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

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

Data Validatable Report

August 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. An 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**
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
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-$SIMHC12W, 3-$TPETD2
Extractions: 3-_SEP004S, 3-_SEP011
VOA: 4-$86RHBF
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), $86RHBF, $SIMHC12W, $TPETD2 -- Unpreserved VOA
2.	ES078 TRIP BLANK	AY65042W	07/17/12 07:00	$86RHBF -- Unpreserved VOA
3.	ES079	AY65043W	07/17/12 11:45	$602D(Pb), $86RHBF, $SIMHC12W, $TPETD2 -- Unpreserved VOA
4.	ES080	AY65044W	07/17/12 08:00	$602D(Pb), $86RHBF, $SIMHC12W, $TPETD2 -- Unpreserved VOA

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

68248 2.0,20

APPL LABS

CHAIN OF CUSTODY RECORD

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

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

C.O.C. 36499

Report to: PLEASE PRINT		Invoice to: A. P. PLEASE PRINT	
Company Name: Environet, Inc.	Phone: 808-833-2225	Company Name: Environet, Inc.	Phone: 808-833-2225
Address: 650 Iwilei Road, Suite 204 Honolulu, HI 96817	Fax: 808-833-2231	Address: 650 Iwilei Road, Suite 204 Honolulu, HI 96817	Fax: 808-833-2291
Attn: Max Solmssen (msolmssen@environetinc.com)		Attn: A. P.	

Project Name/Number	Sampler (Print)	Purchase Order Number	Sampler (Signature)
Red Hill / 1022024	Max Solmssen		Max Solmssen

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Sed.	Soil	TPH-GRO (8260B)	VOCs (8260B)	TPH-DRO (8015B)	PAHs (8270 SIM)	lead* (6020)
ES077	Red Hill	7/17/12	915	HI	8	X			X	X	X	X	X
ES078 trip blank			7:00		3				X	X			
ES079			1145		8				X	X	X	X	X
ES080			800		8				X	X	X	X	X

Analysis Requested/Method Number

Date Shipped: 7/17/12
Carrier: Fed Ex
Waybill No.: 876412433265
Comments: * lead
Samples have been field-filtered.

Shuttle Temperature:

Turnaround Requested: Check one
☑ Standard 2-3wk ☐ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☑ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:
MS	7/17/12	13:40	
Relinquished by:	Date	Time	Received by:

Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received at lab by:
	7/18/12	1110	

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

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: 43926 7 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: Yang Xu Second reviewer: Will Lee

Signature of project manager notified: _____ Date and Time of notification: _____

Name of client notified: _____ Date and Time of notification: _____

Information given to client: _____

_____ by whom (Initials): _____

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons

APPL, INC.

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

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

APPL Inc.
908 North Temperance Avenu
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

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68248

Case No: 68248 Date Analyzed: 07/24/12

Matrix: WATER 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

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68248

Case No: 68248 Date Analyzed: 07/24/12

Matrix: WATER 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: _____

Primary	SPK
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

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 #	AREA #	RT #
	12 HOUR STD	2713	6.09	1189	8.10	2090	9.82
	UPPER LIMIT	5426	6.59	2378	8.60	4180	10.32
	LOWER LIMIT	1357	5.59	595	7.60	1045	9.32
	SAMPLE NO.						
01	120723A BLK 1/1000	2273	6.07	1022	8.08	2049	9.82
02	120723A LCS-1 1/1000	2043	6.07	992	8.08	1998	9.82
03	AY65041W07 1/1050	2190	6.08	1069	8.08	2160	9.82
04	AY65043W05 1/1060	2232	6.08	1038	8.08	2082	9.82
05	AY65044W04 1/1060	2216	6.08	1020	8.08	2138	9.82
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

APPL, INC.

EPA 8270D SIM

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES077
Sample Collection Date: 07/17/12

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

Quantitation Report (QT Reviewed)

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					
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

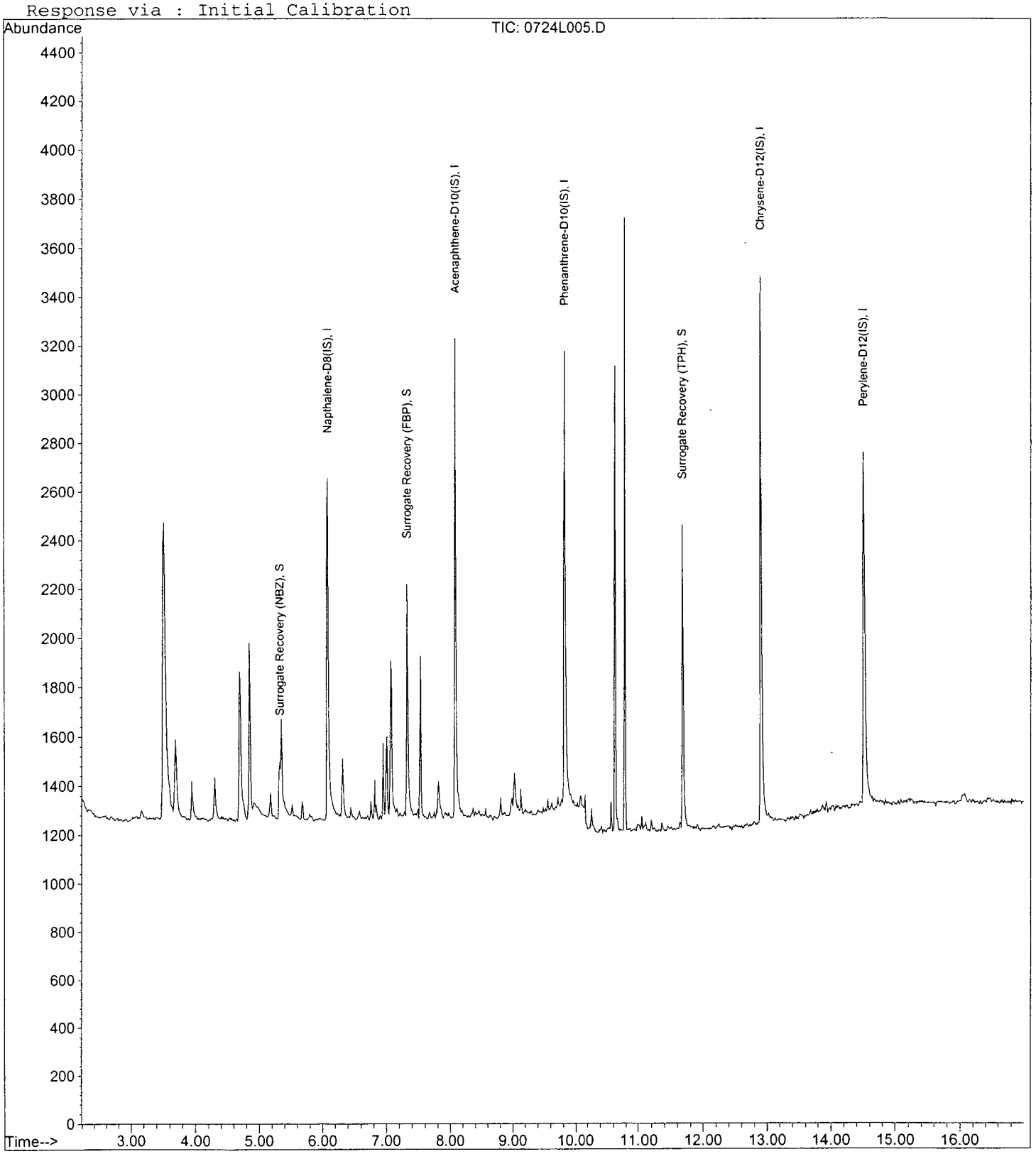
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



EPA 8270D SIM

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES079
Sample Collection Date: 07/17/12

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

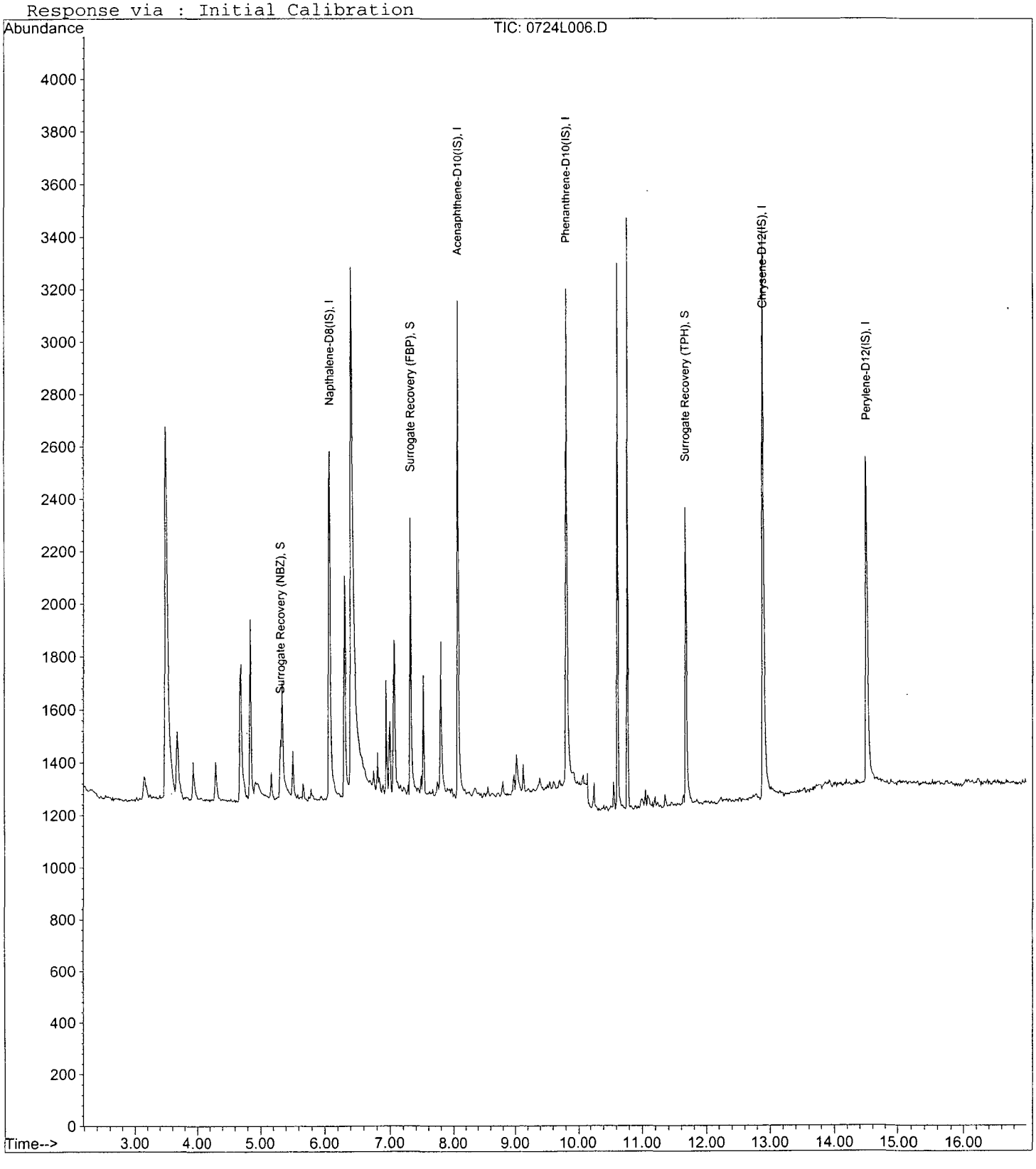
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



EPA 8270D SIM

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68248

Sample ID: ES080

APPL ID: AY65044

Sample Collection Date: 07/17/12

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

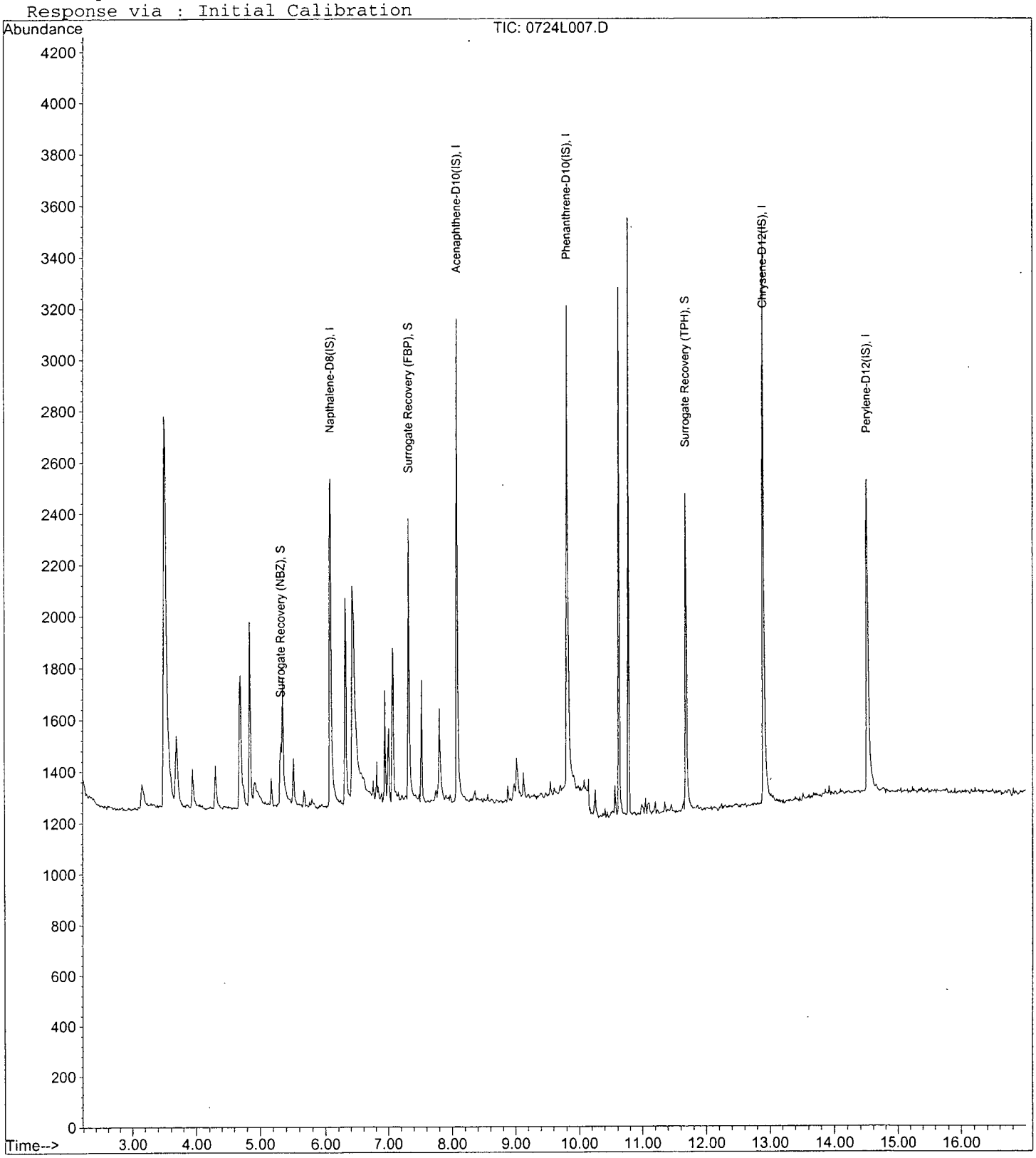
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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

APPL, INC.

EPA 8270C SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68248
Case No: Initial Cal. Date: 06/13/12
Matrix: Instrument: Linus Initials:

		Compound	0613L003.D 0.1	0613L004.D 0.2	0613L005 D 0.5	0613L006 D 1	0613L007.D 5	0613L008.D 10	0613L009.D 50	0613L010.D 100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	S	Surrogate Recovery (NBZ)	0.4582	0.4160	0.5318	0.4779	0.4460	0.4748	0.4769	0.4584			0.47	7.1	S	
3	TM	Naphthalene	1.842	1.750	1.792	1.659	1.423	1.727	1.409	1.279			1.6	13	TM	
4	TM	2-Methylnaphthalene	1.241	1.076	1.116	1.120	0.9307	1.112	0.9262	0.8257			1.0	13	TM	
5	TM	1-Methylnaphthalene	1.126	1.172	1.203	1.088	0.8644	1.036	0.8585				1.0	13	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	2.582	2.805	2.664	2.529	2.150	2.143	1.969	1.882			2.3	15	S	
8	TM	1,1'-Biphenyl	2.787	2.890	2.770	2.823	2.494	2.718	2.250	2.042			2.6	12	TM	
9	TM	Acenaphthylene	3.955	4.033	3.713	3.520	3.060	3.526	2.830	2.701			3.4	15	TM	
10	*TM	Acenaphthene	2.090	2.180	2.070	2.027	1.756	1.959	1.627	1.454			1.9	13	*TM	
11	TM	Fluorene	2.398	2.371	2.439	2.352	2.050	2.300	1.873	1.659			2.2	13	TM	
12	I	Phenanthrene-D10(IS)														
13	TM	Phenanthrene	2.047	1.950	2.033	1.897	1.652	1.874	1.503	1.377			1.8	14	TM	
14	TM	Anthracene	2.130	1.841	1.997	1.890	1.692	1.793	1.496	1.348			1.8	14	TM	
15	*TM	Fluoranthene	3.076	2.754	2.876	2.744	2.354	2.691	2.122	2.002			2.6	15	*TM	
16	I	Chrysene-D12(IS)														
17	TM	Pyrene	2.479	2.491	2.445	2.361	2.151	2.307	1.879	1.969			2.3	10	TM	
18	S	Surrogate Recovery (TPH)	1.440	1.456	1.389	1.283	1.203	1.197	0.9916	1.046			1.3	14	S	
19	TM	Benz (a) anthracene	2.260	2.204	2.209	2.058	1.786	1.987	1.662	1.724			2.0	12	TM	
20	TM	Chrysene	2.088	2.135	2.151	2.031	1.970	1.967	1.407	1.602			1.9	14	TM	
21	TM	Indeno (1,2,3-cd) pyrene	2.365	2.214	2.159	2.037	1.899	2.069	1.653	1.810			2.0	11	TM	
22	I	Perylene-D12(IS)														
23	TM	Benzo (b) fluoranthene	2.382	2.407	2.462	2.408	1.885	2.105	2.227	1.721			2.2	12	TM	
24	TM	Benzo (k) fluoranthene	2.745	2.558	2.205	2.115	2.223	2.494	1.828	1.795			2.2	15	TM	
25	*TM	Benzo (a) pyrene	2.358	2.547	2.297	2.164	1.908	2.189	1.901	1.547			2.1	15	*TM	
26	TM	Dibenz (a,h) anthracene	2.206	2.196	2.054	1.889	1.755	1.968	1.762	1.529			1.9	12	TM	
27	TM	Benzo (g,h,i) perylene	2.288	2.284	2.189	1.980	1.781	2.022	1.834	1.643			2.0	12	TM	
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L003.D Vial: 3
Acq On : 13 Jun 12 13:51 Operator: LF
Sample : 0.1ug/ml PAH 06-13-12 Inst : Linus
Misc : 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) Napthalene-D8(IS)	6.09	136	2619	2.50000 ppb		-0.02
6) Acenaphthene-D10(IS)	8.10	164	1220	2.50000 ppb		-0.04
12) Phenanthrene-D10(IS)	9.83	188	2113	2.50000 ppb		-0.02
16) Chrysene-D12(IS)	12.91	240	2622	2.50000 ppb		-0.01
22) Perylene-D12(IS)	14.52	264	2131	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.35	82	48	0.18668 ppb		0.01
Spiked Amount 2.000			Recovery = 9.350%			
7) Surrogate Recovery (FBP)	7.34	172	126	0.16296 ppb		-0.04
Spiked Amount 2.000			Recovery = 8.150%			
18) Surrogate Recovery (TPH)	11.70	244	151	0.18456 ppb		-0.03
Spiked Amount 2.000			Recovery = 9.250%			
Target Compounds						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

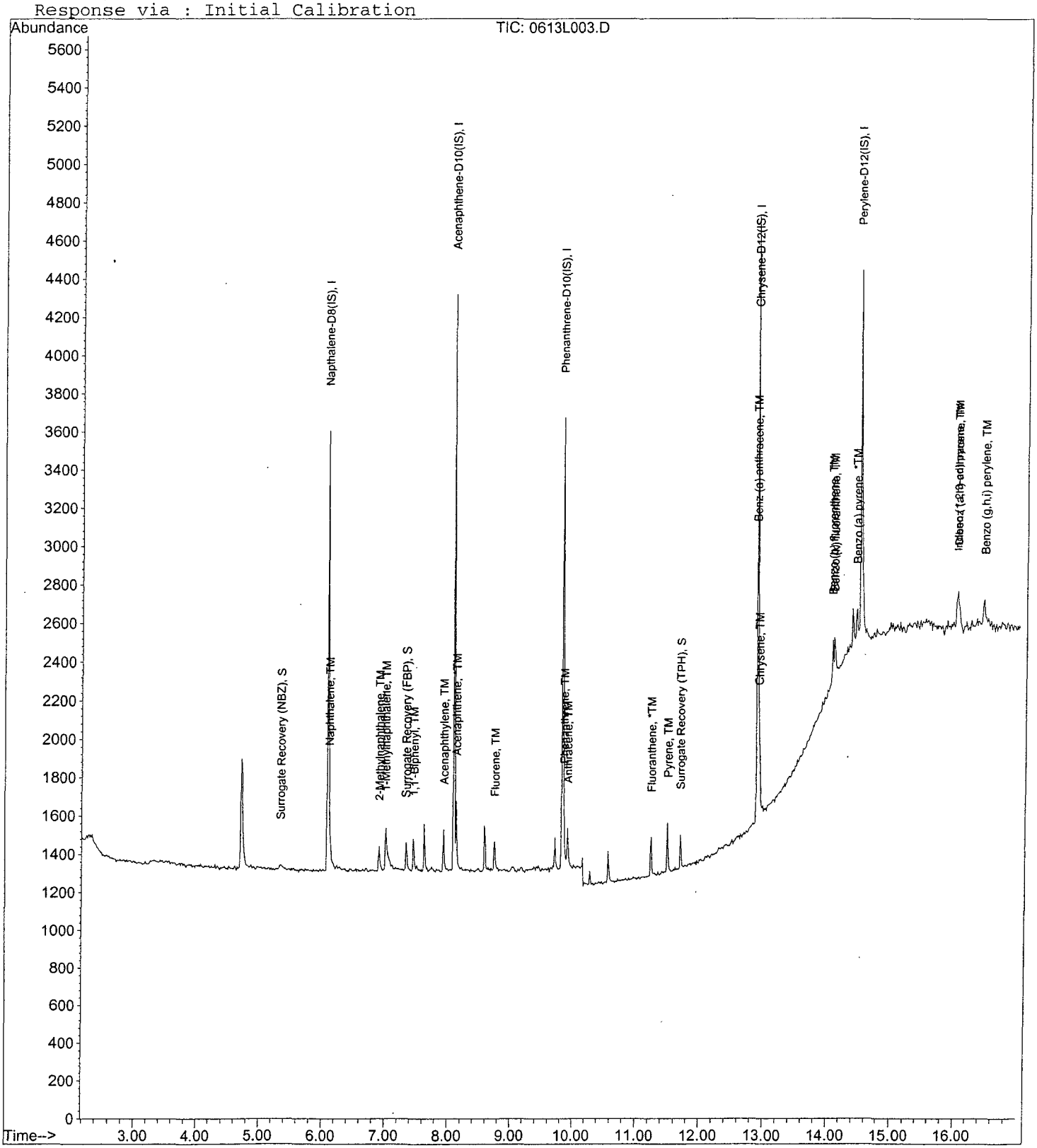
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L003.D 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

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



Quantitation Report (QT Reviewed)

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

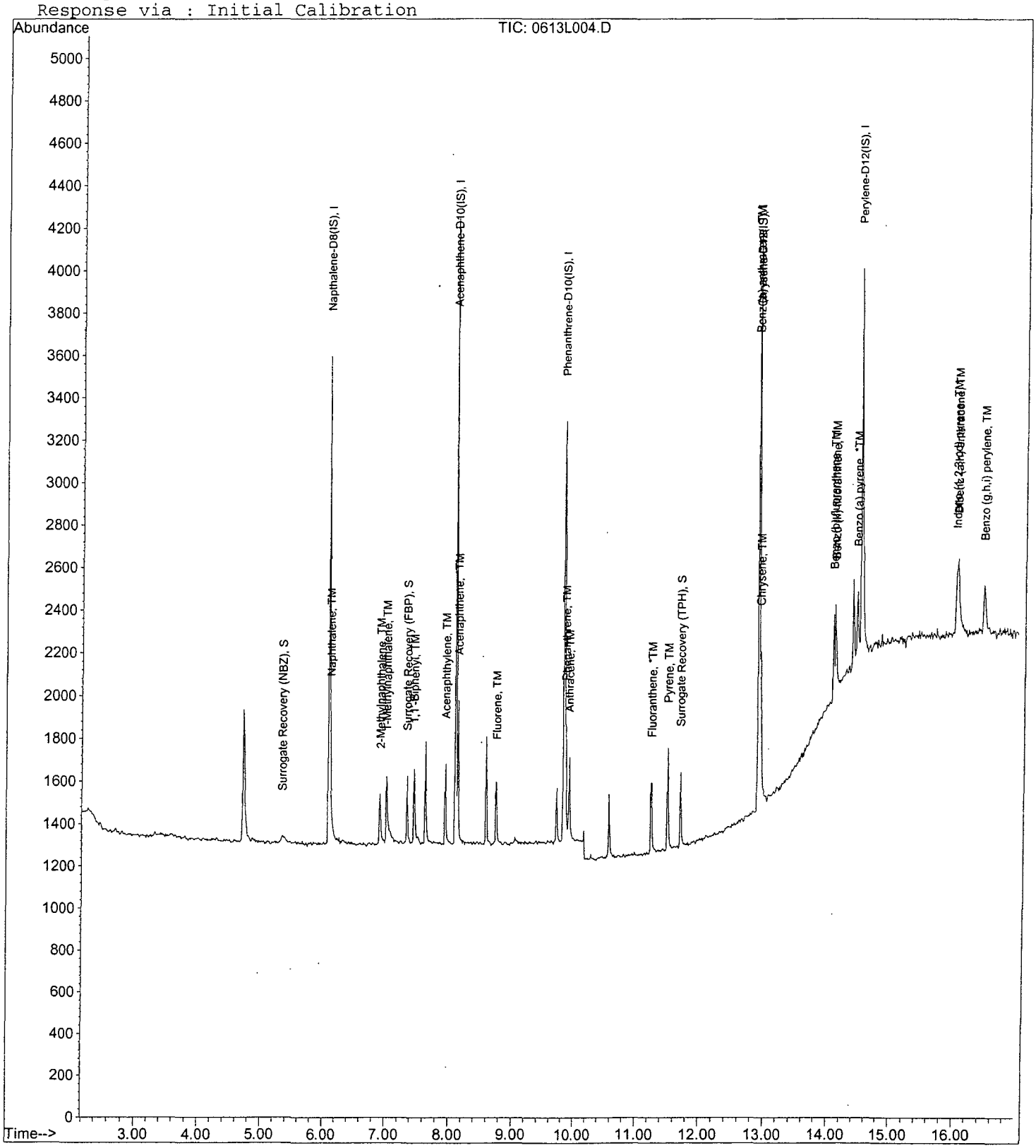
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L004.D Vial: 4
Acq On : 13 Jun 12 14:16 Operator: LF
Sample : 0.2ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L005.D Vial: 5
Acq On : 13 Jun 12 14:41 Operator: LF
Sample : 0.5ug/ml PAH Inst : Linus
Misc : 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						
2) Surrogate Recovery (NBZ)	5.33	82	274	0.60835 ppb		0.00
Spiked Amount 2.000			Recovery = 30.400%			
7) Surrogate Recovery (FBP)	7.34	172	650	0.49453 ppb		-0.04
Spiked Amount 2.000			Recovery = 24.750%			
18) Surrogate Recovery (TPH)	11.70	244	714	0.47952 ppb		-0.03
Spiked Amount 2.000			Recovery = 24.000%			
Target Compounds						Qvalue
3) Naphthalene	6.12	128	923	0.49869 ppb		100
4) 2-Methylnaphthalene	6.90	142	575	0.48172 ppb		100
5) 1-Methylnaphthalene	7.01	142	620	0.52369 ppb		94
8) 1,1'-Biphenyl	7.44	154	676	0.48807 ppb	#	94
9) Acenaphthylene	7.94	152	906	0.46486 ppb		99
10) Acenaphthene	8.13	154	505	0.48464 ppb		91
11) Fluorene	8.74	166	595	0.51139 ppb		99
13) Phenanthrene	9.86	178	847	0.50863 ppb		98
14) Anthracene	9.92	178	832	0.50291 ppb		96
15) Fluoranthene	11.23	202	1198	0.49327 ppb	#	86
17) Pyrene	11.50	202	1257	0.49186 ppb	#	89
19) Benz (a) anthracene	12.90	228	1136	0.49495 ppb		98
20) Chrysene	12.94	228	1106	0.50938 ppb	#	93
21) Indeno (1,2,3-cd) pyrene	16.00	276	1110	0.47150 ppb	#	92
23) Benzo (b) fluoranthene	14.08	252	1093	0.51930 ppb	#	90
24) Benzo (k) fluoranthene	14.11	252	979	0.42017 ppb	#	95
25) Benzo (a) pyrene	14.45	252	1020	0.47286 ppb	#	95
26) Dibenz (a,h) anthracene	16.03	278	912	0.47138 ppb	#	95
27) Benzo (g,h,i) perylene	16.44	276	972	0.41115 ppb		93

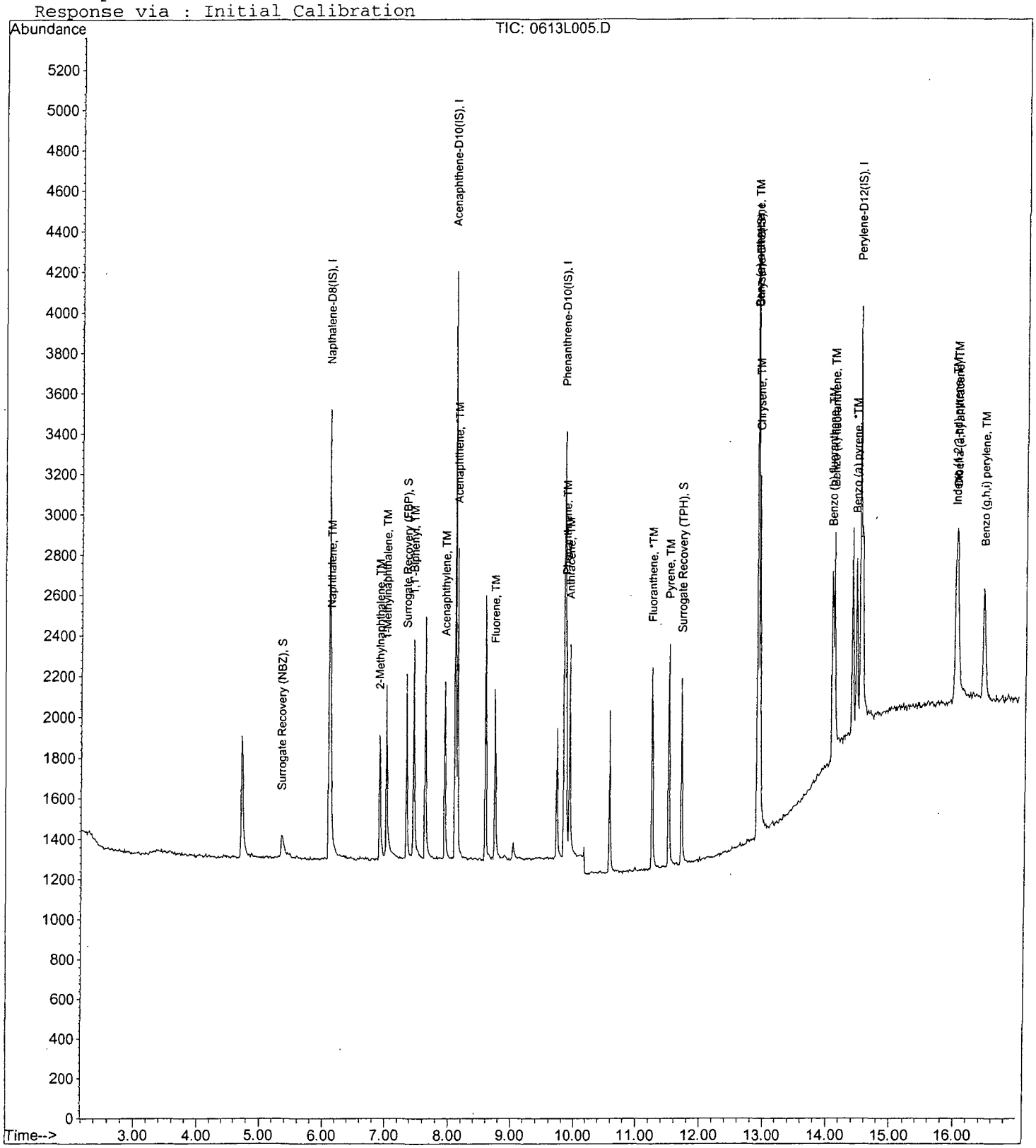
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L006.D Vial: 6
Acq On : 13 Jun 12 15:07 Operator: LF
Sample : 1.0ug/ml PAH Inst : Linus
Misc : 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						
2) Surrogate Recovery (NBZ)	5.33	82	501	1.01960 ppb		0.00
Spiked Amount 2.000			Recovery	= 51.000%		
7) Surrogate Recovery (FBP)	7.34	172	1215	0.94245 ppb		-0.04
Spiked Amount 2.000			Recovery	= 47.100%		
18) Surrogate Recovery (TPH)	11.70	244	1327	0.89865 ppb		-0.03
Spiked Amount 2.000			Recovery	= 44.950%		
Target Compounds						Qvalue
3) Naphthalene	6.12	128	1739	0.92424 ppb		99
4) 2-Methylnaphthalene	6.90	142	1174	0.97858 ppb		98
5) 1-Methylnaphthalene	7.01	142	1141	0.93248 ppb		94
8) 1,1'-Biphenyl	7.45	154	1356	1.00249 ppb	#	91
9) Acenaphthylene	7.94	152	1691	0.90251 ppb		99
10) Acenaphthene	8.13	154	974	0.95935 ppb		89
11) Fluorene	8.74	166	1130	0.97914 ppb		98
13) Phenanthrene	9.86	178	1612	0.94390 ppb		99
14) Anthracene	9.92	178	1606	0.95018 ppb		98
15) Fluoranthene	11.23	202	2331	0.94550 ppb	#	88
17) Pyrene	11.50	202	2441	0.95516 ppb	#	88
19) 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

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

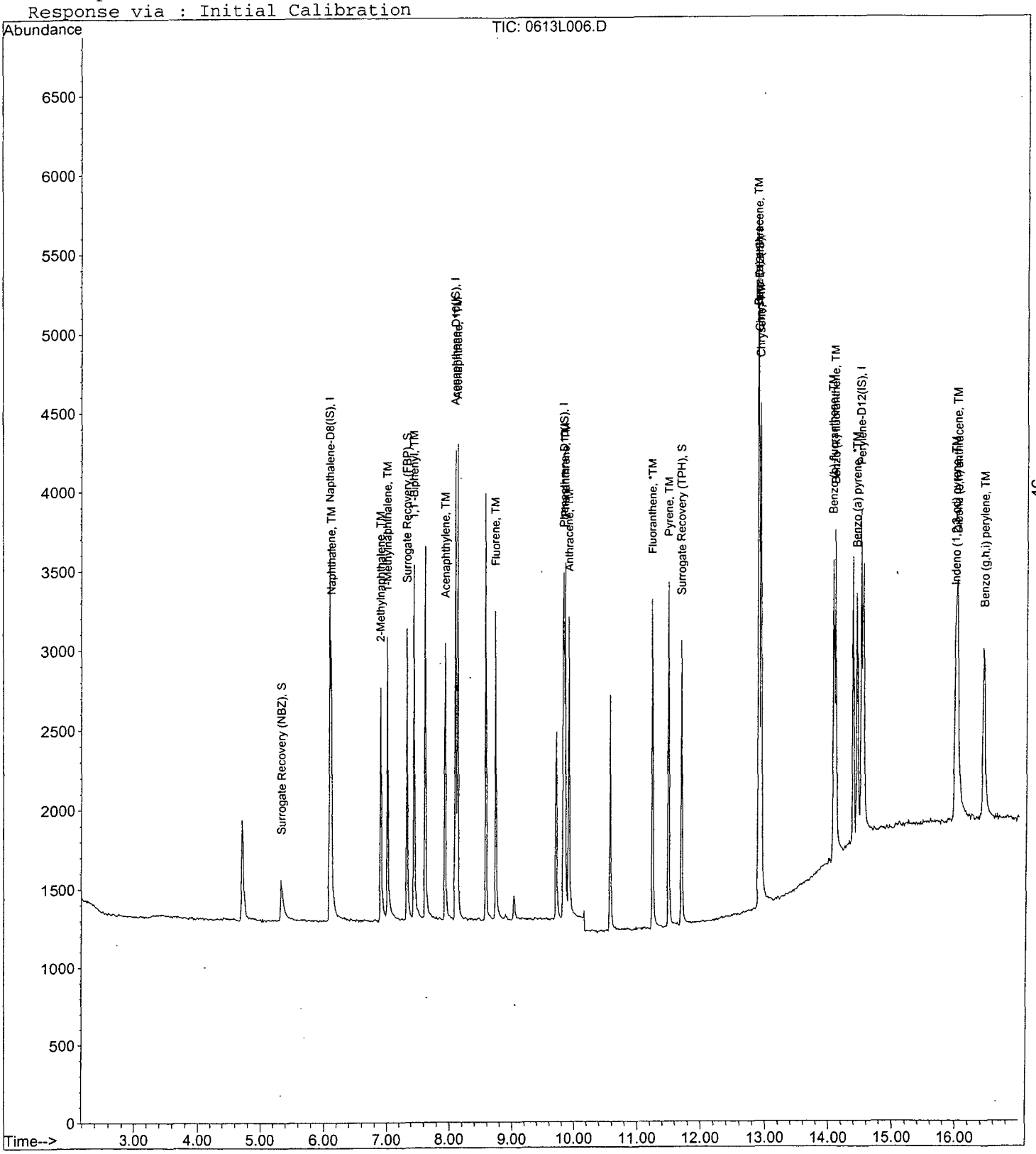
Quantitation Report

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



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Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L007.D Vial: 7
Acq On : 13 Jun 12 15:33 Operator: LF
Sample : 5.0ug/ml PAH Inst : Linus
Misc : 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) Napthalene-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						Qvalue
3) Naphthalene	6.12	128	7720	4.04041 ppb		100
4) 2-Methylnaphthalene	6.90	142	5050	4.08854 ppb		95
5) 1-Methylnaphthalene	7.01	142	4690	3.76651 ppb		93
8) 1,1'-Biphenyl	7.45	154	5931	4.42630 ppb	#	89
9) Acenaphthylene	7.93	152	7276	4.02049 ppb		97
10) Acenaphthene	8.13	154	4176	4.19734 ppb		93
11) Fluorene	8.74	166	4875	4.28917 ppb		98
13) Phenanthrene	9.86	178	6907	4.16861 ppb		99
14) Anthracene	9.92	178	7071	4.30520 ppb		98
15) Fluoranthene	11.23	202	9839	4.11183 ppb		95
17) Pyrene	11.49	202	10454	4.40089 ppb	#	90
19) Benz (a) anthracene	12.90	228	8681	4.09173 ppb		96
20) Chrysene	12.94	228	9575	4.68837 ppb	#	96
21) Indeno (1,2,3-cd) pyrene	15.99	276	9227	4.32779 ppb	#	88
23) Benzo (b) fluoranthene	14.08	252	8043	3.92370 ppb	#	84
24) Benzo (k) fluoranthene	14.12	252	9483	4.64656 ppb	#	92
25) Benzo (a) pyrene	14.45	252	8141	4.09554 ppb		98
26) Dibenz (a,h) anthracene	16.02	278	7487	4.22884 ppb	#	91
27) Benzo (g,h,i) perylene	16.43	276	7598	3.75225 ppb		96

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

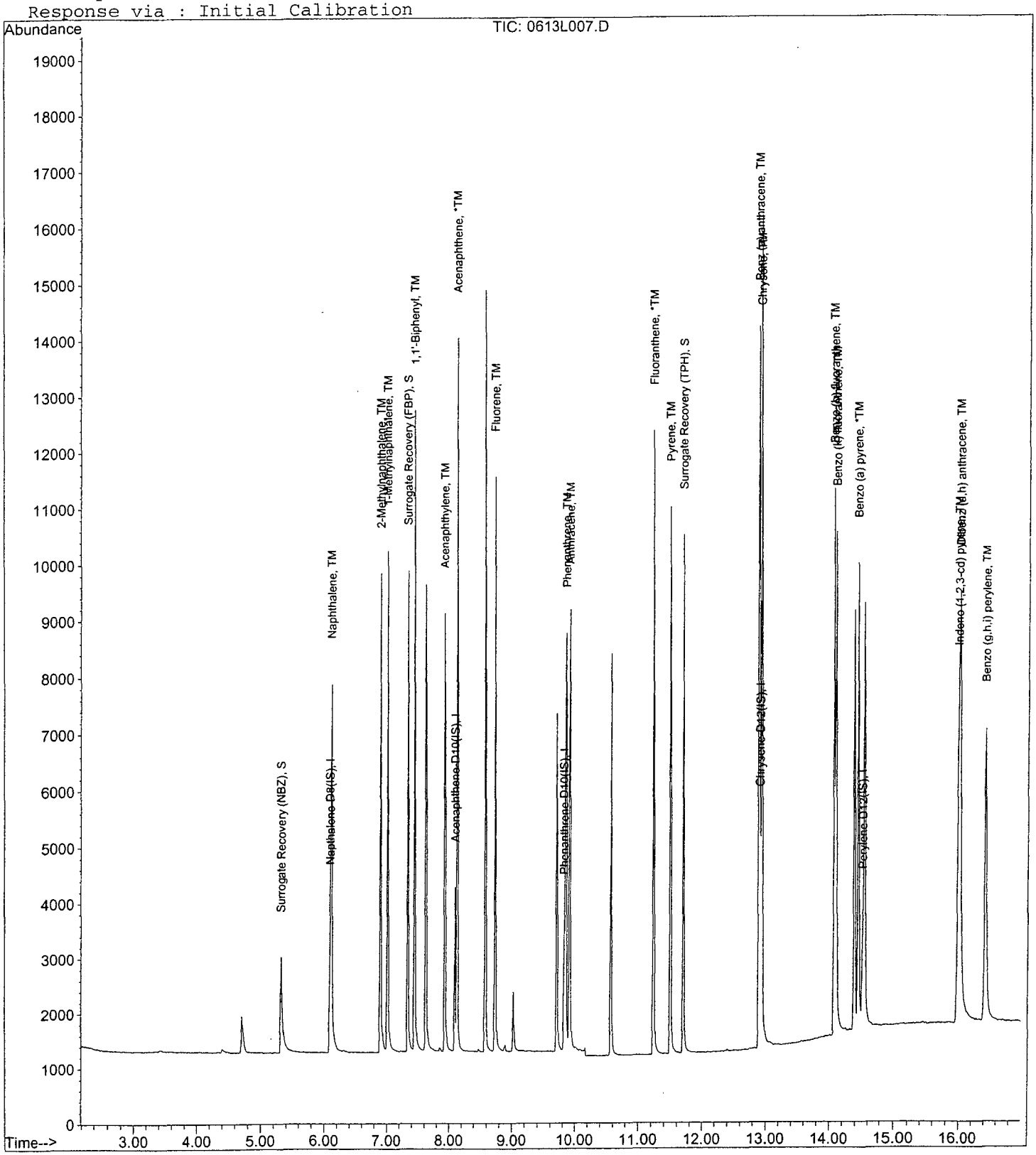
Quantitation Report

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

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

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L008.D Vial: 8
Acq On : 13 Jun 12 15:59 Operator: LF
Sample : 10ug/ml PAH Inst : Linus
Misc : 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							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

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

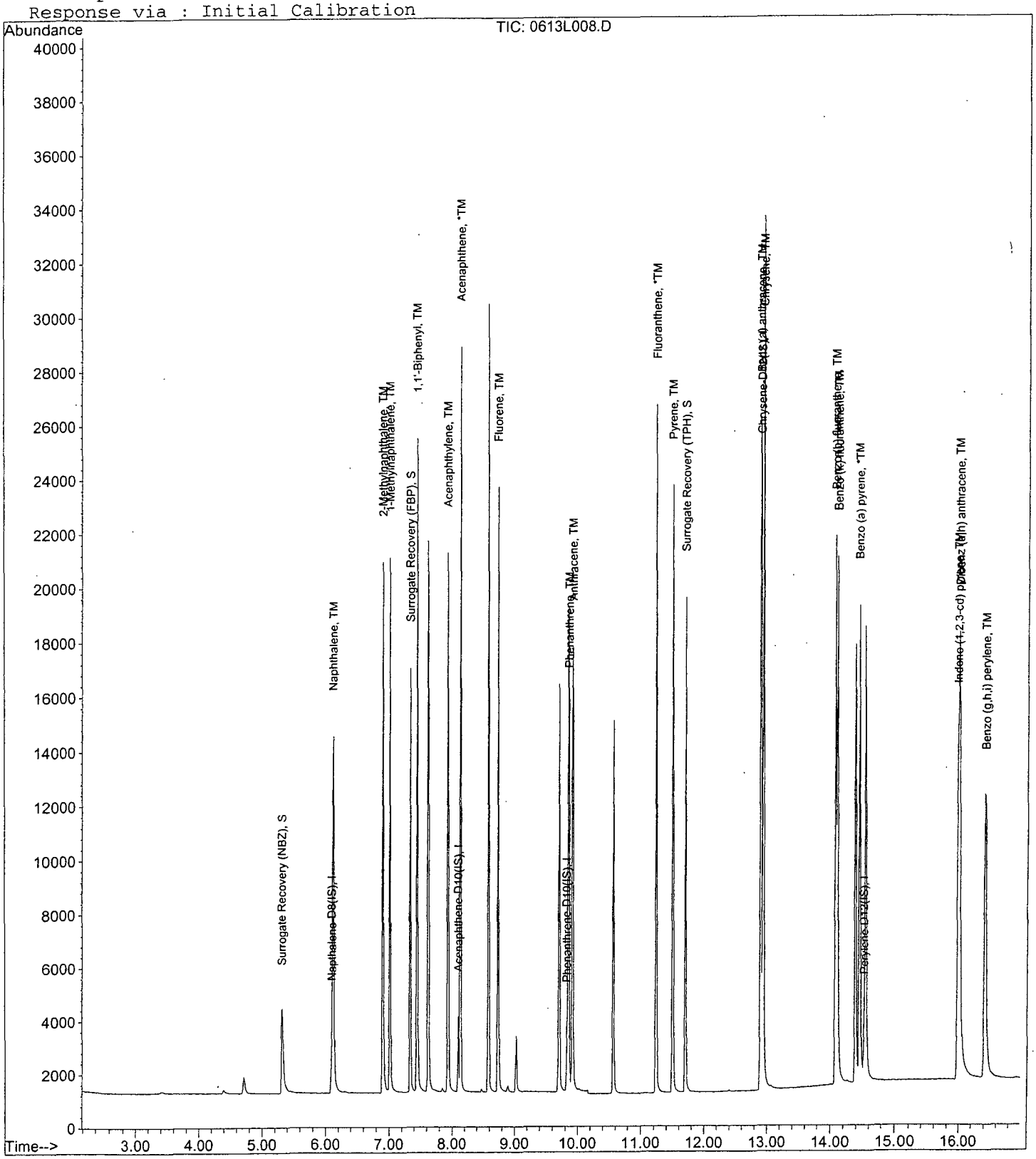
Quantitation Report

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

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

Quant Time: Jun 13 17:35 2012 Quant Results File: SIMB.RES

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



Quantitation Report (QT Reviewed)

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

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

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

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

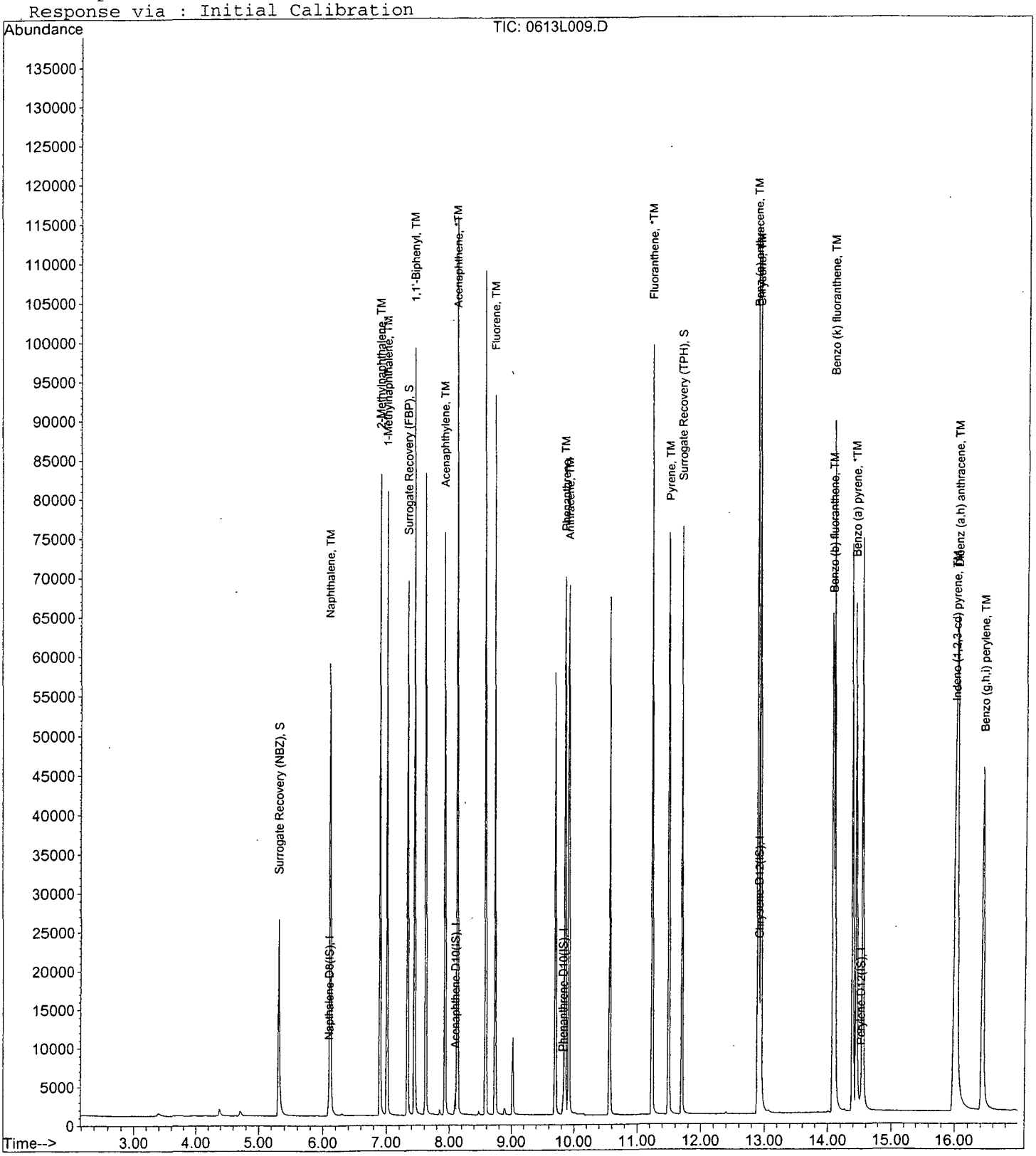
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



Quantitation Report (QT Reviewed)

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

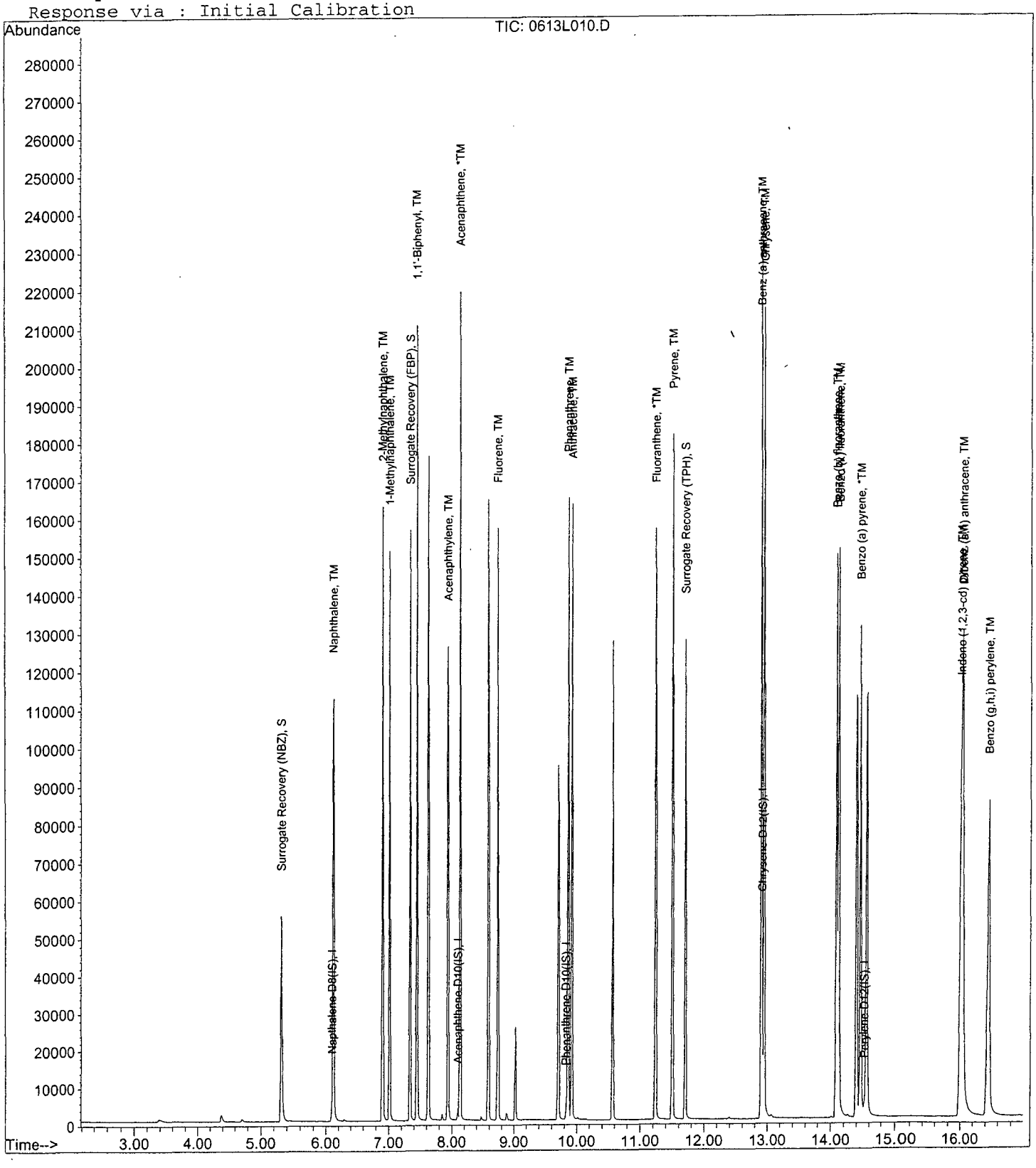
Quantitation Report

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



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	
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.8		

Quantitation Report (QT Reviewed)

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

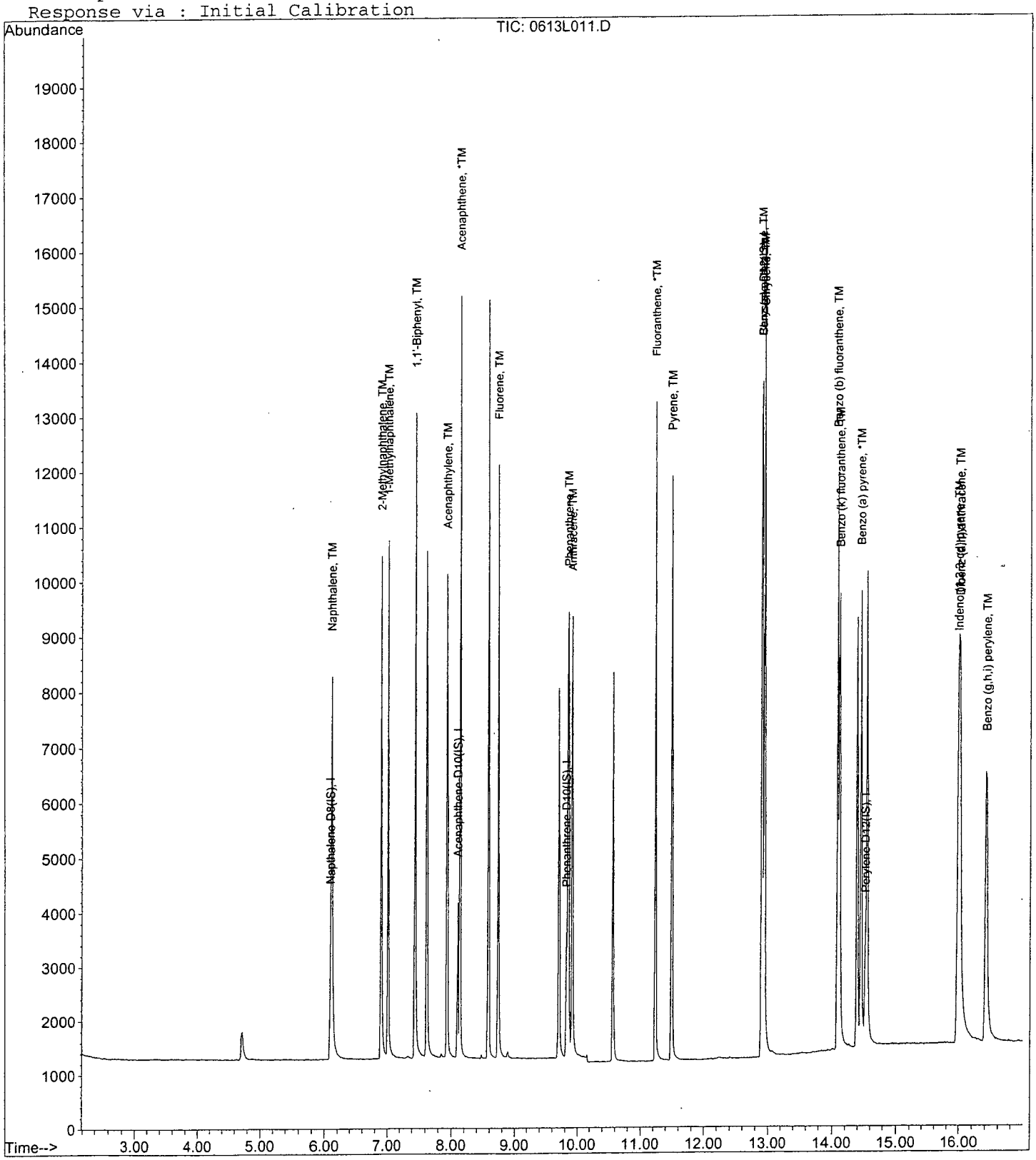
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



Form 7

Continuing Calibration

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

SDG No: 68248
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							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		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						Qvalue
3) Naphthalene	6.09	128	9664	5.07785 ppb		99
4) 2-Methylnaphthalene	6.89	142	6037	4.89471 ppb		90
5) 1-Methylnaphthalene	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

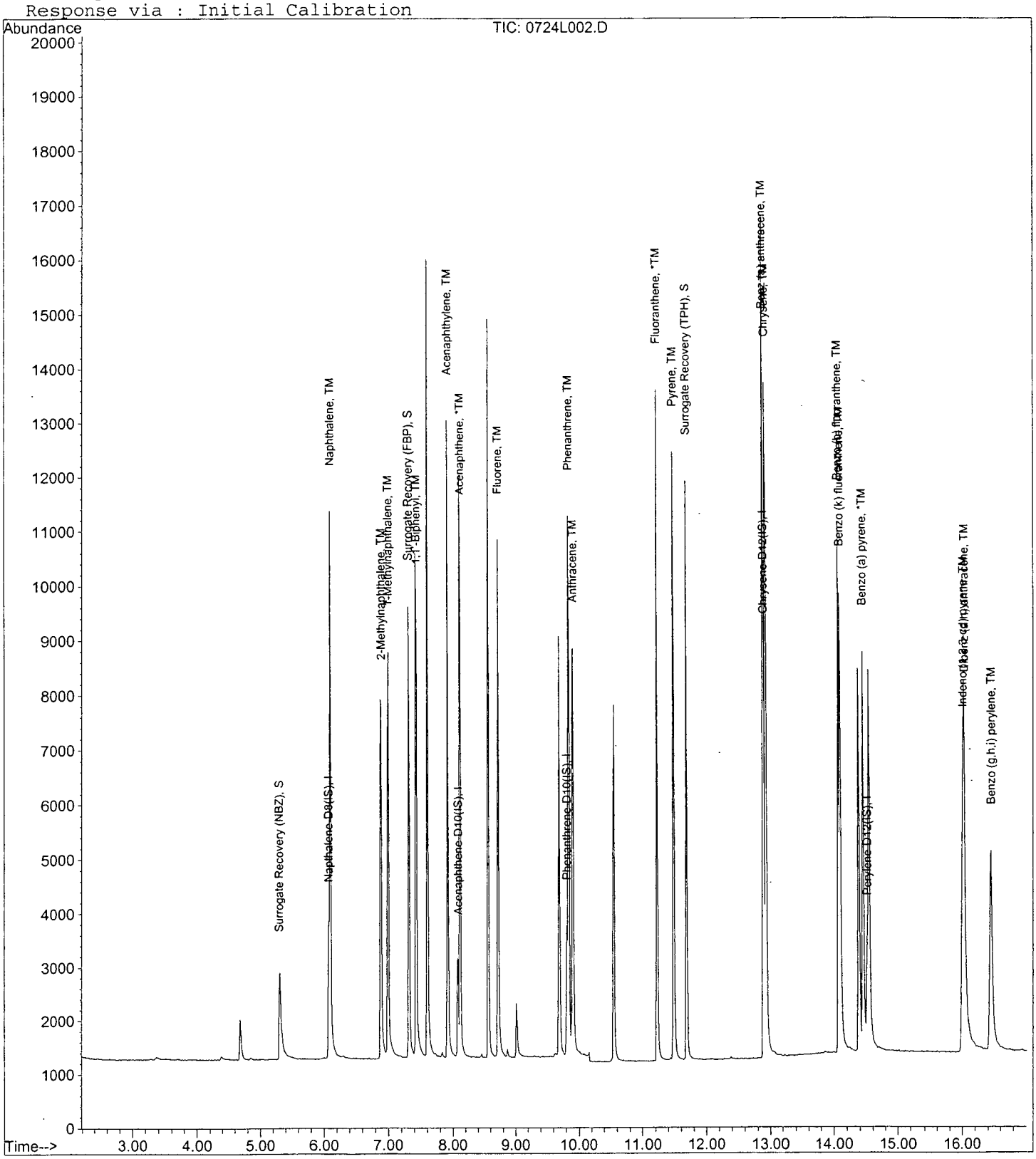
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

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

APPL Inc.
908 North Temperance Avenu
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

Quantitation Report (QT Reviewed)

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

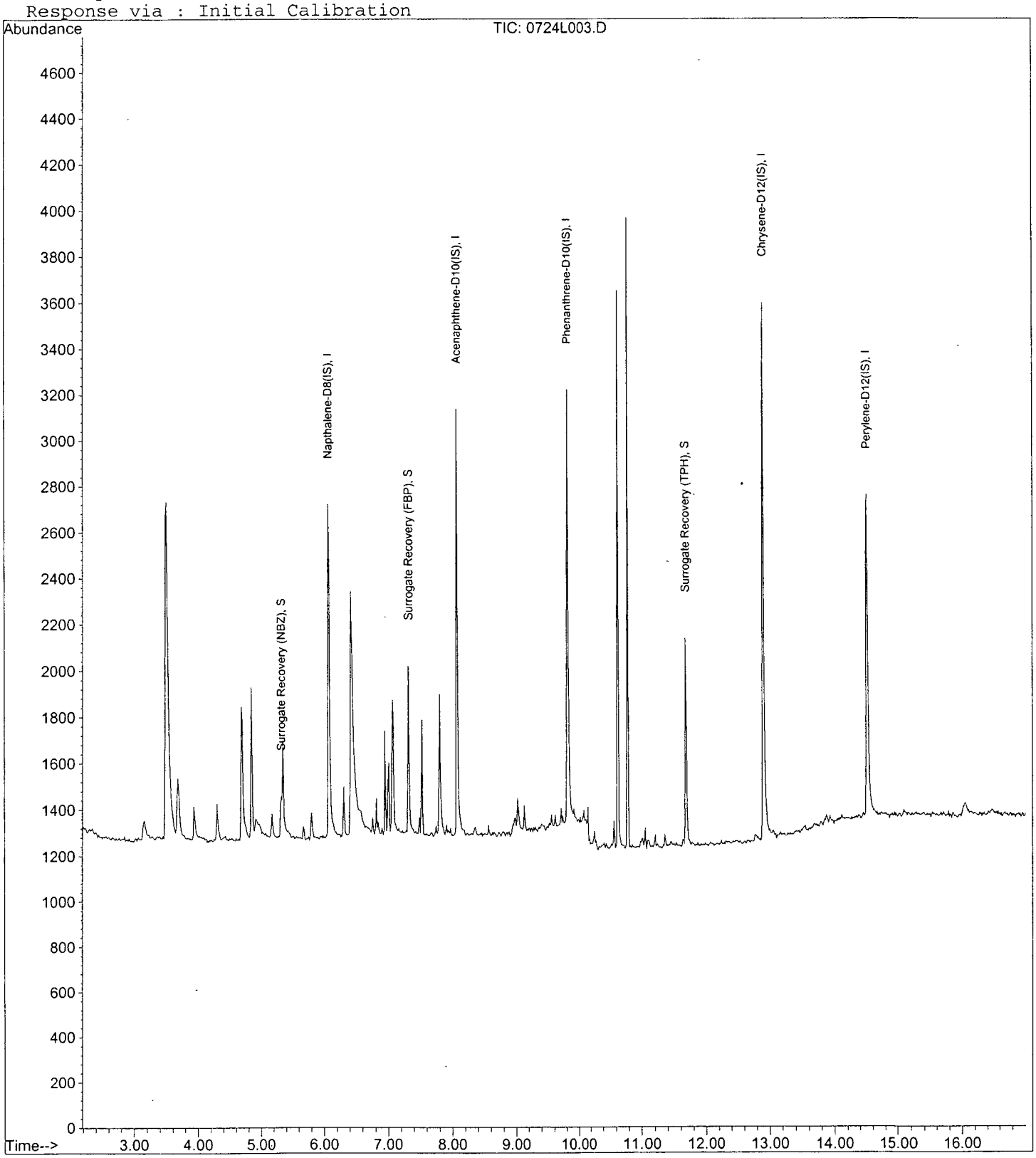
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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: _____

Primary	SPK
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 Vial: 4
Acq On : 24 Jul 12 19:16 Operator: LF
Sample : 120723A LCS-1 1/1000 Inst : Linus
Misc : 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) Napthalene-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

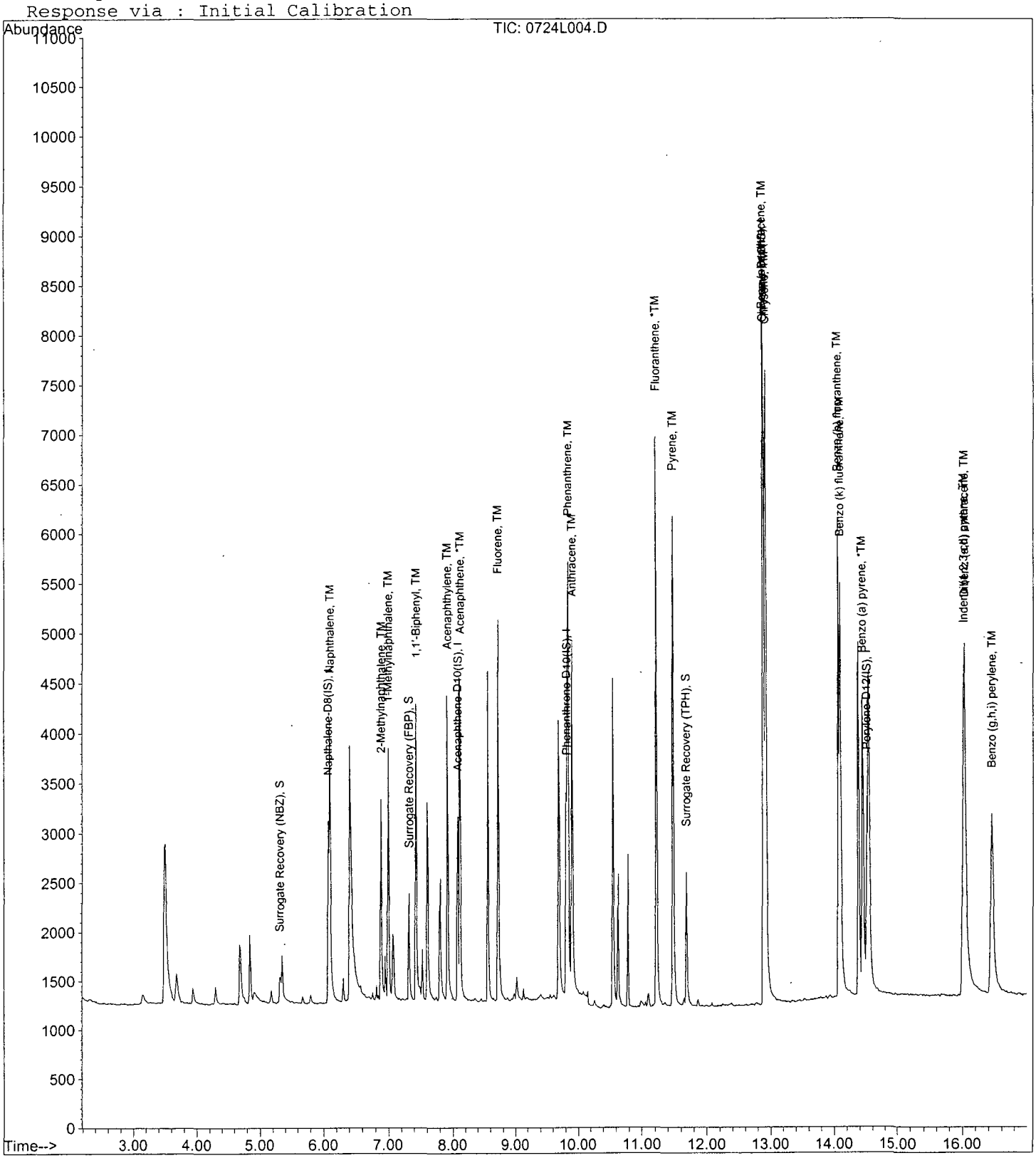
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0724L004.D Vial: 4
Acq On : 24 Jul 12 19:16 Operator: LF
Sample : 120723A LCS-1 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 7:48 2012 Quant Results File: SIMB.RES

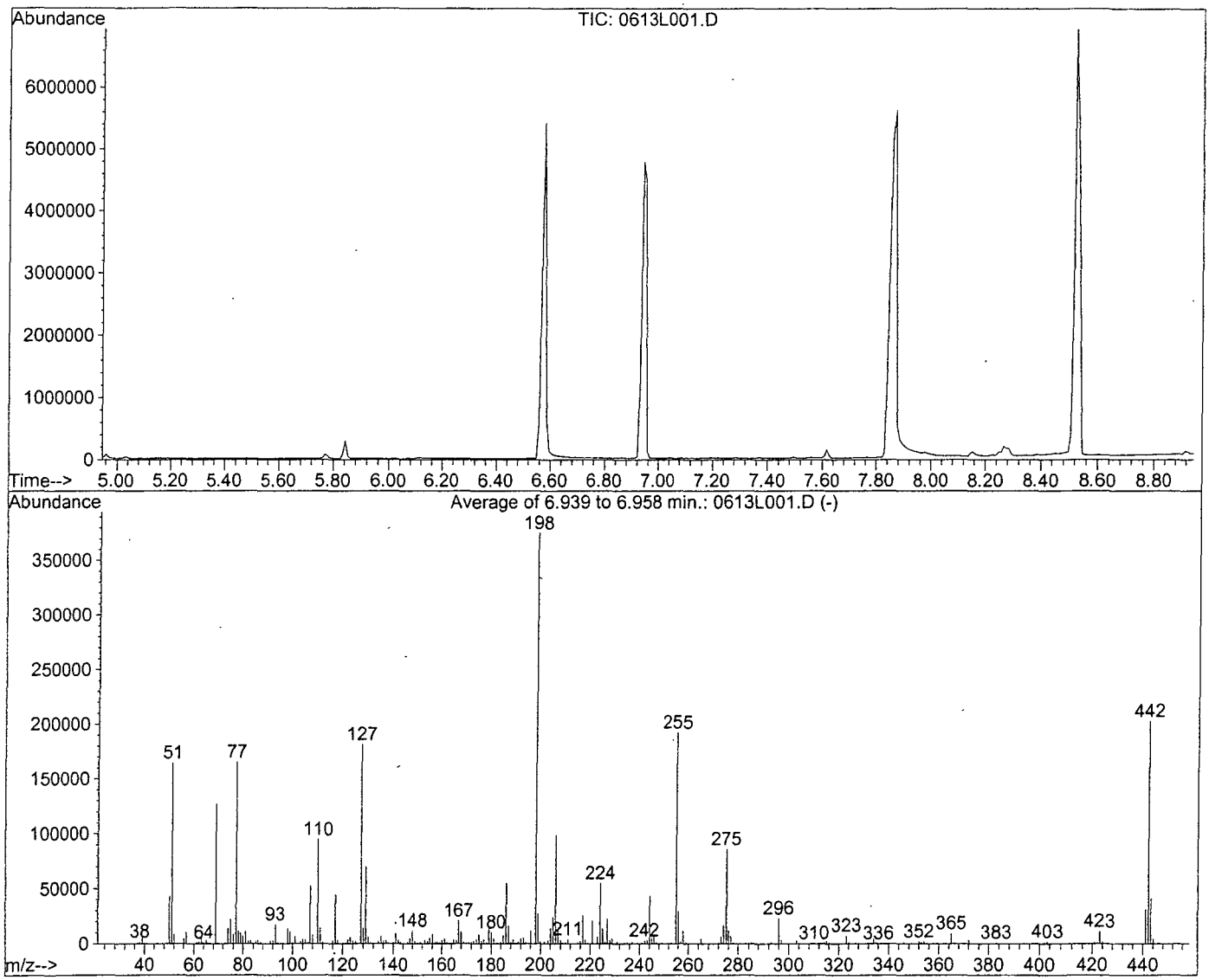
Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration



DFTPP

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

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

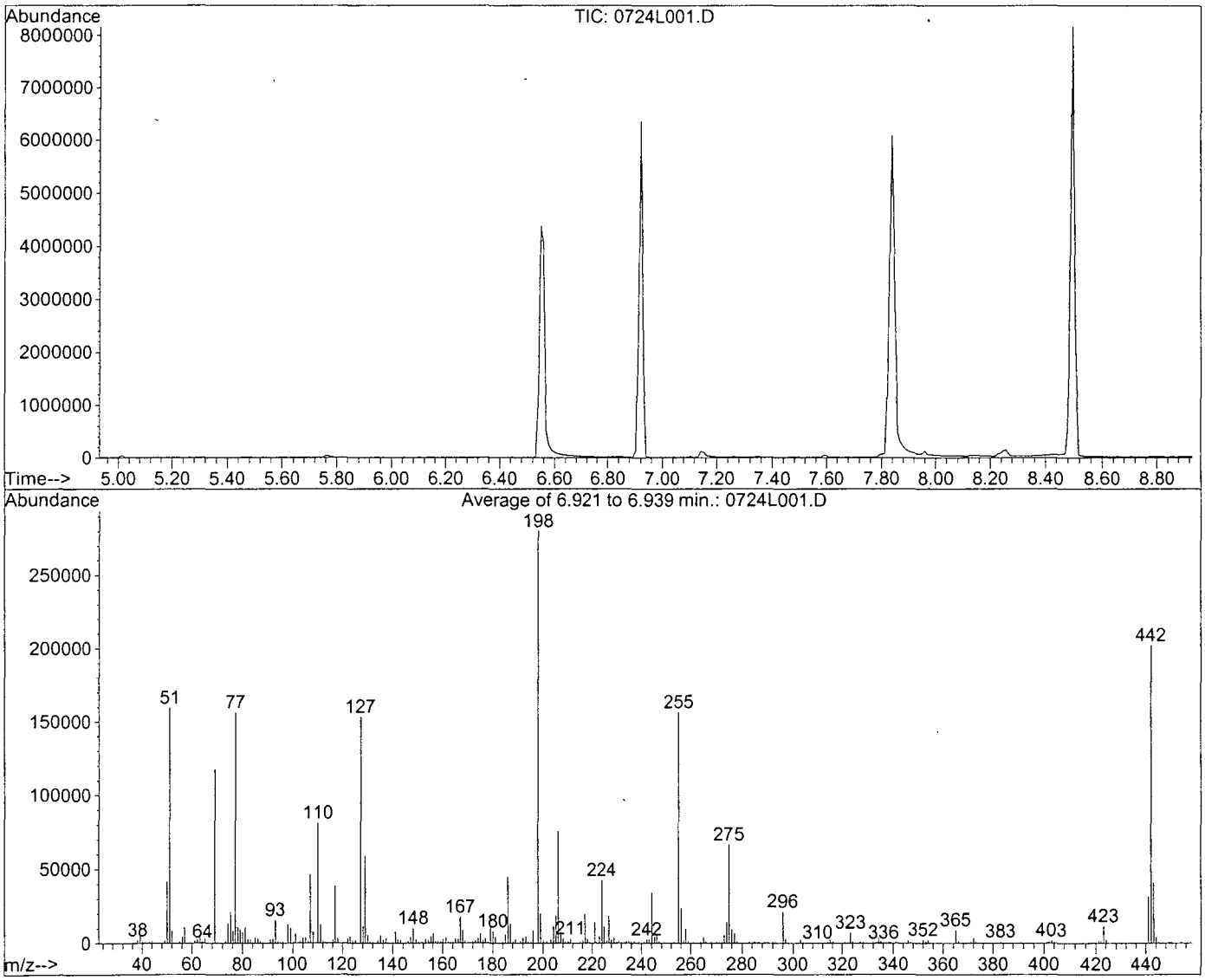


Spectrum Information: Average of 6.939 to 6.958 min.

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

Data File : M:\LINUS\DATA\L120613\0724L001.D Vial: 1
Acq On : 24 Jul 12 18:05 Operator: LF
Sample : SVTUNE 2-28-12 Inst : Linus
Misc : Multiplr: 1.00

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



Spectrum Information: Average of 6.921 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

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

exp 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
ABSOLUTE STANDA
Lot #: 042910 - 29085
Rec: 8/4/11 MFR exp. 04/29/13

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

exp 7/31/12

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

exp 7/31/12

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
ABSOLUTE STANDARDS
CLP Semi-Volatiles Toxic Substances #1
Lot #: 101509 - 28453
Rec: 3/8/11 MFR exp. 10/15/201

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

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

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

exp 10/18/12

2/24/12

8270D PAH SIM Solution,
200 mg/L, 1 ml
110780-01

Lot #	Storage	Expiry
170253	≤-10 Degrees C	3/3/13

Solv: Methylene Chloride

Per R&D only, not human consump. Made in the USA

8270D PAH SIM
Lot # 170253 - 28478
Rec. 3/10/11 MFR exp 3/3/2013

exp 3/3/13

2/24/12

8270D PAH SIM Solution,
Second Source, 200 mg/L, 1 ml
110780-01-SS

Lot #	Storage	Expiry
170256	≤-10 Degrees C	3/3/13

Solv: Methylene Chloride

Per R&D only, not human consump. Made in the USA

8270D PAH SIM (SS)
Lot #. 170256 - 28490
Rec 3/10/11 MFR exp 3/3/2013

exp 3/3/13

2/24/12

8270 BN:A (200:400)
Surrogate Solution, 1 ml
110004-17

Lot #	Storage	Expiry
167802	≤-10 Degrees C	1/9/13

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270 BN:A (200:400) Surrogate Solution
Lot # 167802 - 29314
Rec: 8/8/11 MFR exp 01/09/13

exp 1/9/13

2/24/12

Method 8270 Internal
Standard Solution, 2,000
mg/L, 1 ml
110001-82

Lot #	Storage	Expiry
167766	≤-10 Degrees C	4/20/13

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270 Internal Standard
Lot # 167766 - 28151
Rec 1/20/11 MFR exp. 04/20/13

exp 4/20/13

2/24/12

PREP DATE:	02-25-12						
SIM Semivolitile Int. Std. Mix 125 ug/ml							
Exp:	08-25-12						
		Conc.		Date	CODE:	B	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	
O2SI	Int. Std.	2000	167766-28151	02/25/12	02-25-13	100	
EM Science	MeCl2		47186			1500	
						1600	

2/24/12

PREP DATE:	02-25-12												
8270 SIM STANDARD CURVE													
						0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
		Conc.		Date	CODE:	A	A	C	D	E	F	G	H
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

UF 2/27/12

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

UF 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, N Kingstown, RI 02852 USA
ULTRA 1 mL
For Lab Use

UF 2/28/13

UF 2/28/12

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

UF 2/29/12

PREP DATE:	02-29-12												
8270 SIM STANDARD CURVE													
						0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
		Conc.		Date	CODE:	A	A	C	D	E	F	G	H
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		02/29/12		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

UF 2/29/12

PREP DATE:	02-29-12					
SIM 8270 Second Source (5µg/mL)						
Exp:	03-14-12					
				Conc.	Date	CODE:
Supplier	ID #		Lot #	µg/mL	Code	Exp.Date	µL
	8270D PAH SIM (SS)		170256-28490	200	02/25/12	02-25-13	5
	MeCl2			Lot#47186			195
					Final Volume		200

UF 3/18/12

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

UF 3/19/12

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

VF 5/1/12

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

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

Exp 4/29/13

VF 5/1/12

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

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

Exp 7/31/12

VF 5/1/12

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

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

Exp 10/15/14

VF 5/1/12

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

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

Exp 12/12/13

VF 5/1/12

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

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

Exp 7/12/14

VF 5/1/12

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

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

Exp 10/9/14

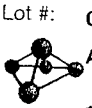
VF 5/1/12

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

EPA Method 8270A - Analytes Mix #8
13 components - P(
2000 ug/mL in metl
ABSOLUTE STANDAR
EPA Method 8270A - Analytes Mix #8
Lot #: 062111 - 29112
Re 1 MFR exp. 06/21/16

Exp 6/21/16

VF 5/1/12

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

Atrazine
1000 ug/mL in ac
ABSOLUTE STANDA
Atrazine
Lot #: 031611 - 29117
Rec: 9/4/11 MFR exp. 03/16/16

Exp 3/16/16

VF 5/1/12

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 041911 Exp: 041914 Storage 4 °C



EPA Method 8270A
4 components
2000 ug/mL in acet

EPA Method 8270A - Mix #18
Lot #: 041911 - 29122
Rec: 8/4/11 MFR exp. 04/19/14

ABSOLUTE STANDAR

Exp 4/19/14

VF 5/1/12

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 030411 Exp: 030414 Storage 4 °C



Semi-Volatile Standard
11 components
Varied ug/mL in m

Semi-Volatile Standard
Lot #: 030411 - 29127
Rec: 8/4/11 MFR exp. 03/04/14

ABSOLUTE STANDAR

Exp 3/4/14

VF 5/1/12

PREP DATE:	05-01-12					
8270C Stock/Spike Standard						
Exp:	07-31-12					
		Conc.		Date	CODE:	P
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
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

PREP DATE.	05-04-12													
8270 STANDARD CURVE														
						5	10	20	40	50	60	80	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp Date	µL	µL	µL	µL	µL	µL	µL	µL
	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 5/4/12

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

7/23/12

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 mel

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 042910 - 29082
Rec: 8/4/11 MFR exp. 04/29/13

ABSOLUTE STANDAR

exp 4/29/13

7/31/12

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 me

CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 073109 - 29087
Rec: 8/4/11 MFR exp. 07/31/12

ABSOLUTE STANDAI

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
1+1 Acid	06/27/12
A. Na2SO4	06/28/12

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

	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 **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	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,78				
15	AY65149	AY65149W03			0.025	1	1060	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,78				
16	AY65150	AY65150W06			0.025	1	1060	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,78				
17	AY65151	AY65151W04			0.025	1	1060	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,78				

DRA 7/24/12

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

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

	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 **Date** 07/24/12

Injection Log

Directory: M:\LINUS\DATA\L120613\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0613L001.D	1	SVTUNE 2-28-12		13 Jun 12 13:07
2	3	0613L003.D	1	0.1ug/ml PAH 06-13-12		13 Jun 12 13:51
3	4	0613L004.D	1	0.2ug/ml PAH		13 Jun 12 14:16
4	5	0613L005.D	1	0.5ug/ml PAH		13 Jun 12 14:41
5	6	0613L006.D	1	1.0ug/ml PAH		13 Jun 12 15:07
6	7	0613L007.D	1	5.0ug/ml PAH		13 Jun 12 15:33
7	8	0613L008.D	1	10ug/ml PAH		13 Jun 12 15:59
8	9	0613L009.D	1	50ug/ml PAH		13 Jun 12 16:25
9	10	0613L010.D	1	100ug/ml PAH		13 Jun 12 16:51
10	11	0613L011.D	1	5.0ug/ml SS PAH 06-13-12		13 Jun 12 17:17
11	1	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 Avenu
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

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68248

Case No: 68248 Date Analyzed: 07/31/12

Matrix: WATER 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
SURROGATE: OCTACOSANE (S)	150	87.7	58.5	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	137	91.3	57-132

Comments: _____

Primary	SPK
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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68248

Sample ID: ES077

APPL ID: AY65041

Sample Collection Date: 07/17/12

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

Quantitation Report (QT Reviewed)

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

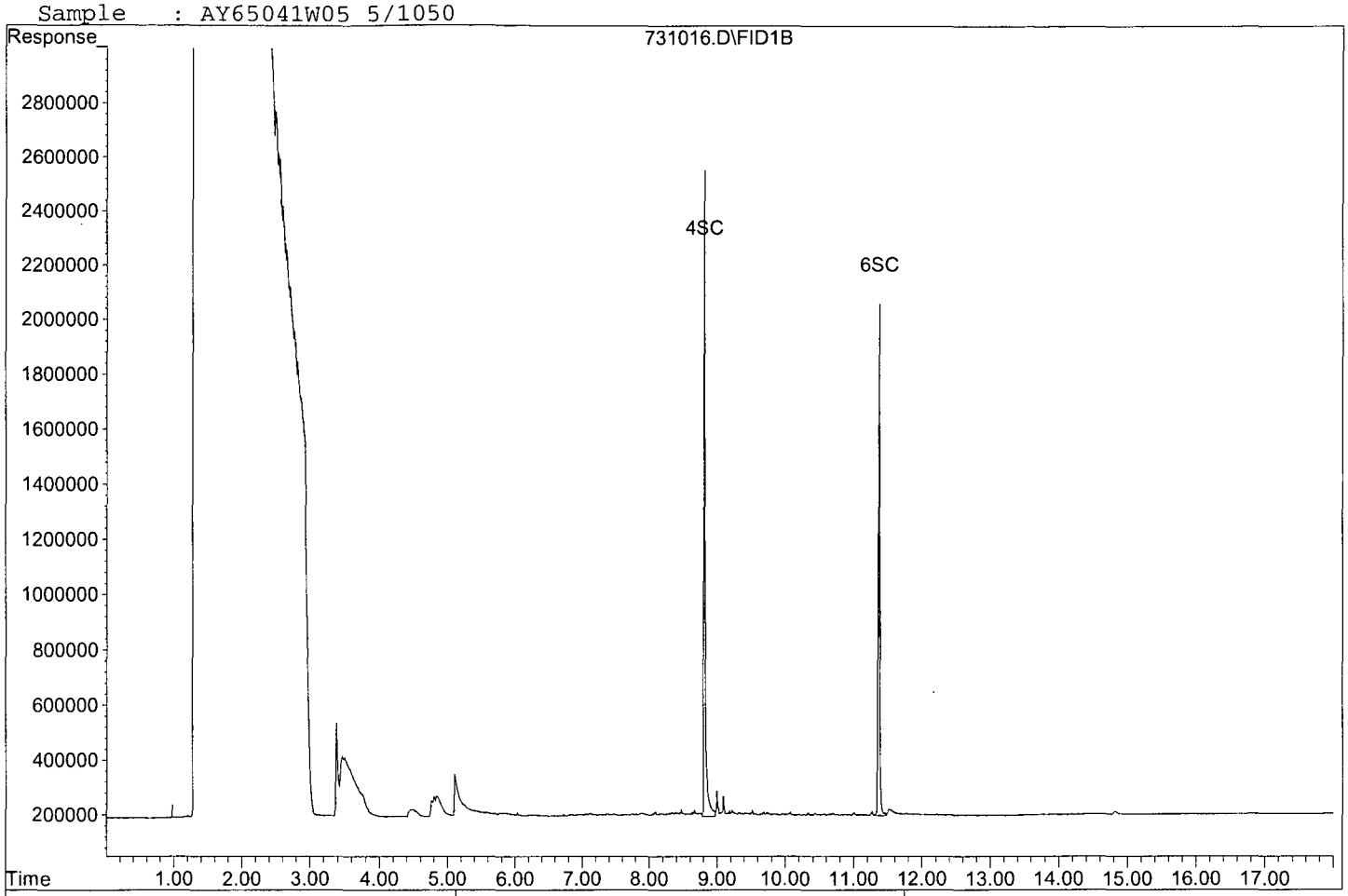
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

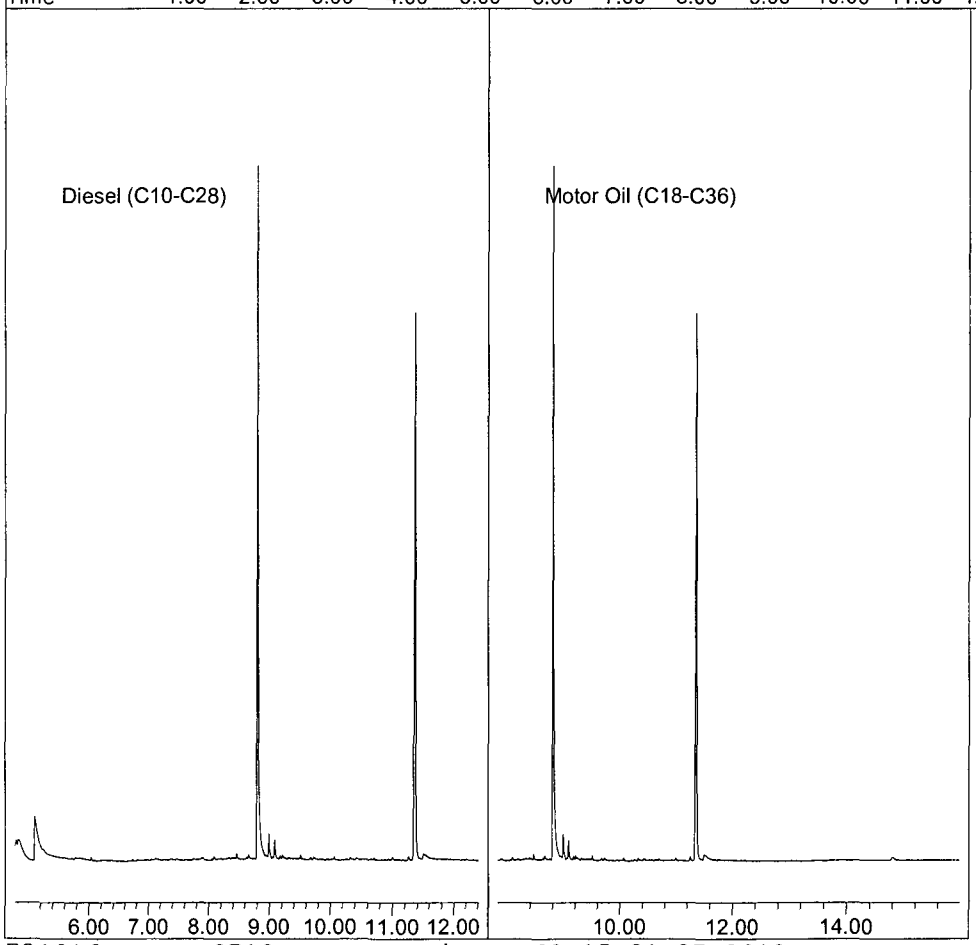
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

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			

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

Data File: G:\APOLLO\DATA\120731\731016.D
Sample : AY65041W05 5/1050





TPH Diesel Water

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68248

Sample ID: ES079

APPL ID: AY65043

Sample Collection Date: 07/17/12

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

Quantitation Report (QT Reviewed)

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

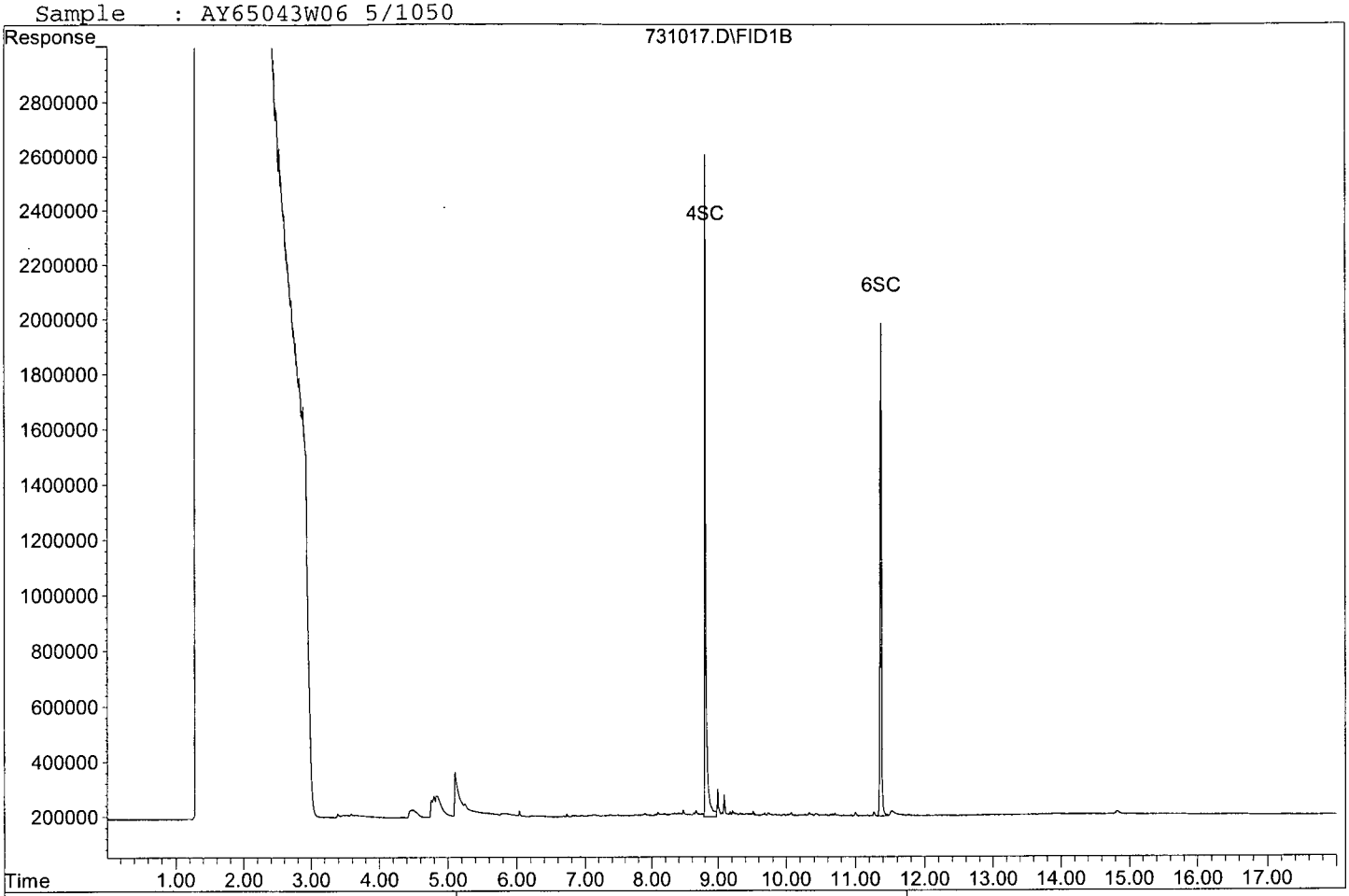
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

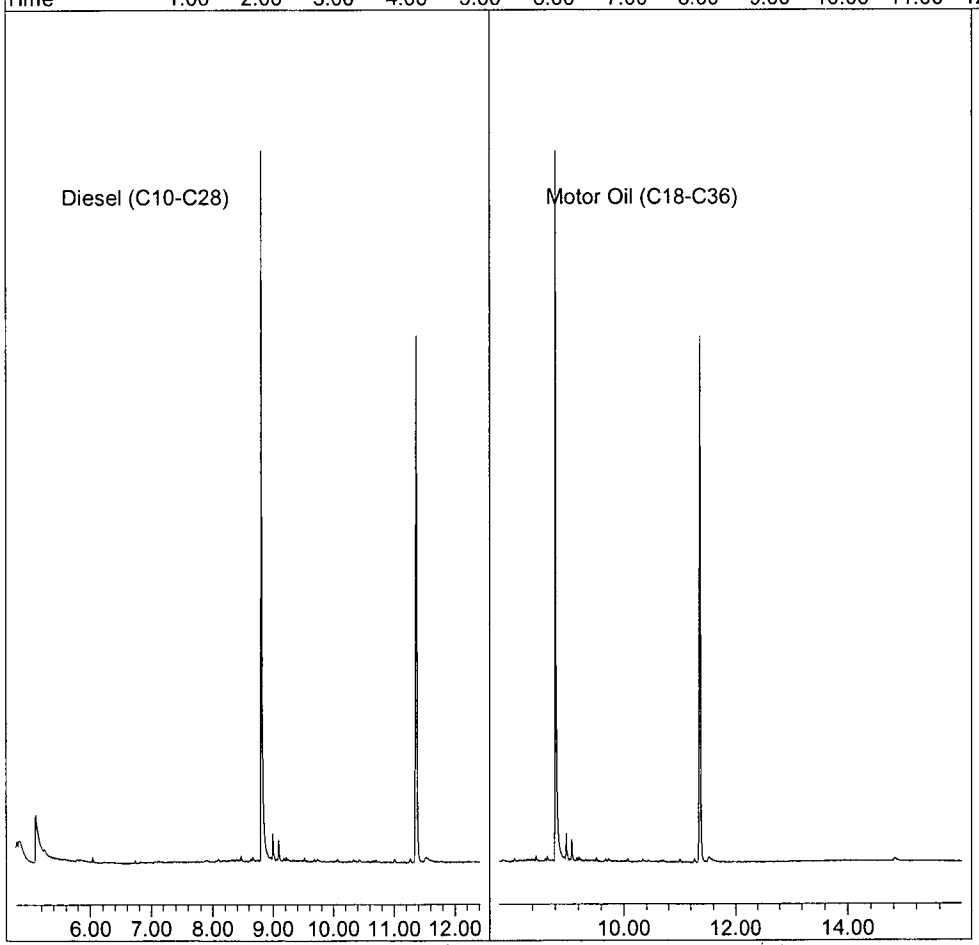
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	30157075	101.899 ppb
Surrogate Spike 142.857		Recovery =	71.33%
6) SC Octacosane(S)	11.37	26810341	84.708 ppb
Surrogate Spike 142.857		Recovery =	59.30%
Target Compounds			

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

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731017.D
Sample : AY65043W06 5/1050





731017.D TPH0719.M Fri Aug 03 15:21:35 2012

TPH Diesel Water

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68248

Sample ID: ES080

APPL ID: AY65044

Sample Collection Date: 07/17/12

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

Quantitation Report (QT Reviewed)

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

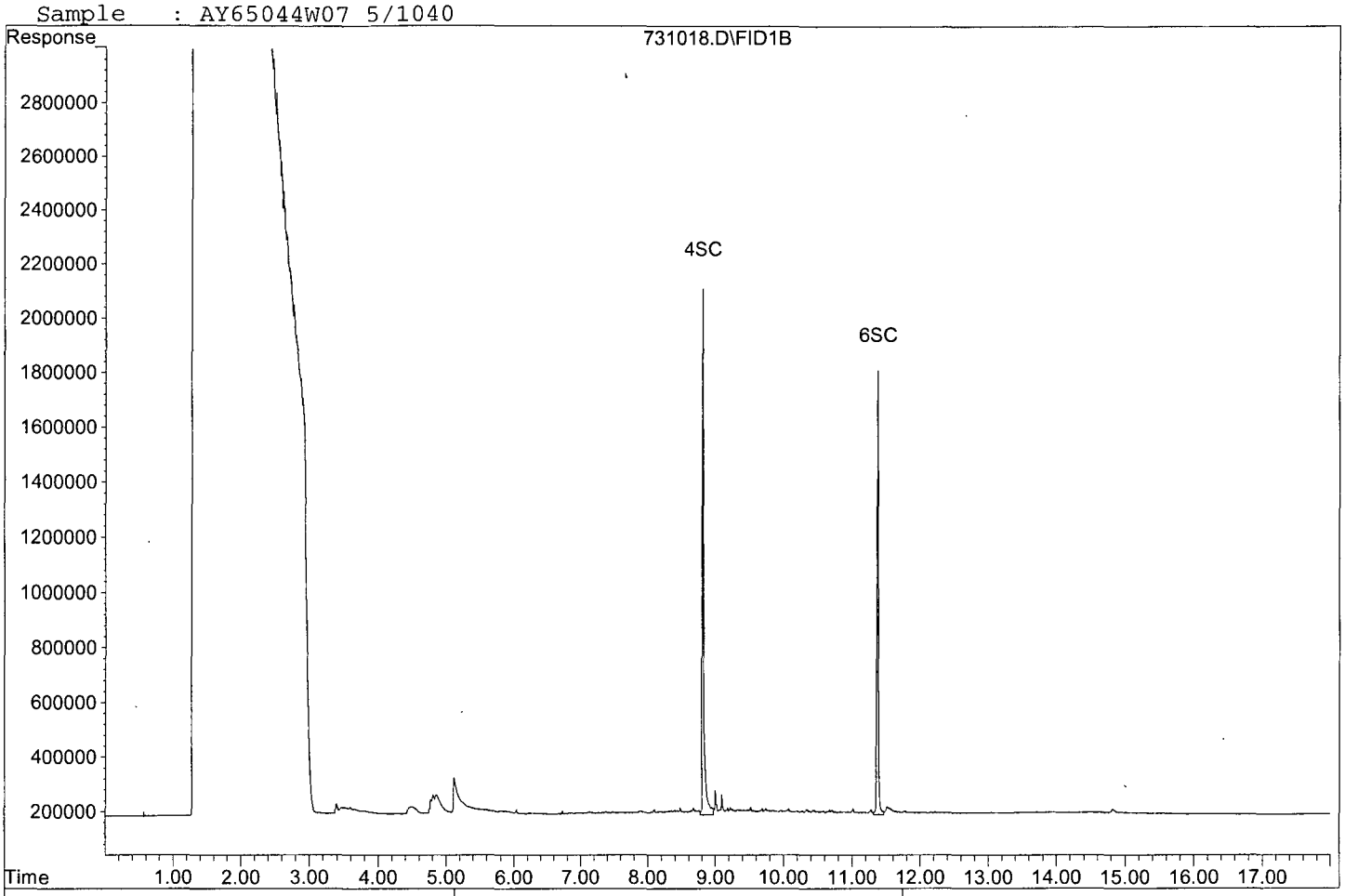
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

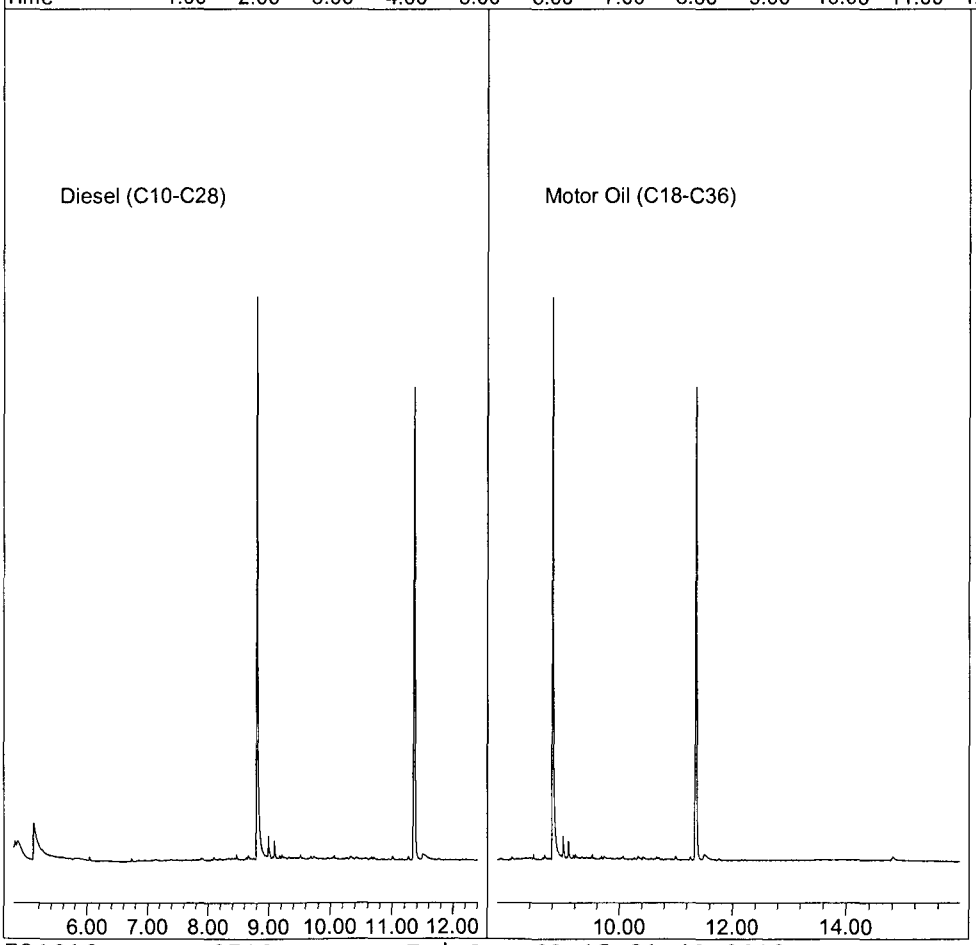
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

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			

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

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. SDG No: 68248
Case No: Initial Cal. Date: 06/22/2012 and 7/19/12
Matrix: 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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* Not Used

0.475552

Quantitation Report (QT Reviewed)

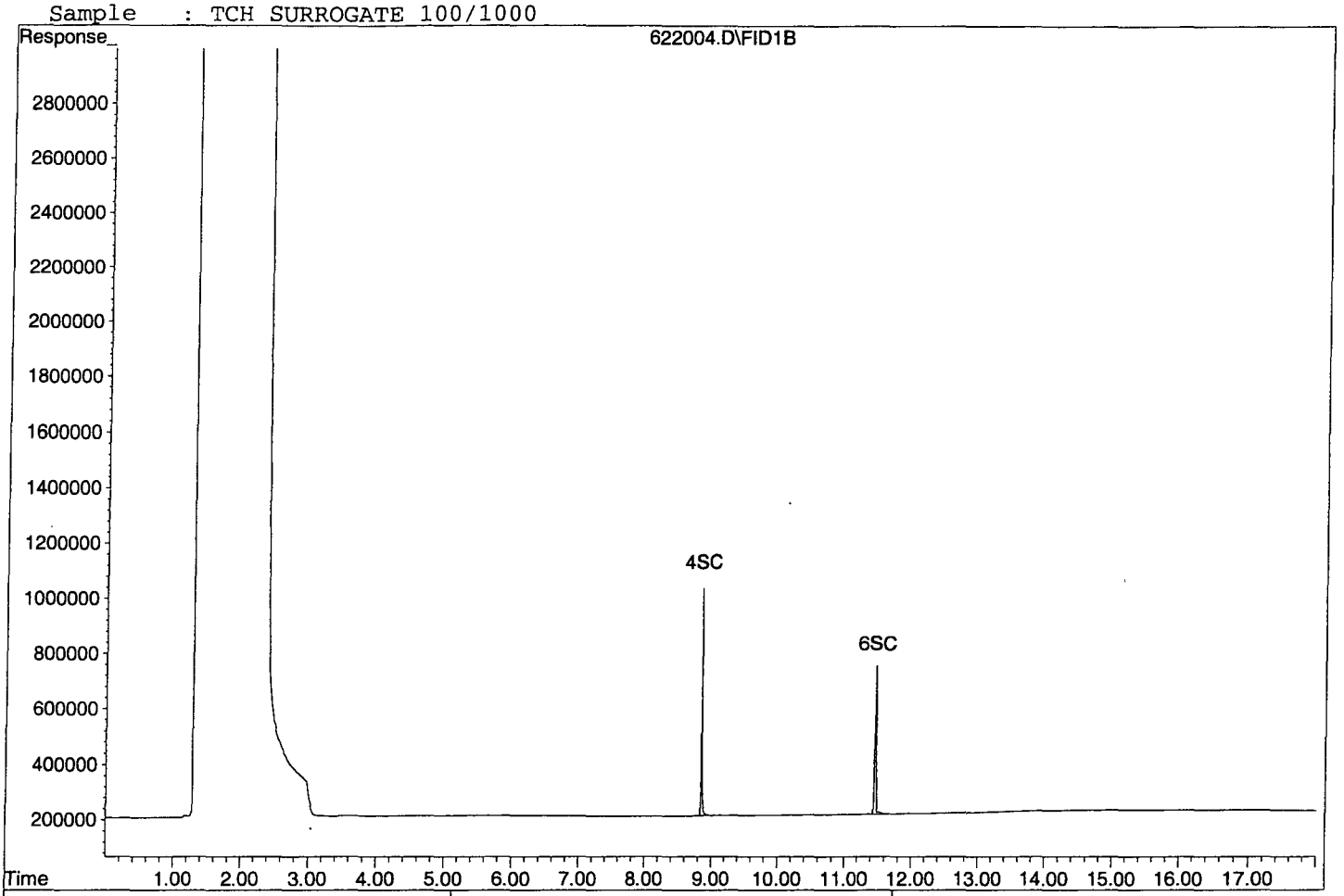
Data File : G:\APOLLO\DATA\120622\622004.D Vial: 4
Acq On : 6-22-12 18:22:29 Operator: LAC
Sample : TCH SURROGATE 100/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

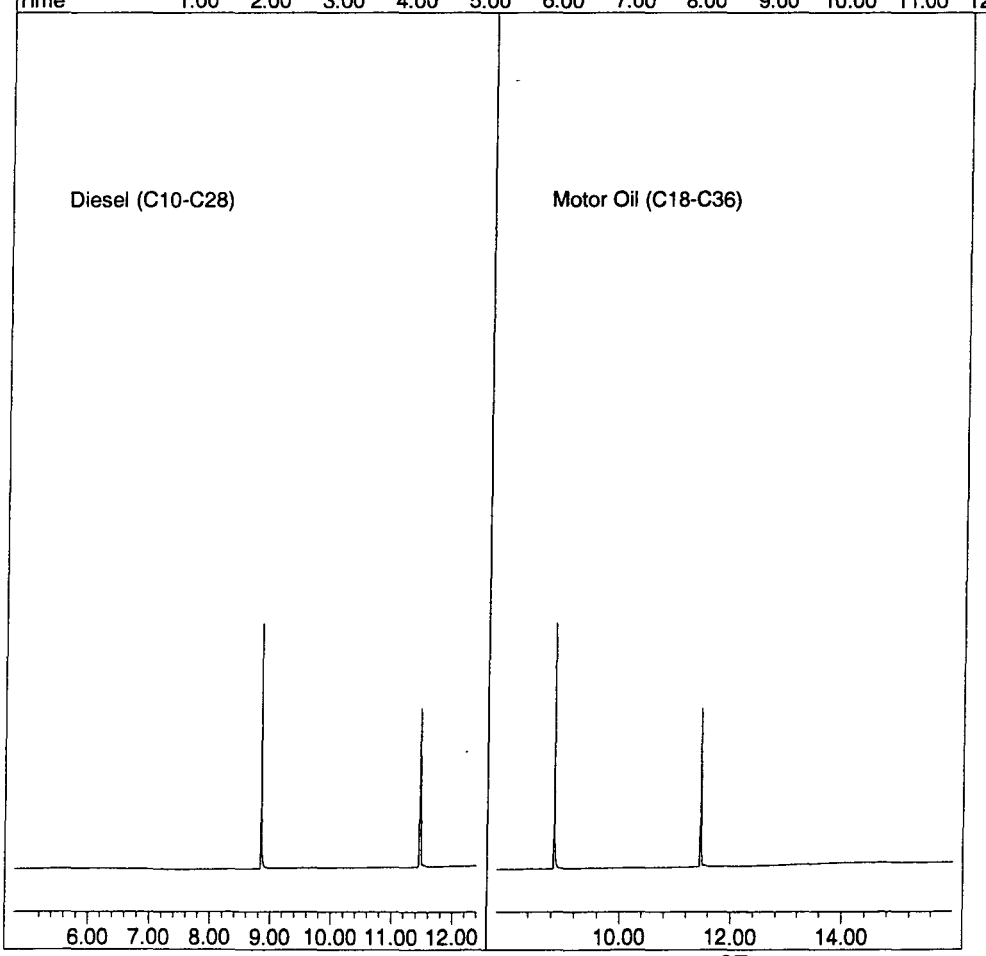
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
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				

Data File: G:\APOLLO\DATA\120622\622004.D
Sample : TCH SURROGATE 100/1000





Quantitation Report (QT Reviewed)

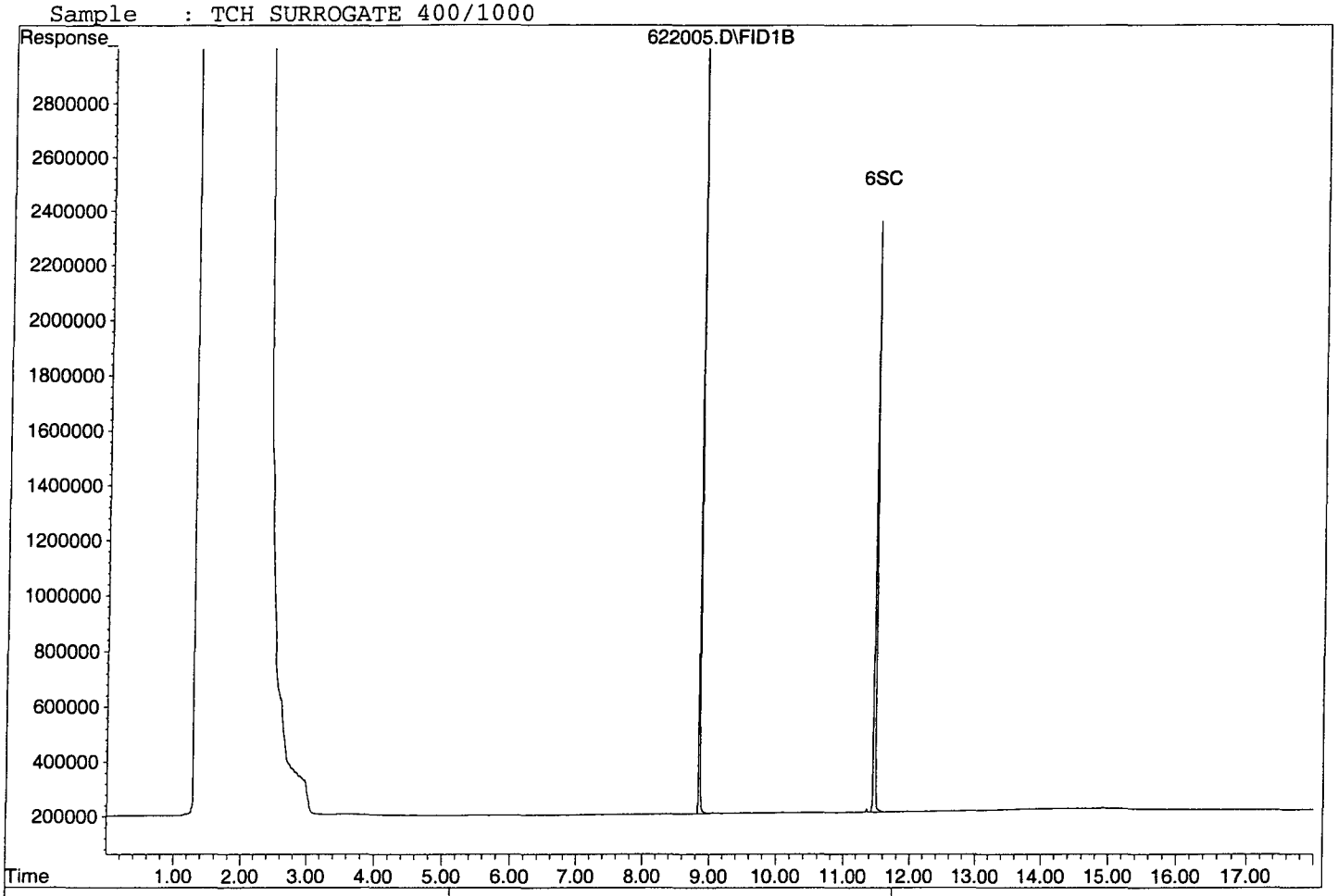
Data File : G:\APOLLO\DATA\120622\622005.D Vial: 5
Acq On : 6-22-12 18:46:55 Operator: LAC
Sample : TCH SURROGATE 400/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

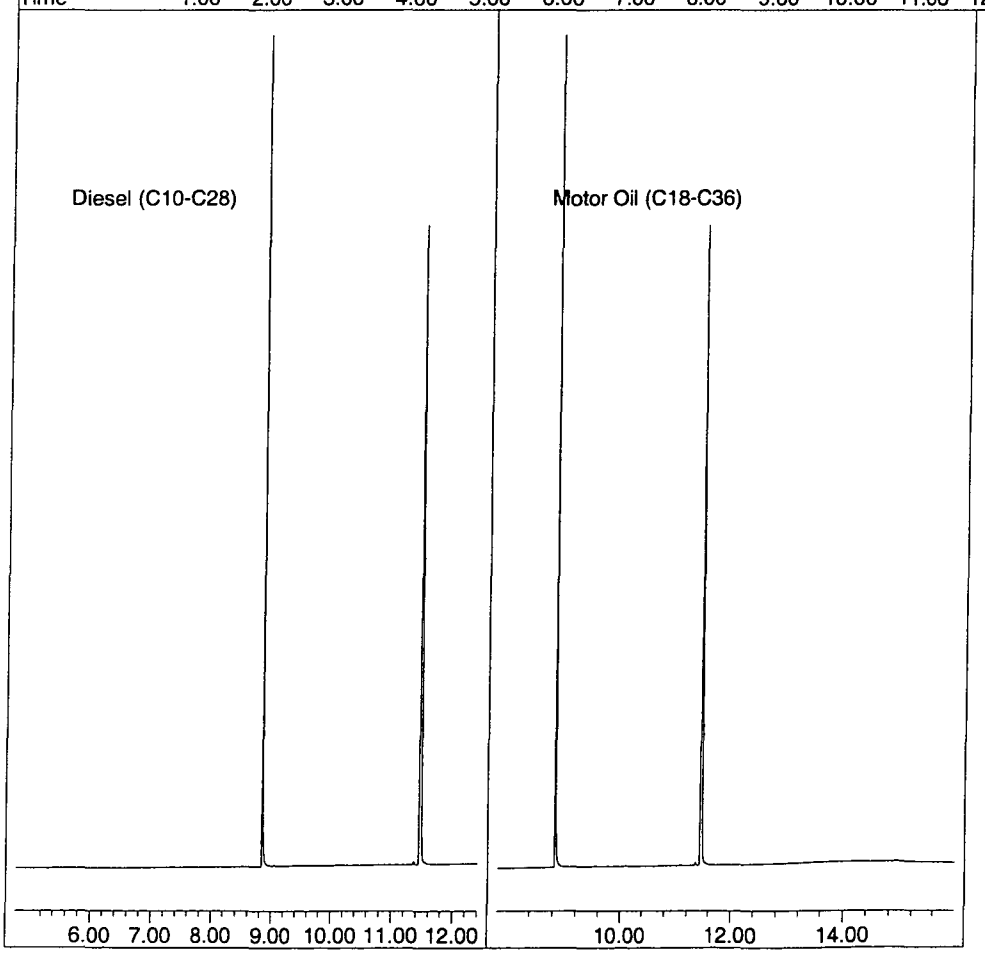
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
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				

Data File: G:\APOLLO\DATA\120622\622005.D
Sample : TCH SURROGATE 400/1000





Quantitation Report (QT Reviewed)

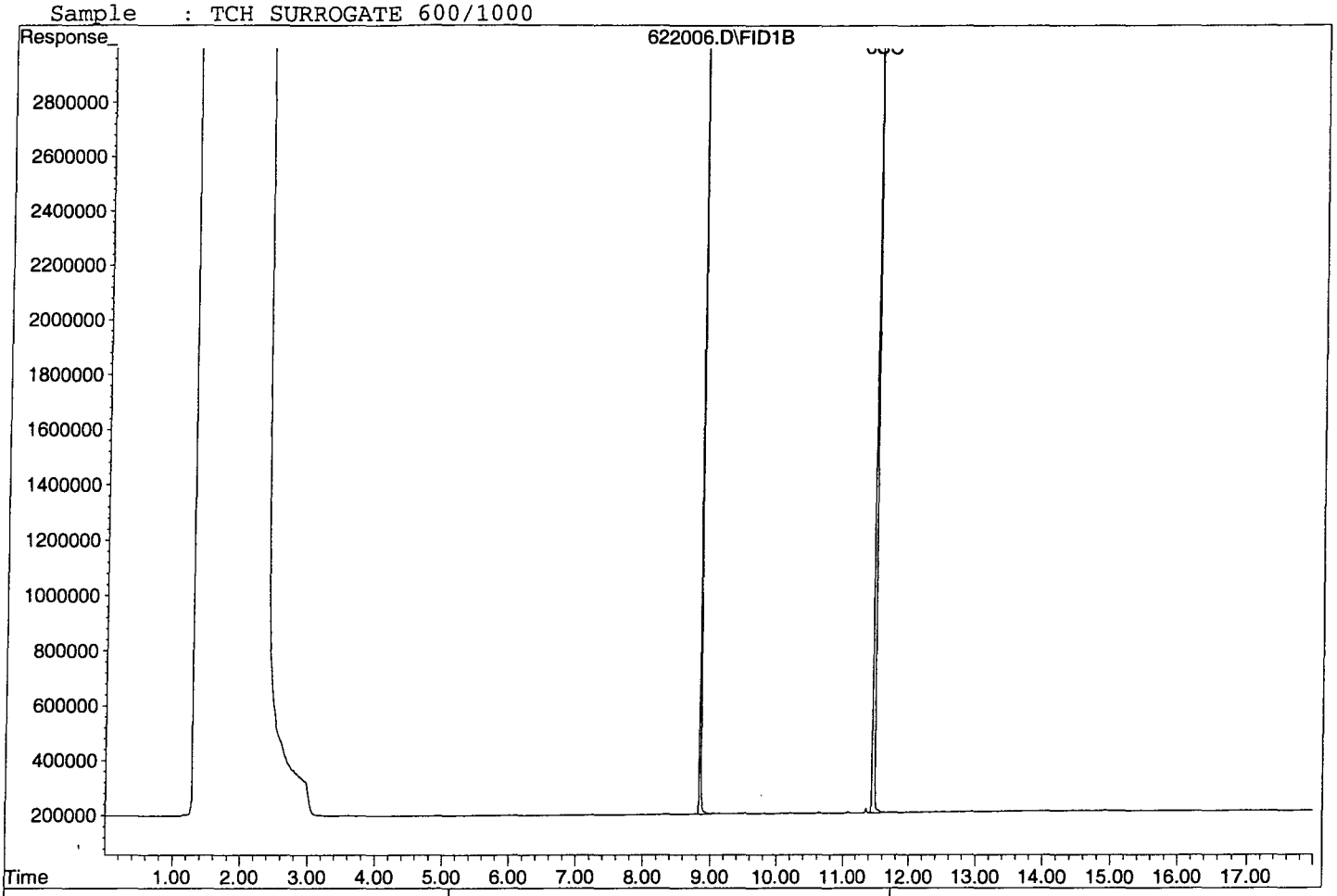
Data File : G:\APOLLO\DATA\120622\622006.D Vial: 6
Acq On : 6-22-12 19:10:46 Operator: LAC
Sample : TCH SURROGATE 600/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

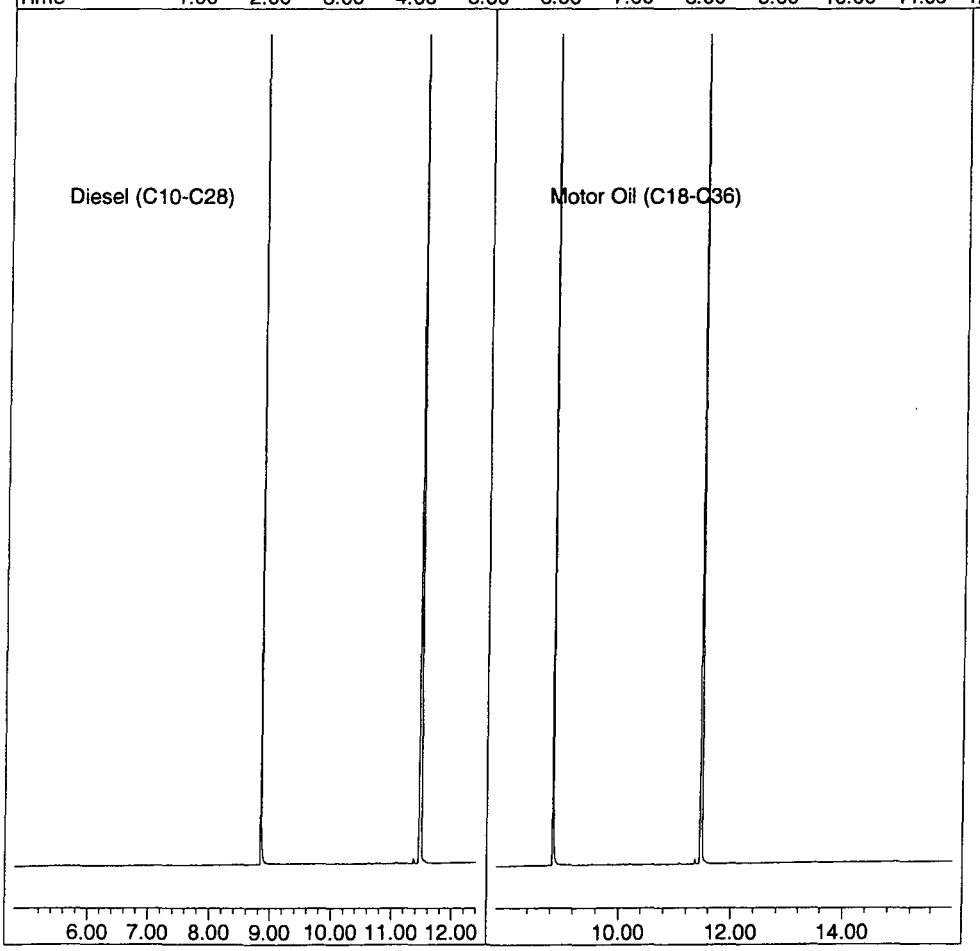
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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			

Data File: G:\APOLLO\DATA\120622\622006.D
Sample : TCH SURROGATE 600/1000





Quantitation Report (QT Reviewed)

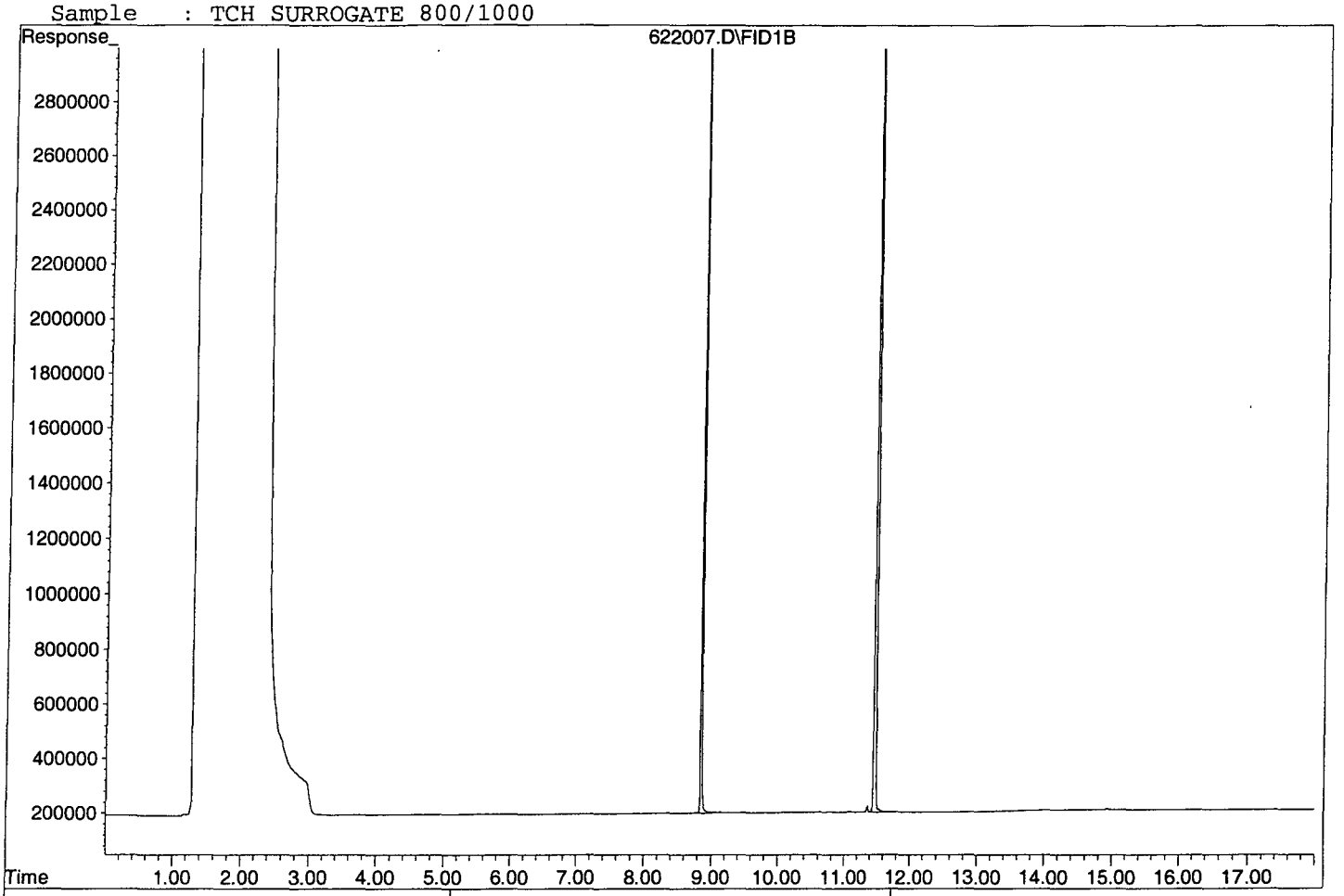
Data File : G:\APOLLO\DATA\120622\622007.D Vial: 7
Acq On : 6-22-12 19:34:47 Operator: LAC
Sample : TCH SURROGATE 800/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

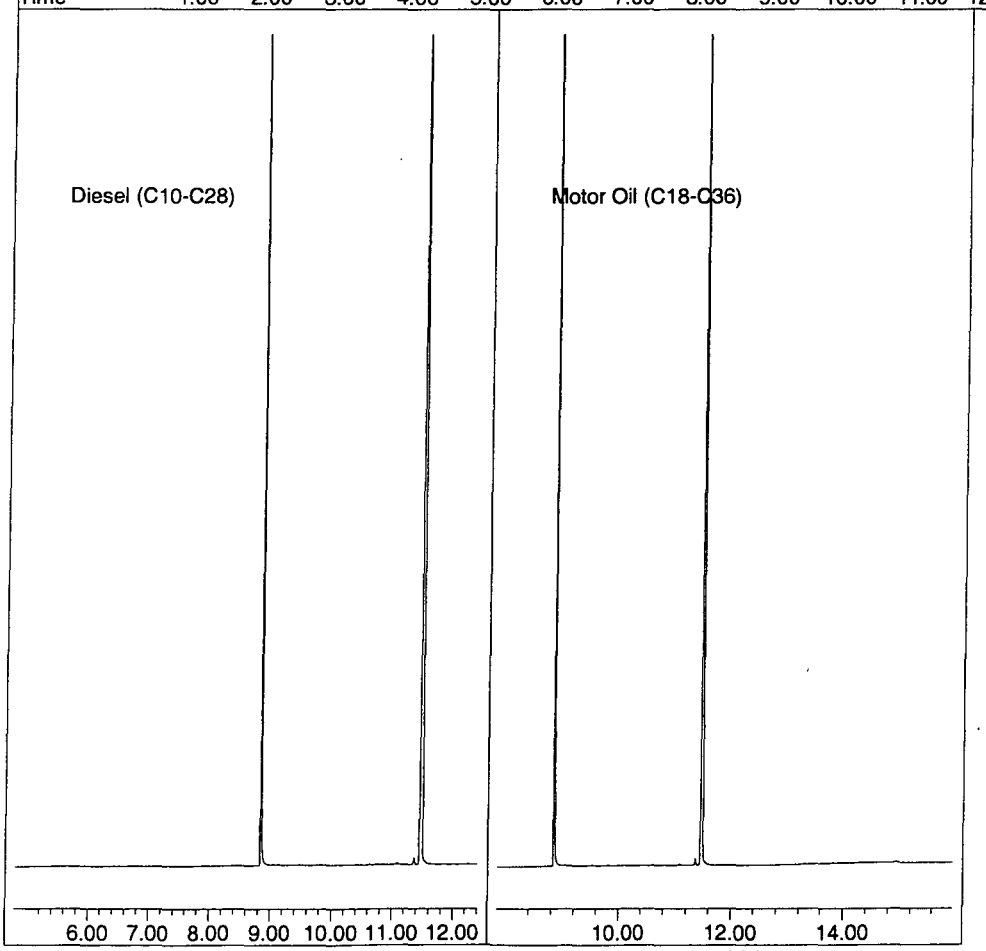
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
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				

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





Quantitation Report (QT Reviewed)

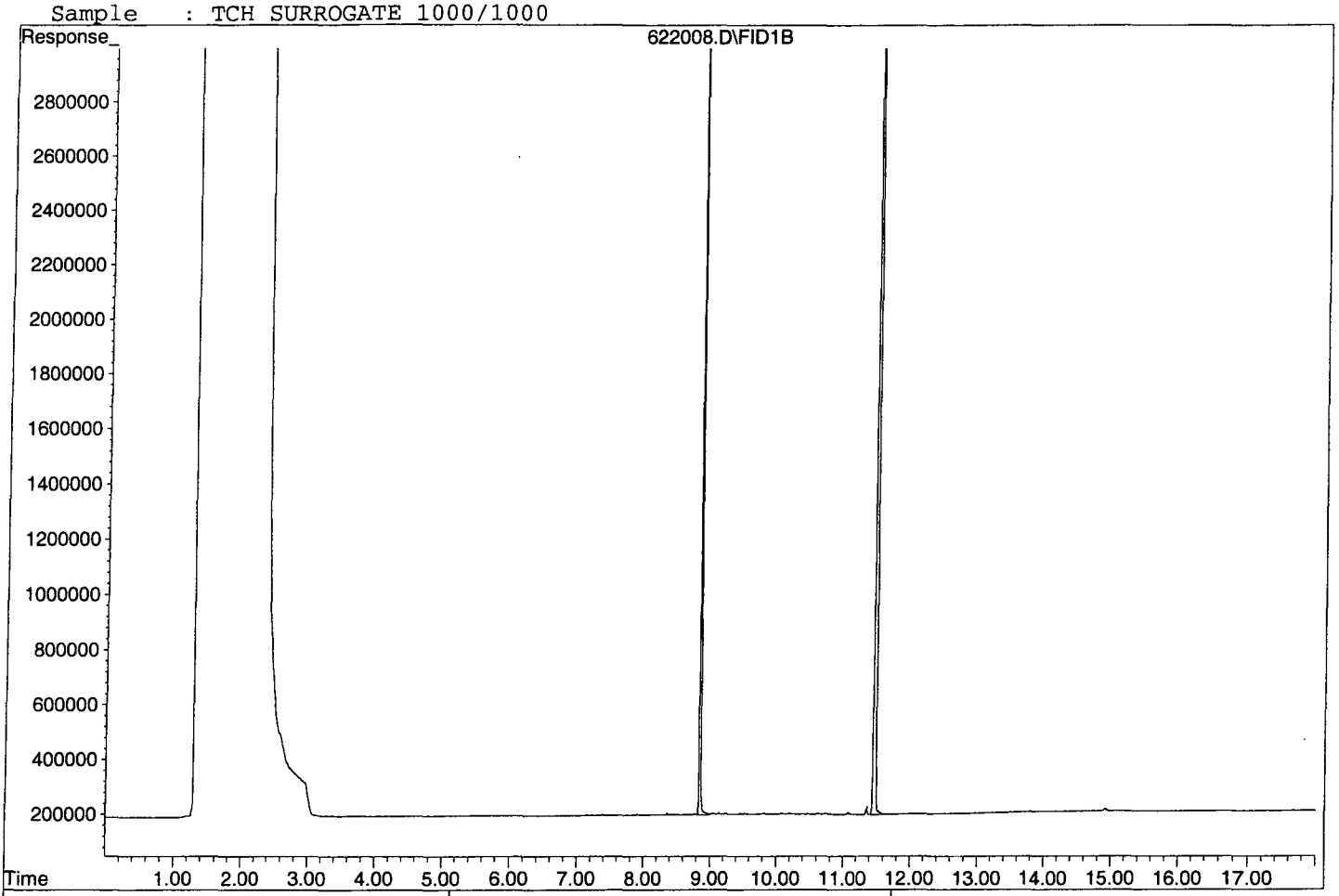
Data File : G:\APOLLO\DATA\120622\622008.D Vial: 8
Acq On : 6-22-12 19:58:49 Operator: LAC
Sample : TCH SURROGATE 1000/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:39 2012 Quant Results File: TPH0622.RES

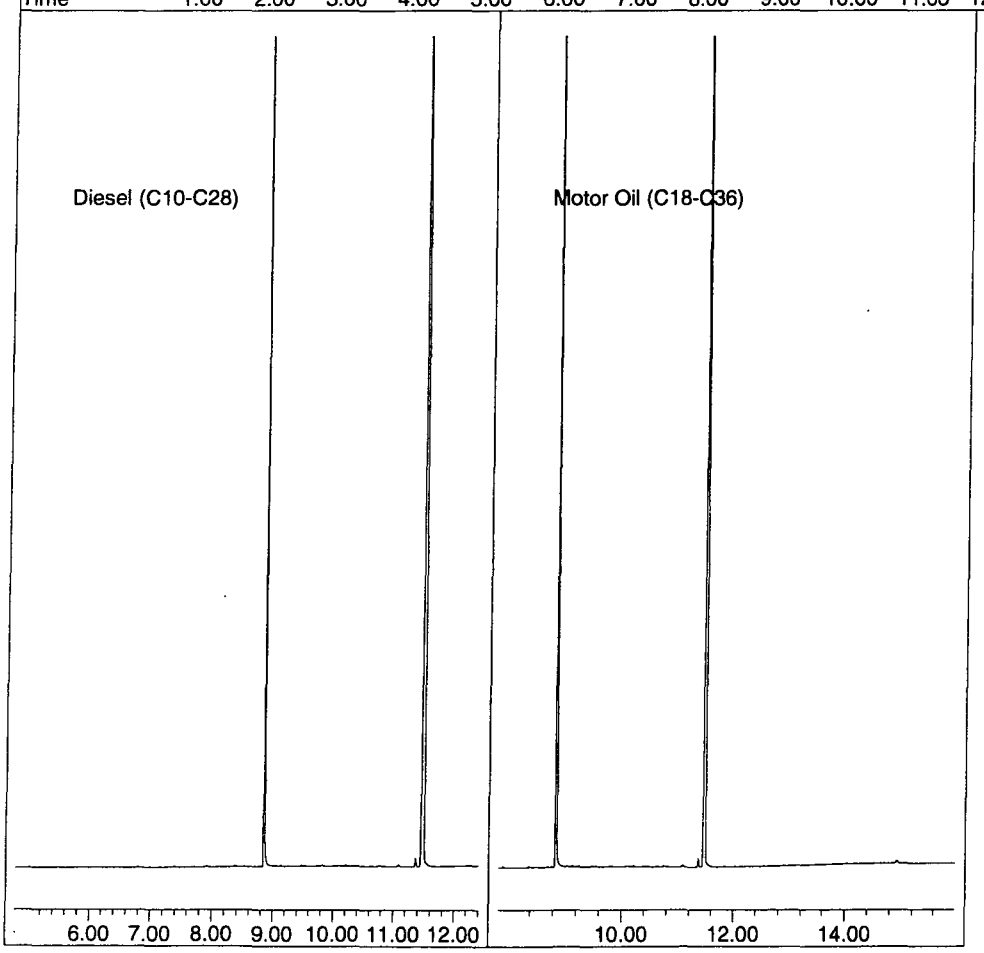
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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			

Data File: G:\APOLLO\DATA\120622\622008.D
Sample : TCH SURROGATE 1000/1000





Quantitation Report (QT Reviewed)

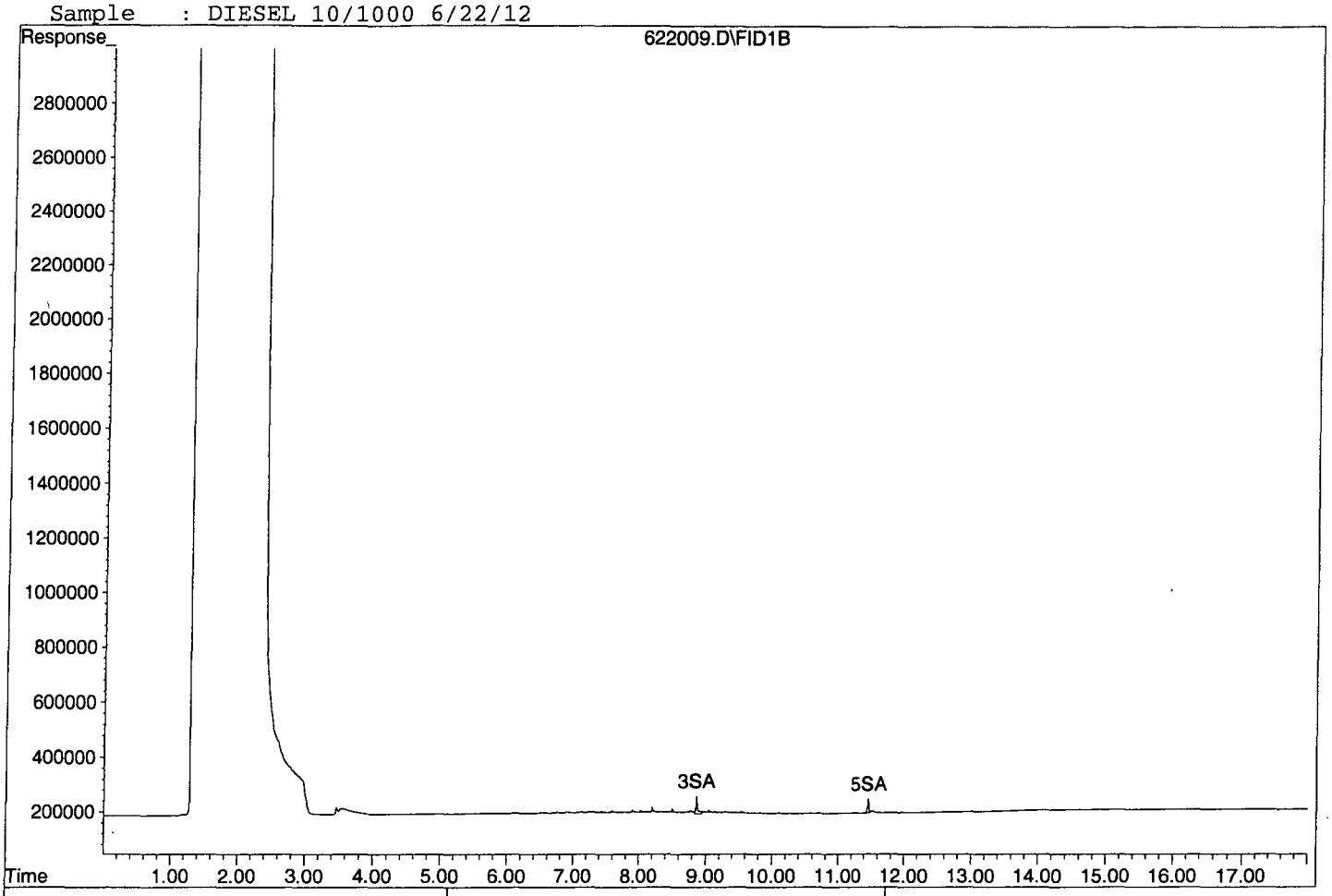
Data File : G:\APOLLO\DATA\120622\622009.D Vial: 9
Acq On : 6-22-12 20:22:56 Operator: LAC
Sample : DIESEL 10/1000 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:08 2012 Quant Results File: TPH0622.RES

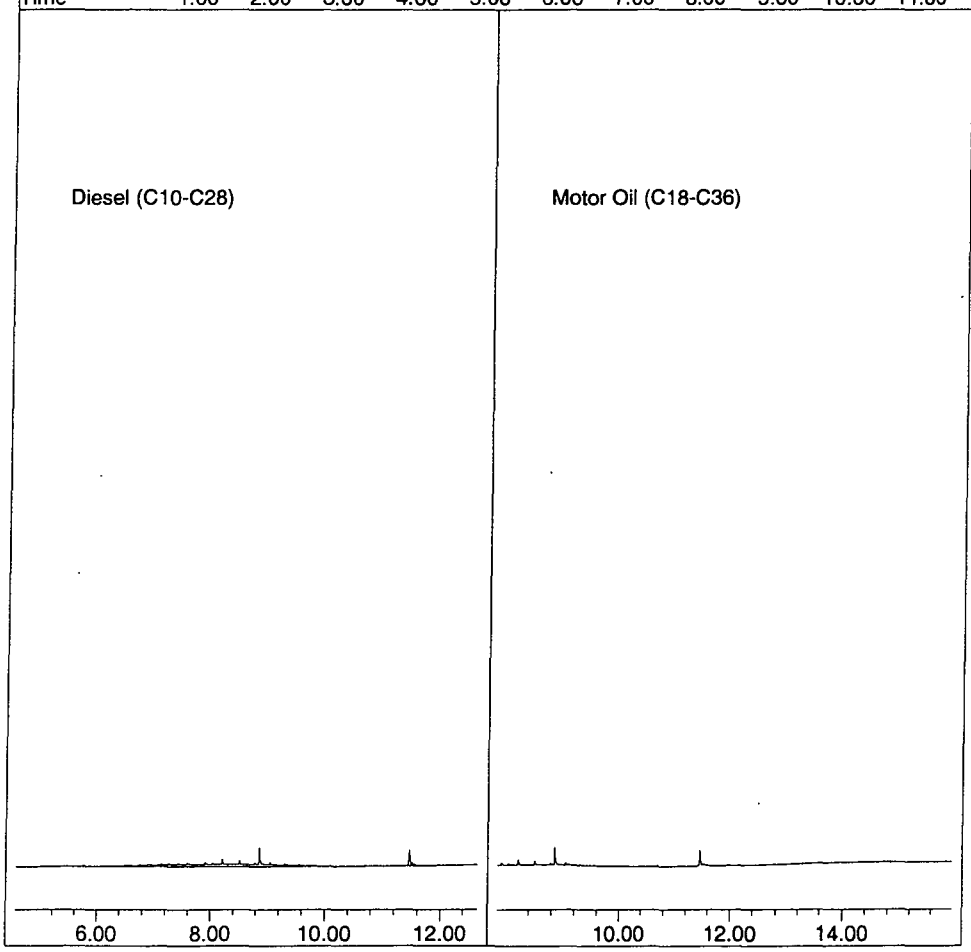
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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

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





Quantitation Report (Not Reviewed)

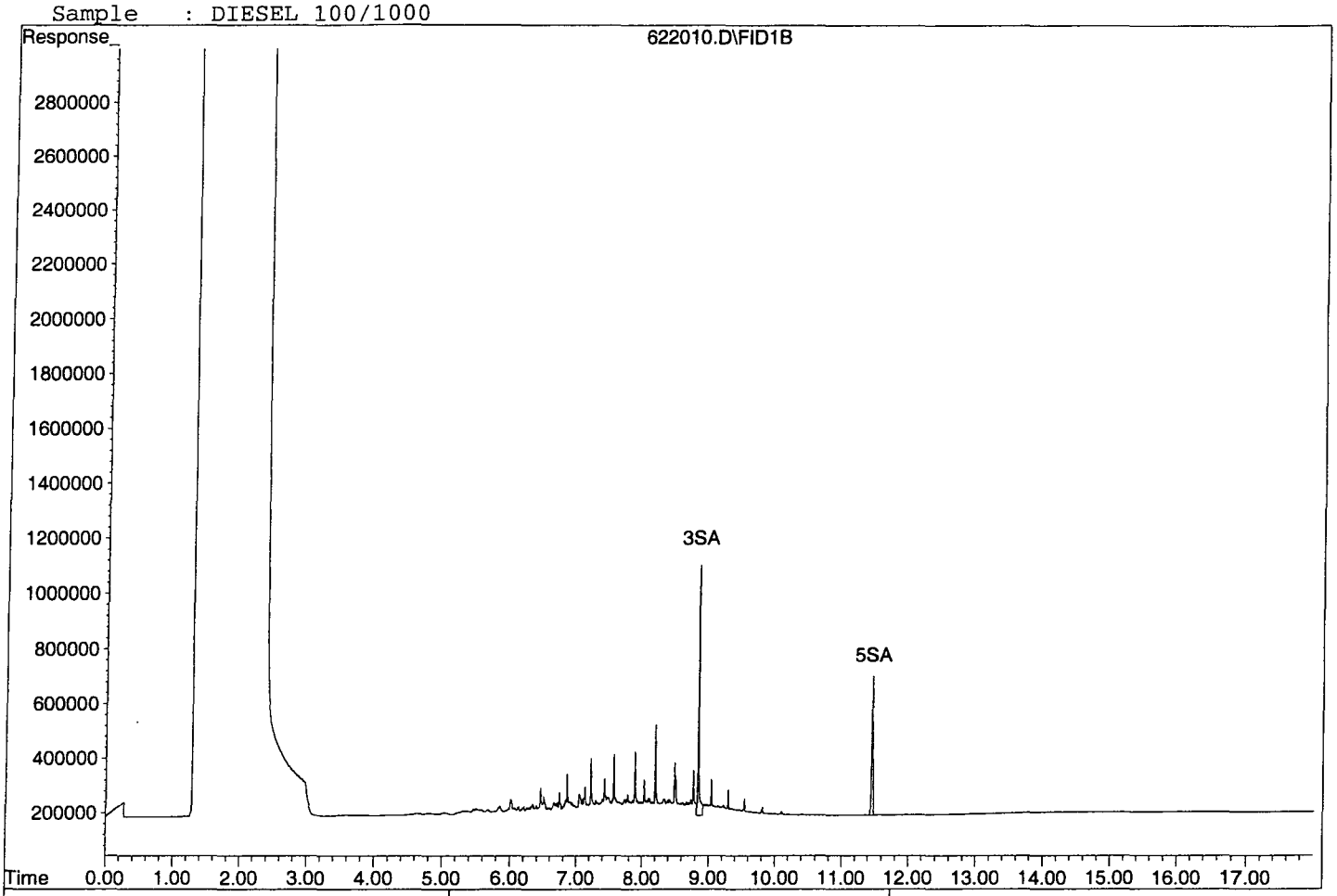
Data File : G:\APOLLO\DATA\120622\622010.D Vial: 10
Acq On : 6-22-12 20:47:06 Operator: LAC
Sample : DIESEL 100/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

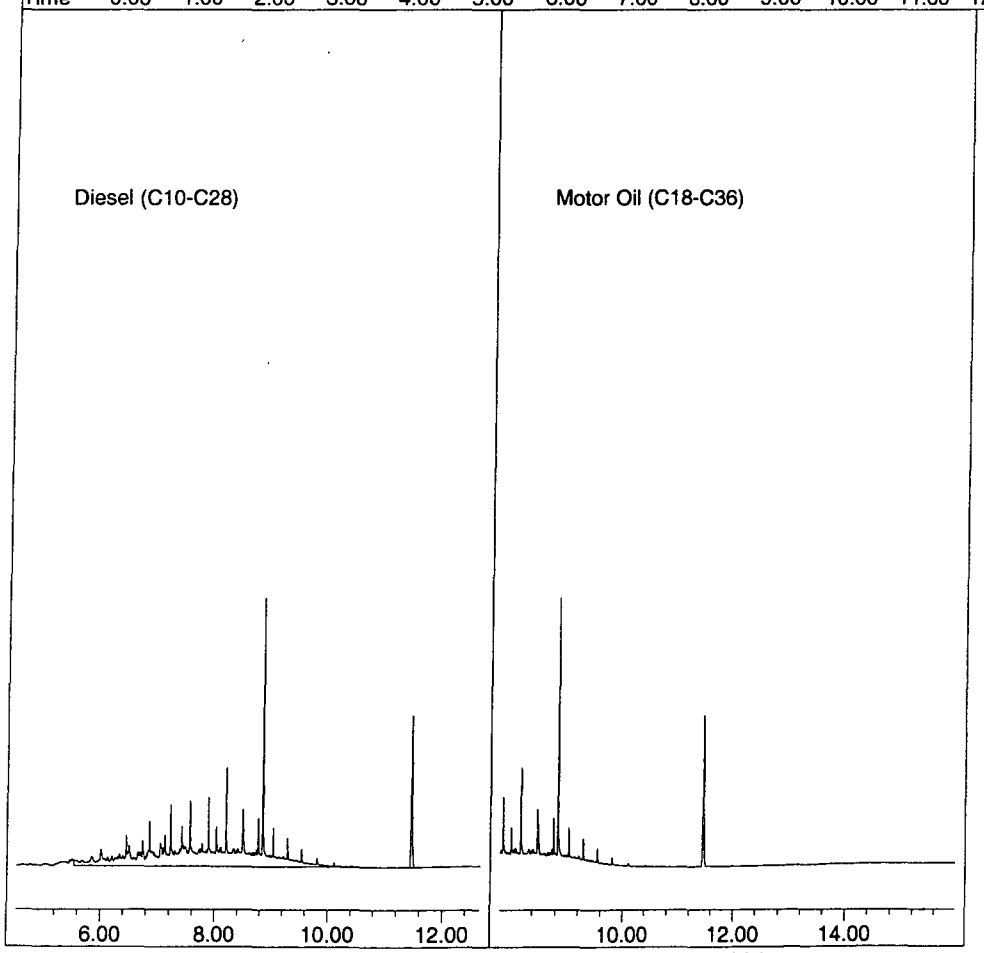
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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

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





Quantitation Report (Not Reviewed)

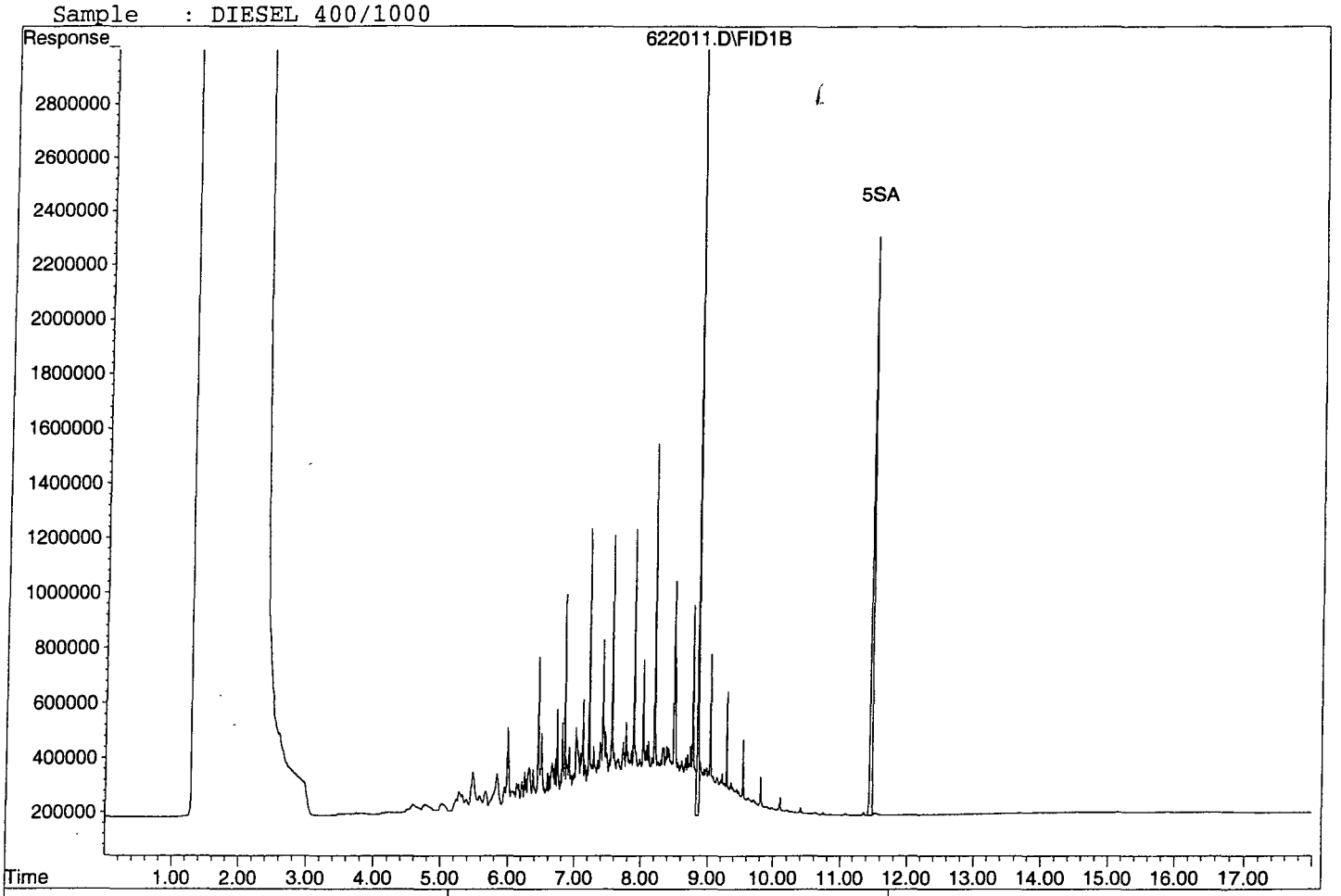
Data File : G:\APOLLO\DATA\120622\622011.D Vial: 11
Acq On : 6-22-12 21:11:13 Operator: LAC
Sample : DIESEL 400/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

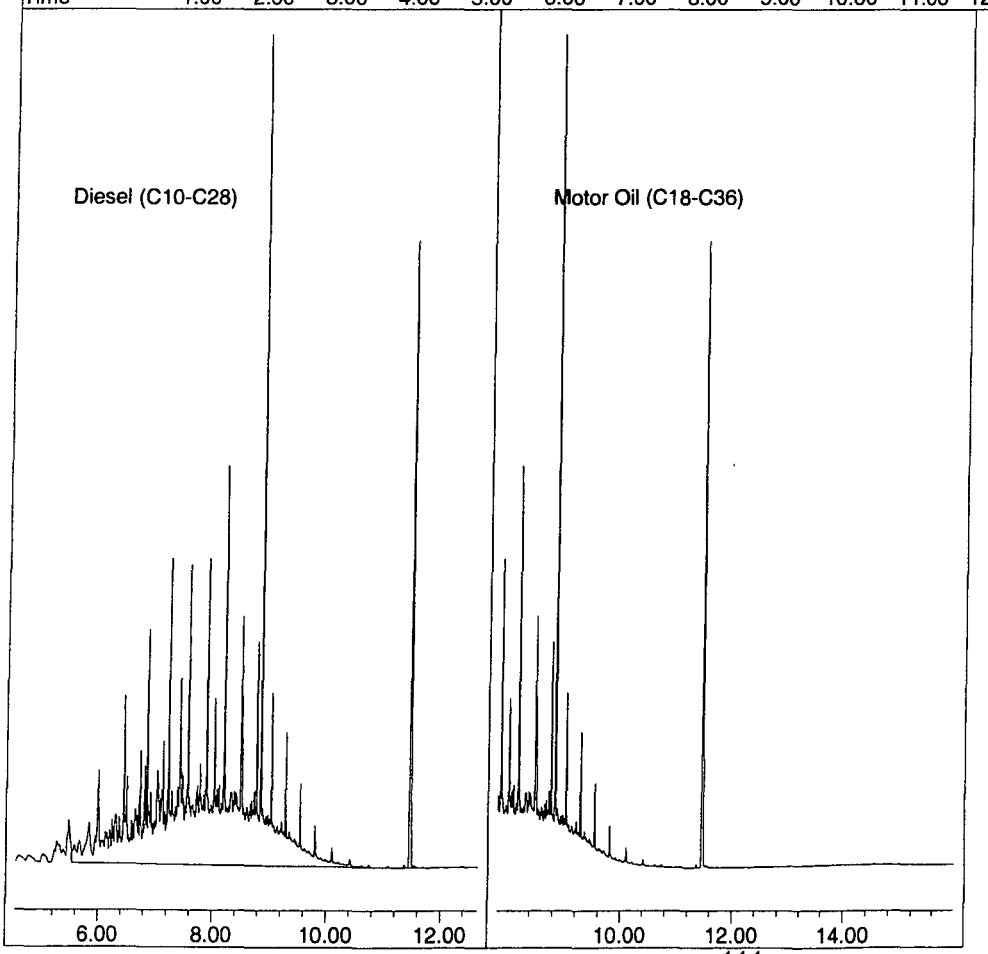
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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

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





Quantitation Report (Not Reviewed)

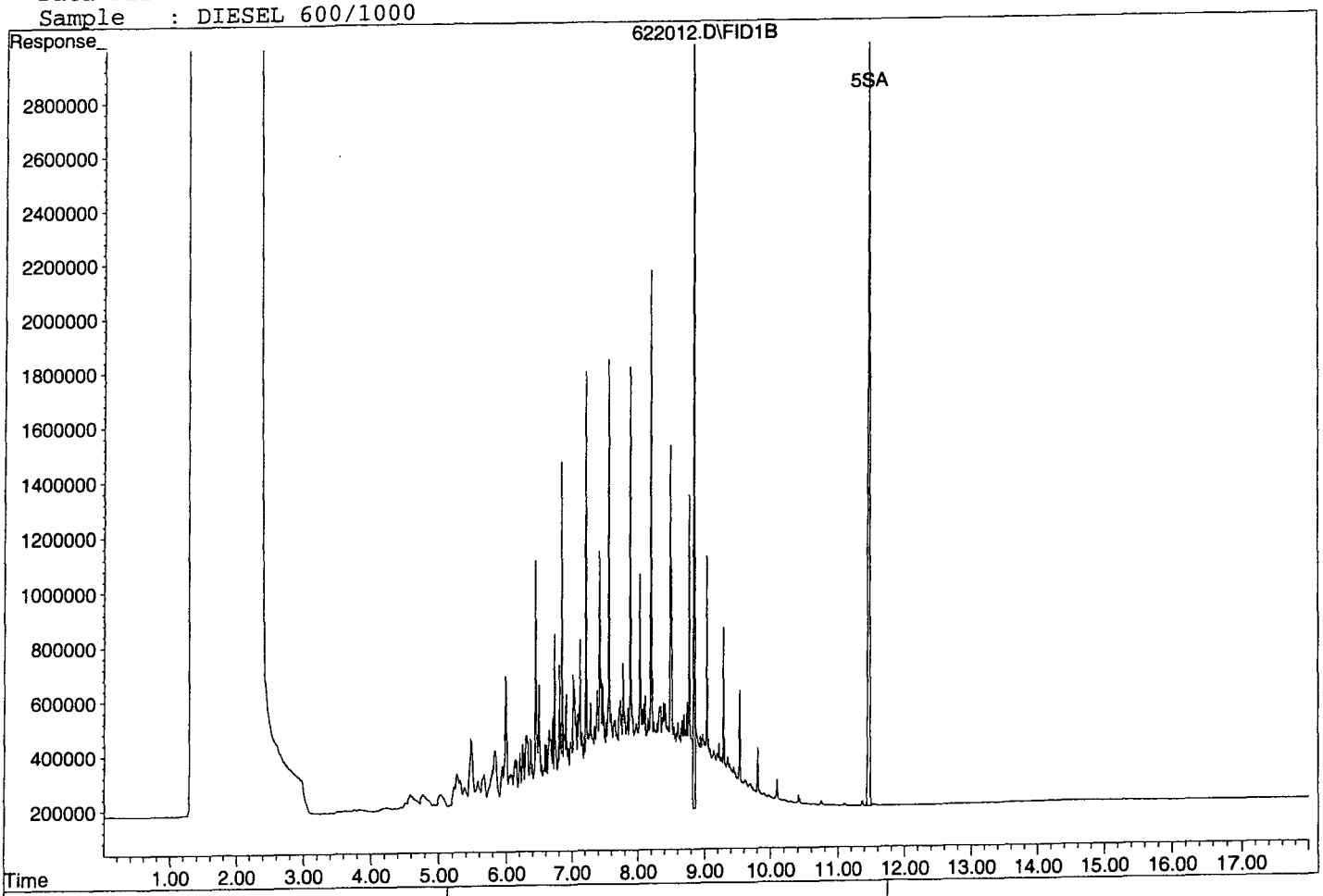
Data File : G:\APOLLO\DATA\120622\622012.D Vial: 12
Acq On : 6-22-12 21:35:18 Operator: LAC
Sample : DIESEL 600/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

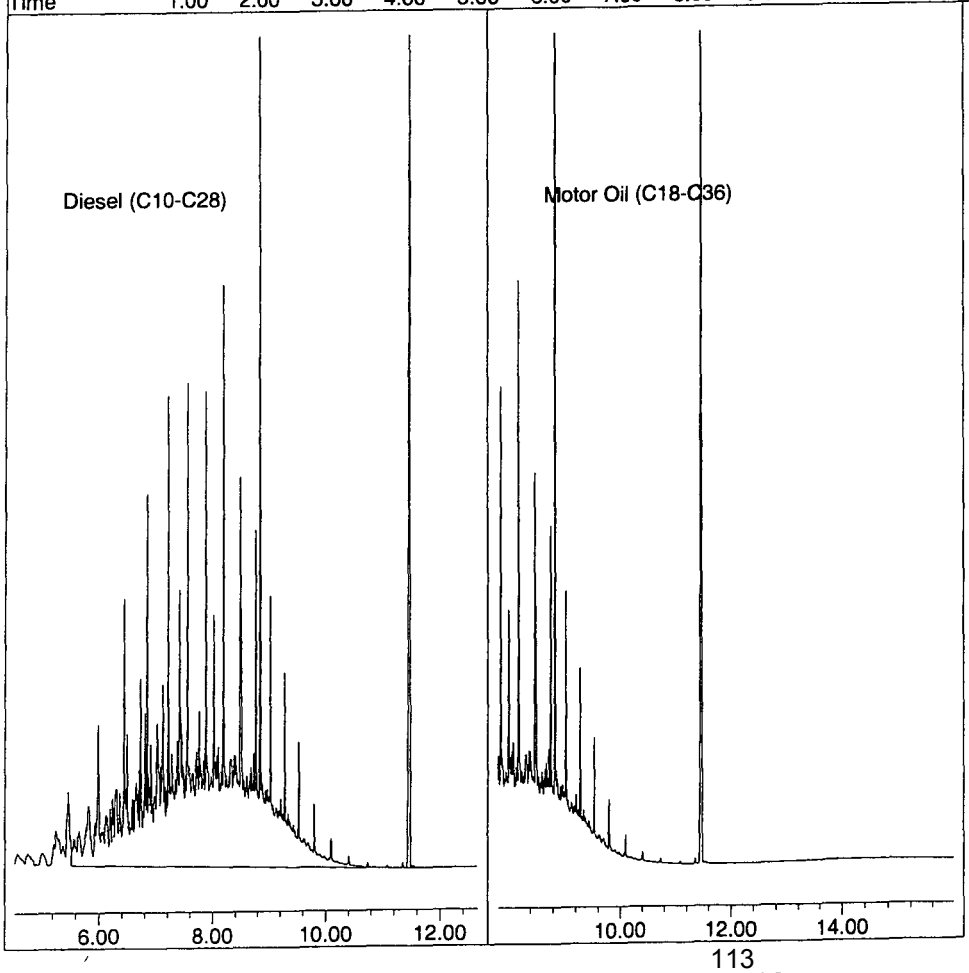
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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

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





Quantitation Report (Not Reviewed)

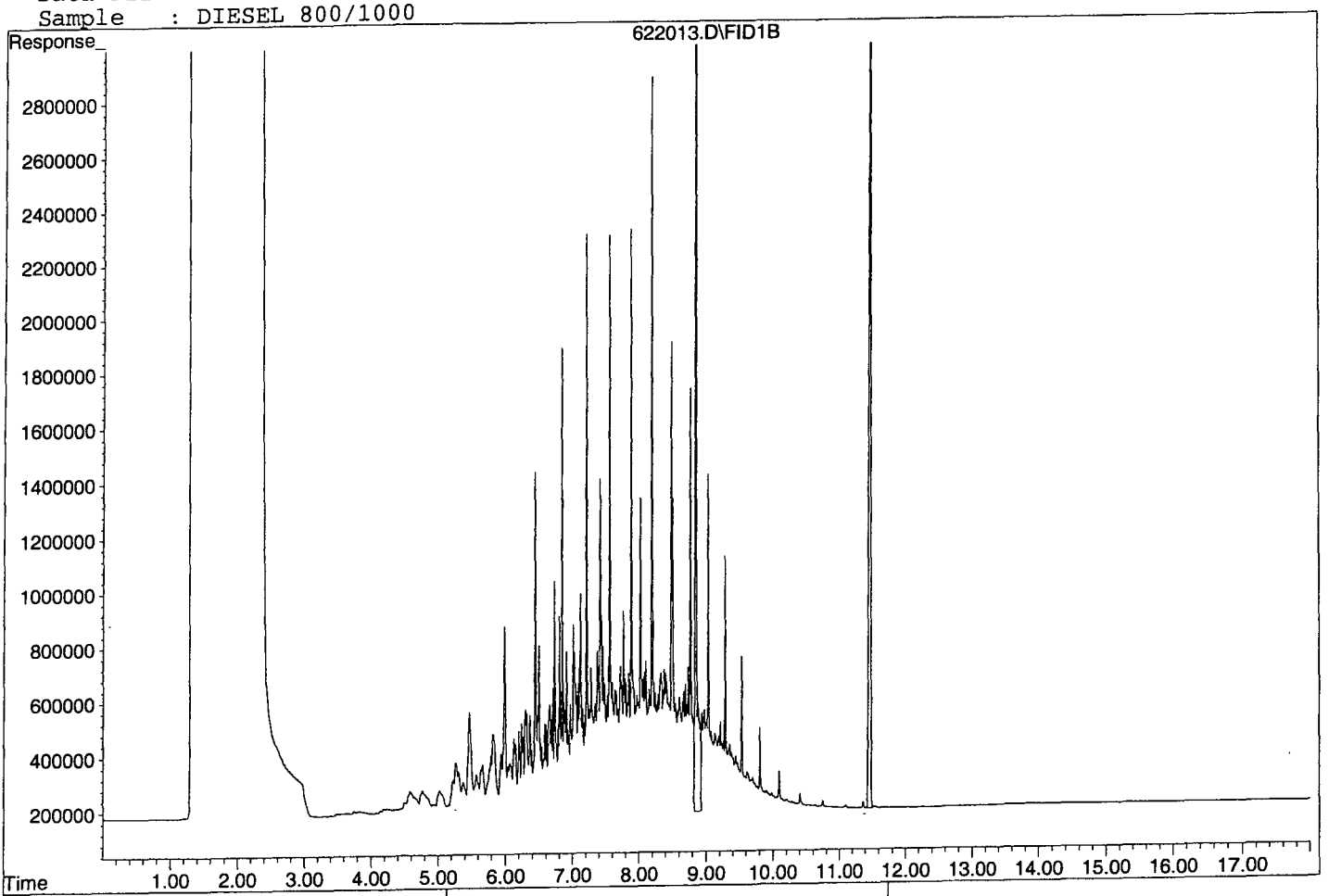
Data File : G:\APOLLO\DATA\120622\622013.D Vial: 13
Acq On : 6-22-12 21:59:20 Operator: LAC
Sample : DIESEL 800/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

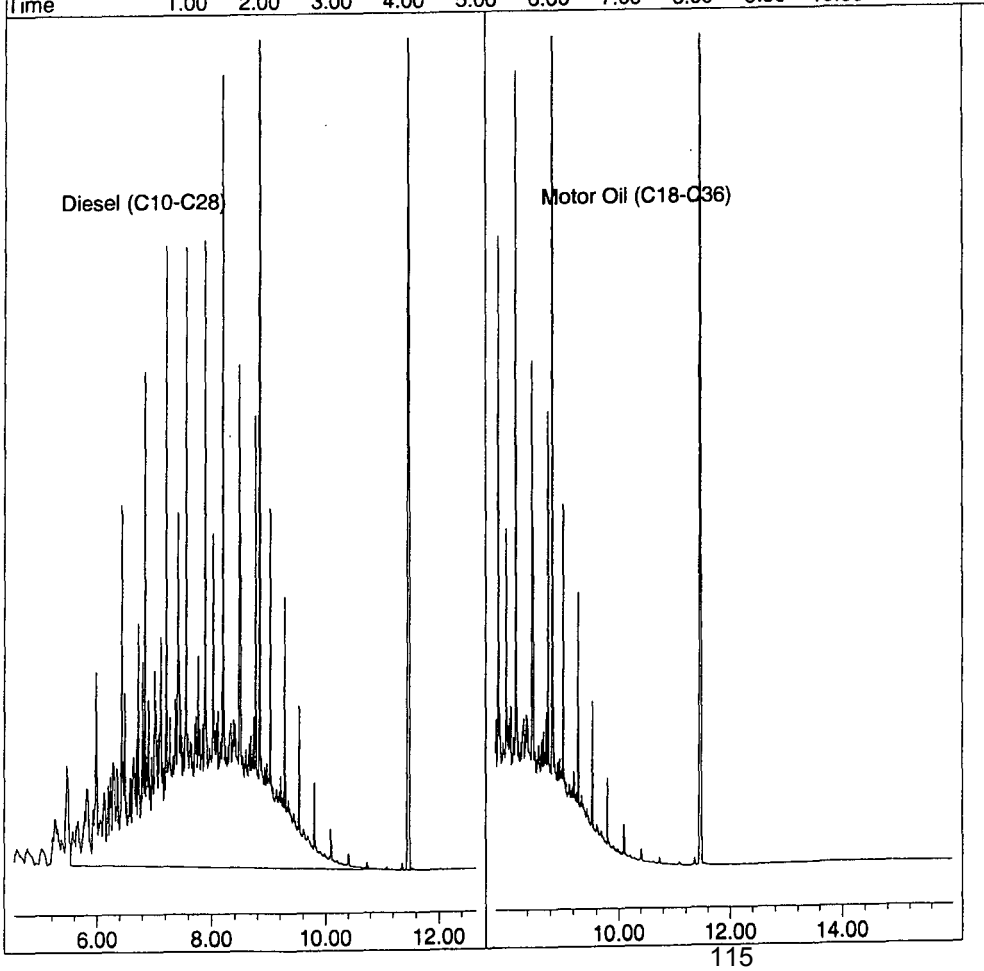
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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

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





Quantitation Report (Not Reviewed)

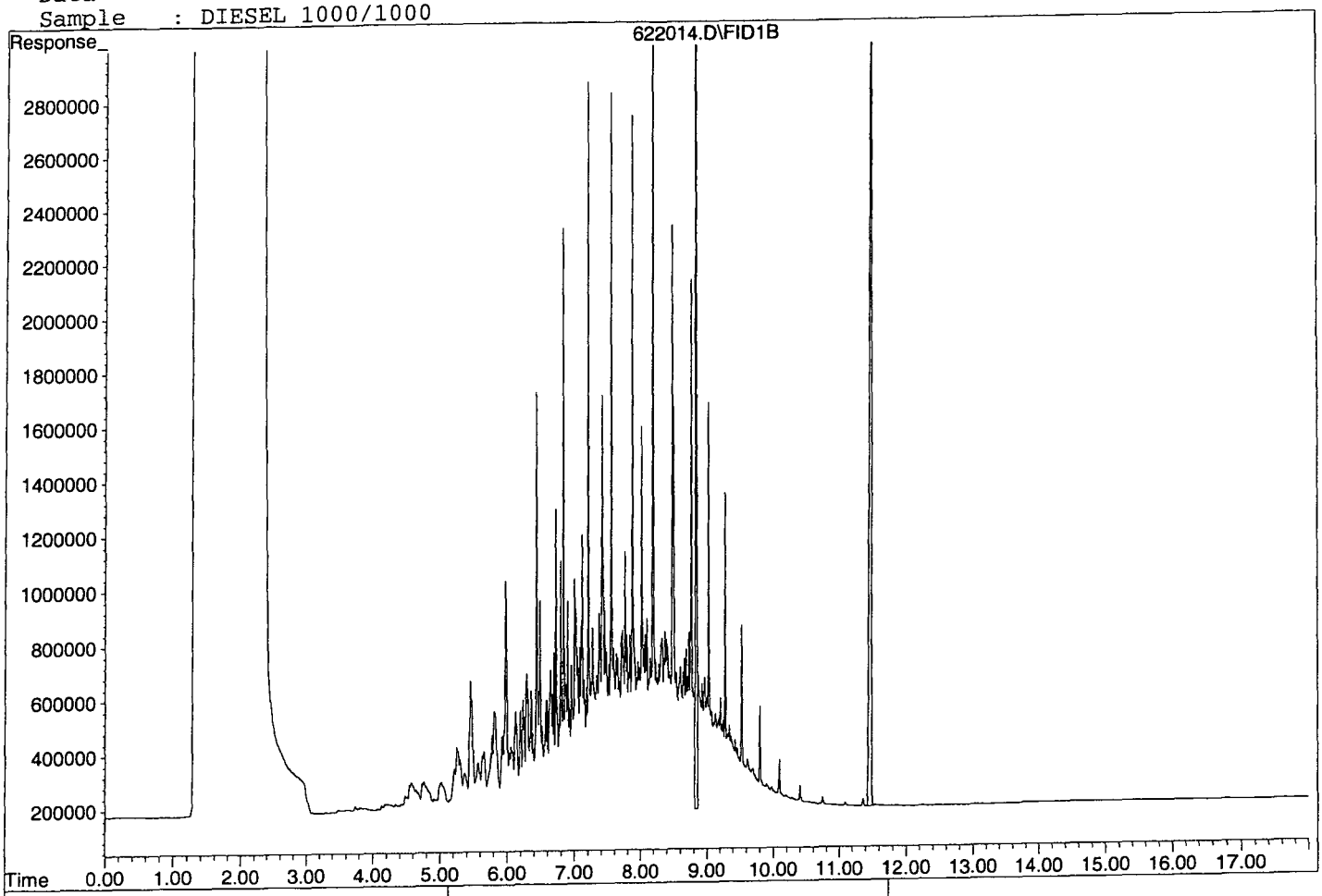
Data File : G:\APOLLO\DATA\120622\622014.D Vial: 14
Acq On : 6-22-12 22:23:21 Operator: LAC
Sample : DIESEL 1000/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

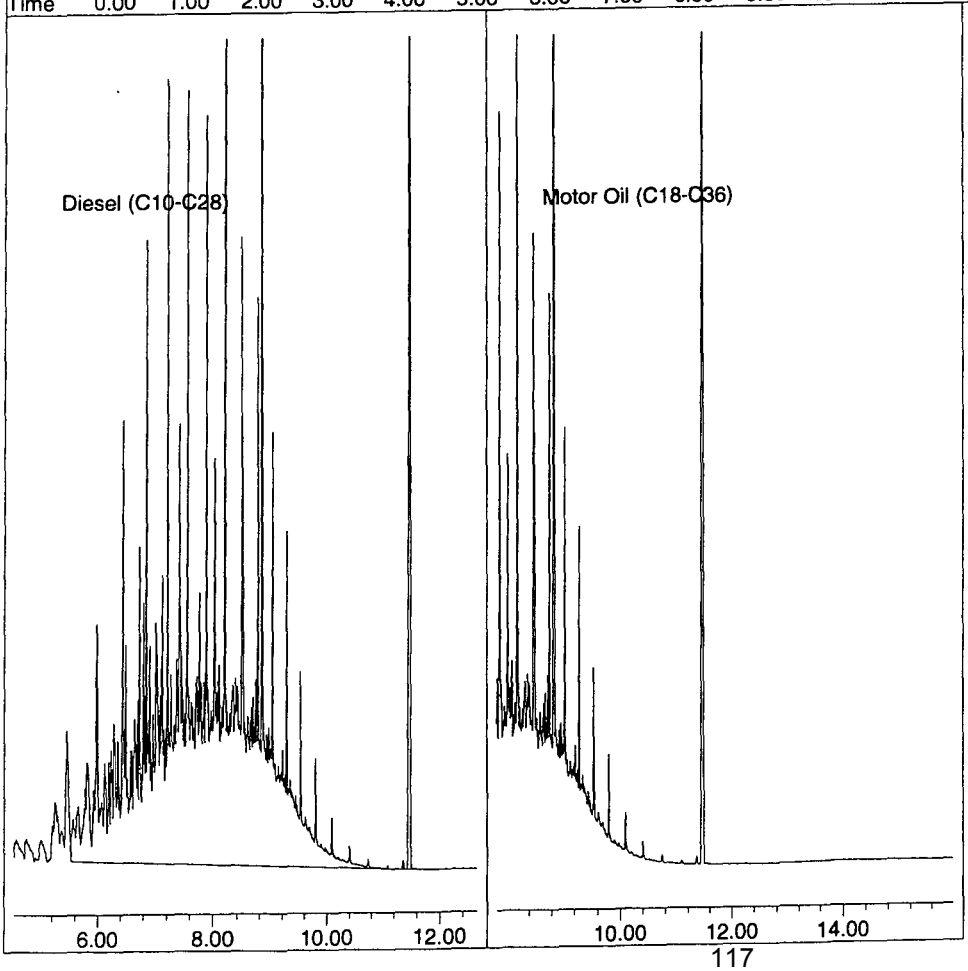
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
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

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							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.0		

Quantitation Report (QT Reviewed)

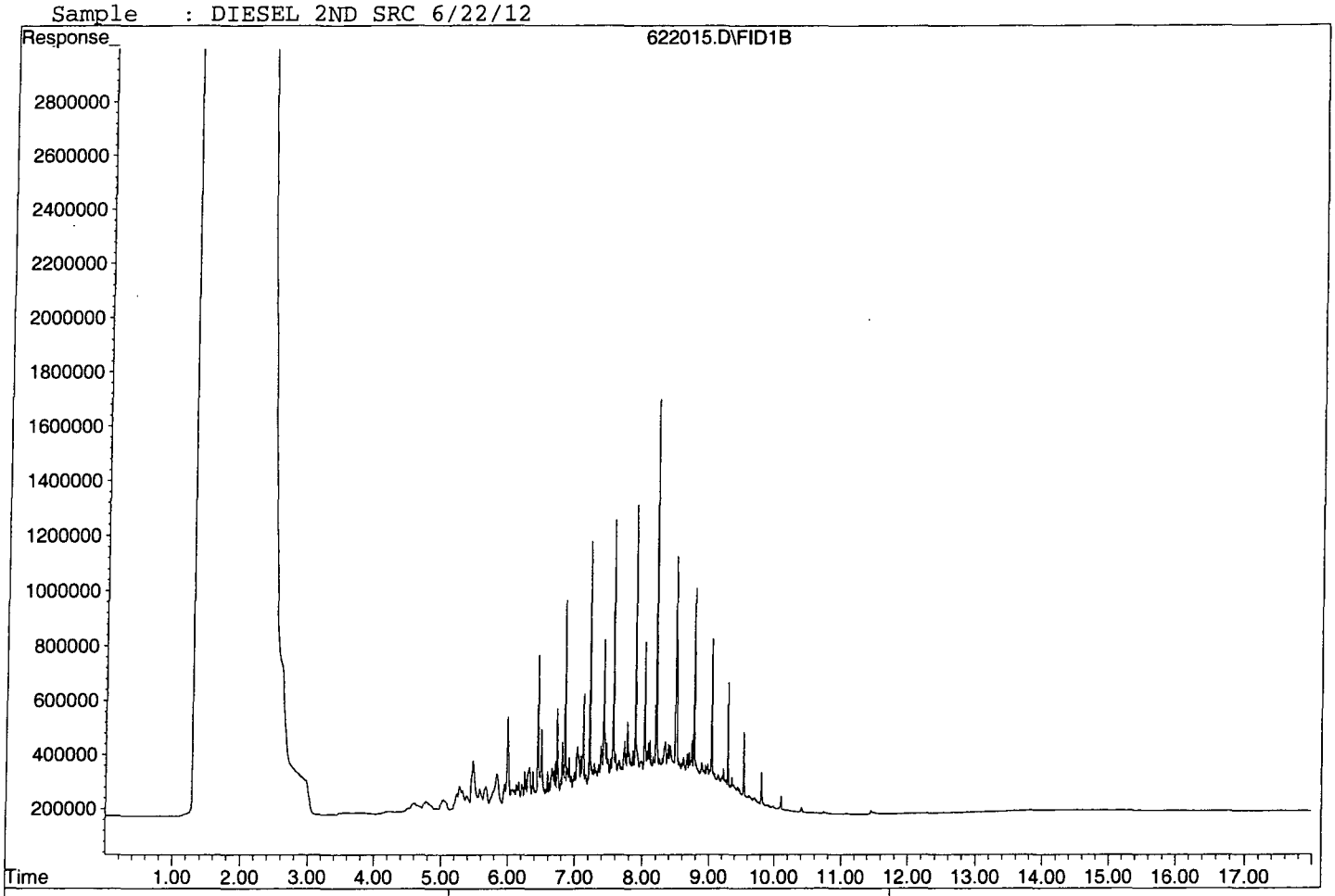
Data File : G:\APOLLO\DATA\120622\622015.D Vial: 15
Acq On : 6-22-12 22:47:20 Operator: LAC
Sample : DIESEL 2ND SRC 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:28 2012 Quant Results File: TPH0622.RES

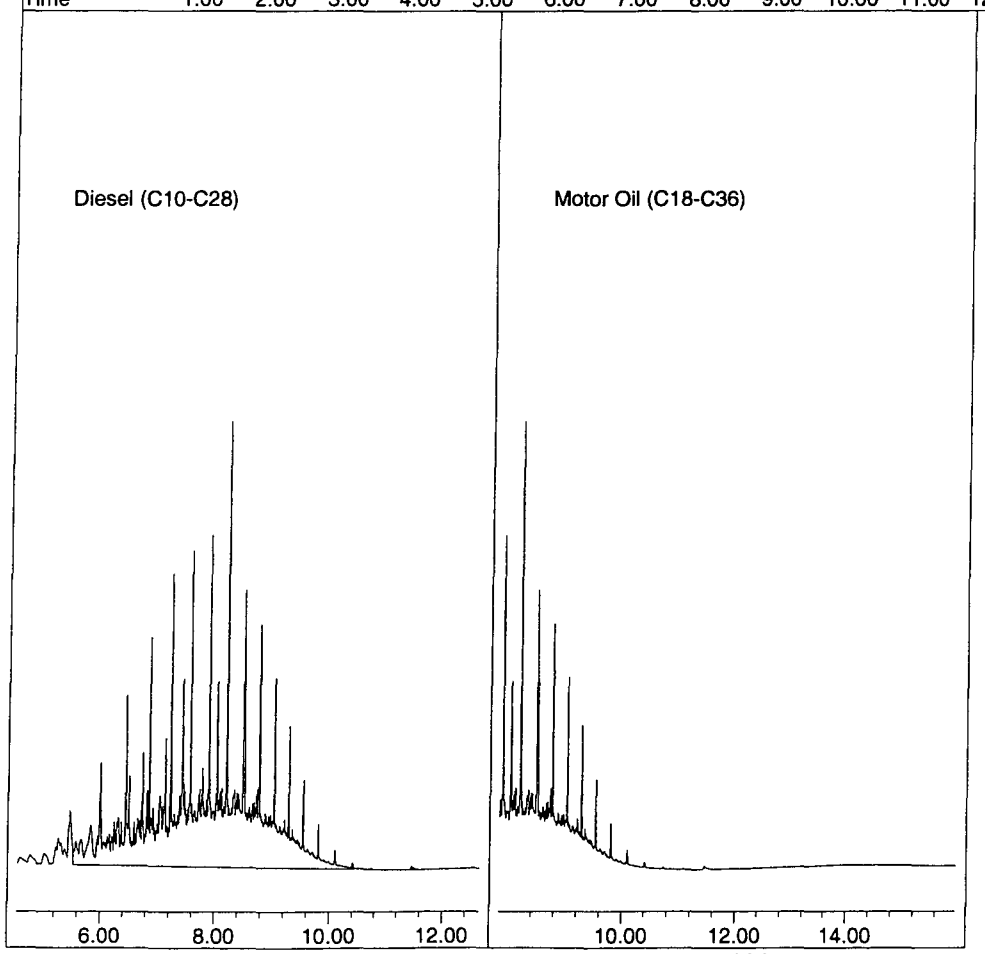
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	413291584	376.067 ppb

Data File: G:\APOLLO\DATA\120622\622015.D
Sample : DIESEL 2ND SRC 6/22/12





TPH Extractables
TPH0719

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
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							
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31							
32							
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35							
36							
37							
38							
39							
40							
		Average			11.0		

Quantitation Report (QT Reviewed)

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

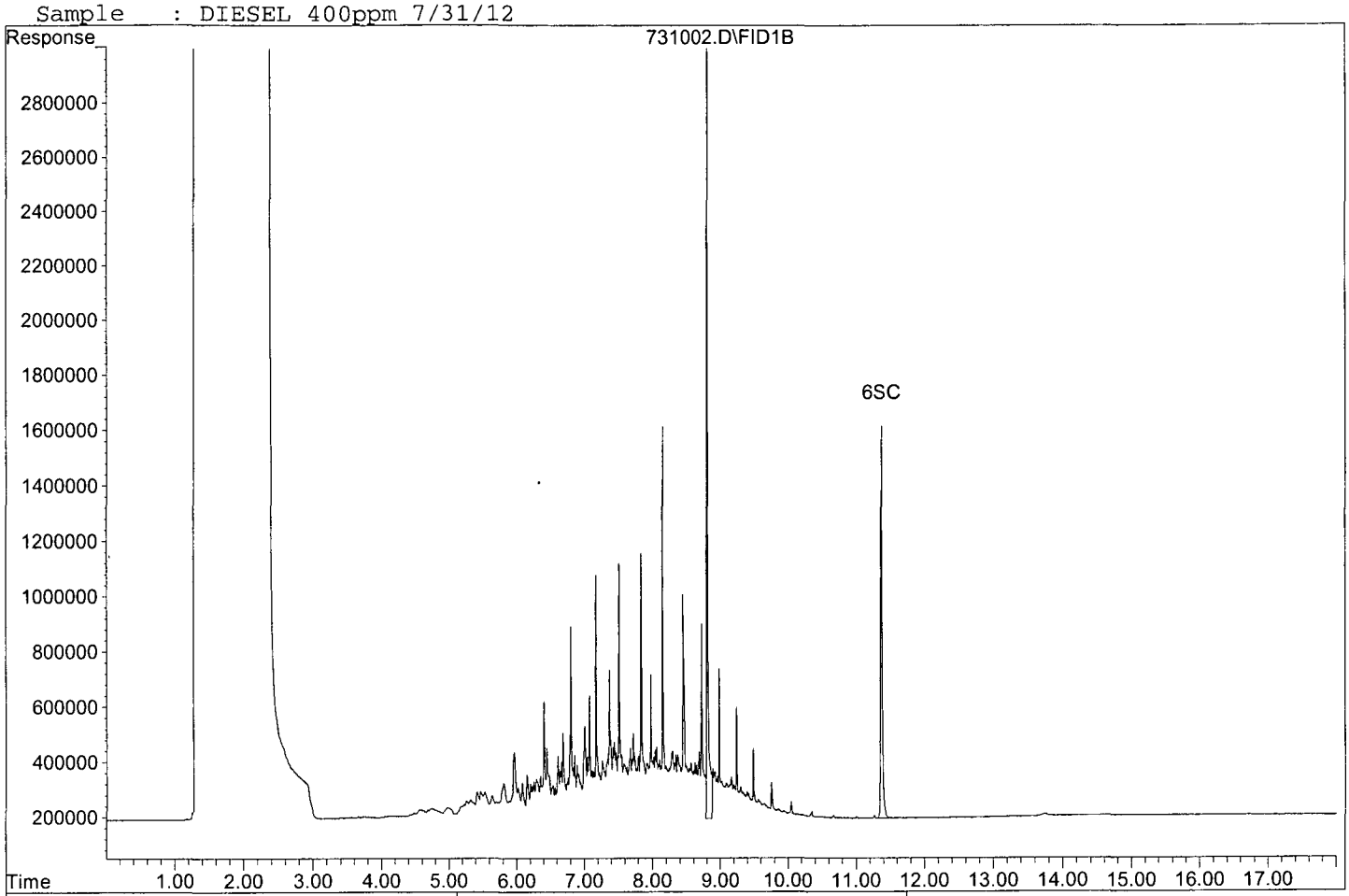
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

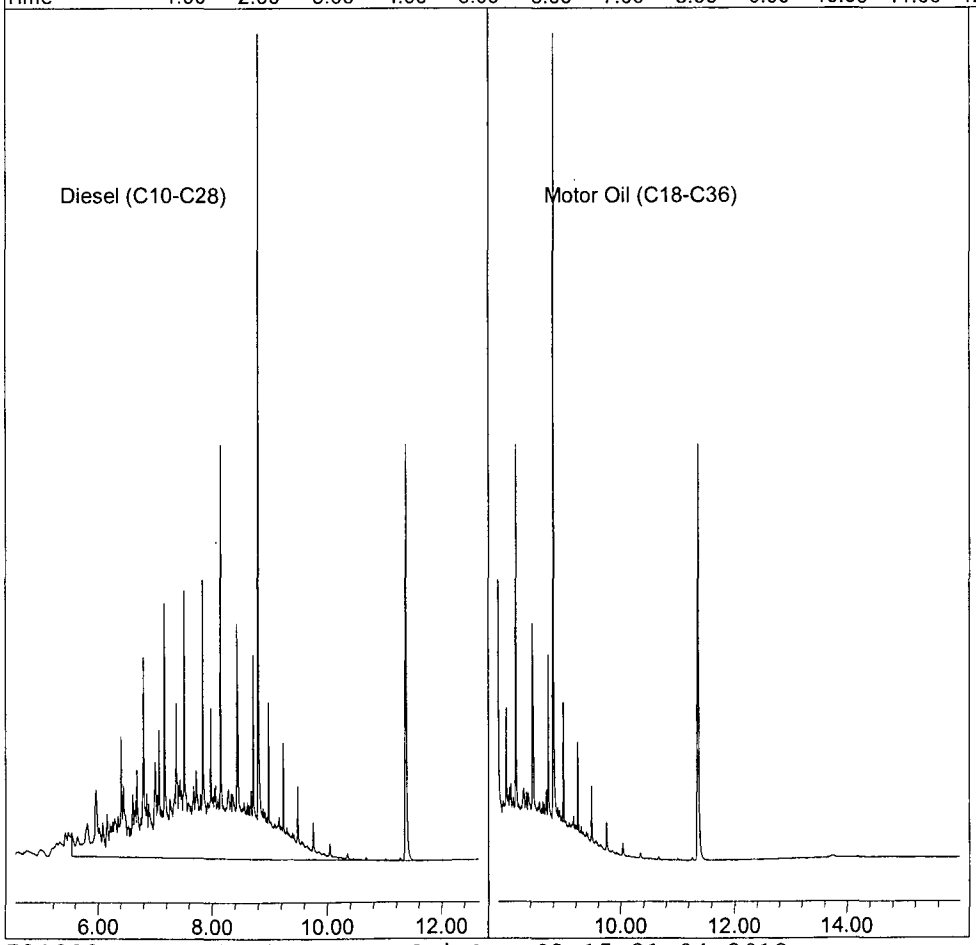
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	34641855	24.581 ppb
Surrogate Spike 30.000		Recovery =	81.94%
6) SC Octacosane(S)	11.37	23218499	15.405 ppb
Surrogate Spike 30.000		Recovery =	51.35%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	395673584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

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

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							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			8.1		

Quantitation Report (QT Reviewed)

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

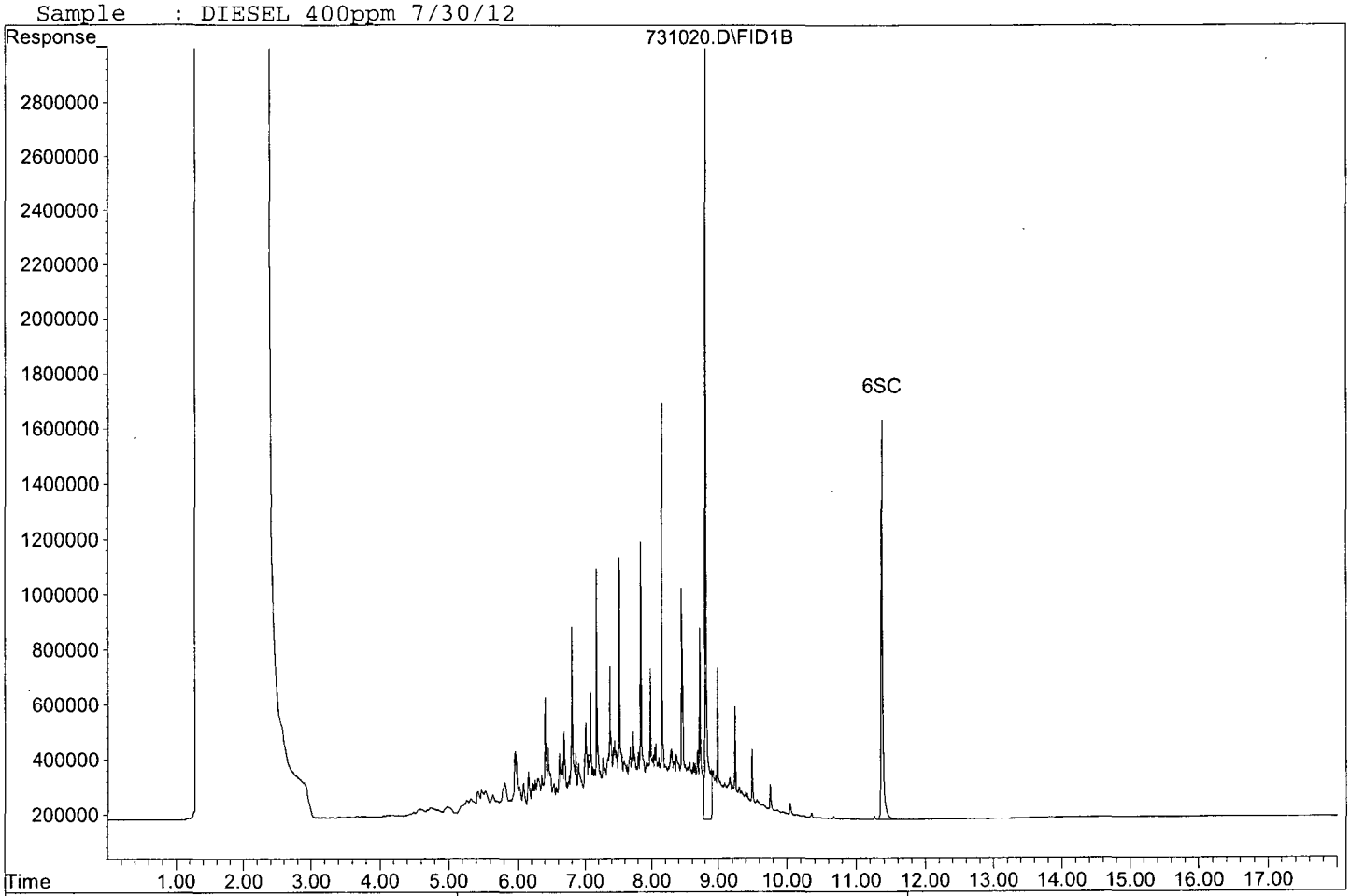
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

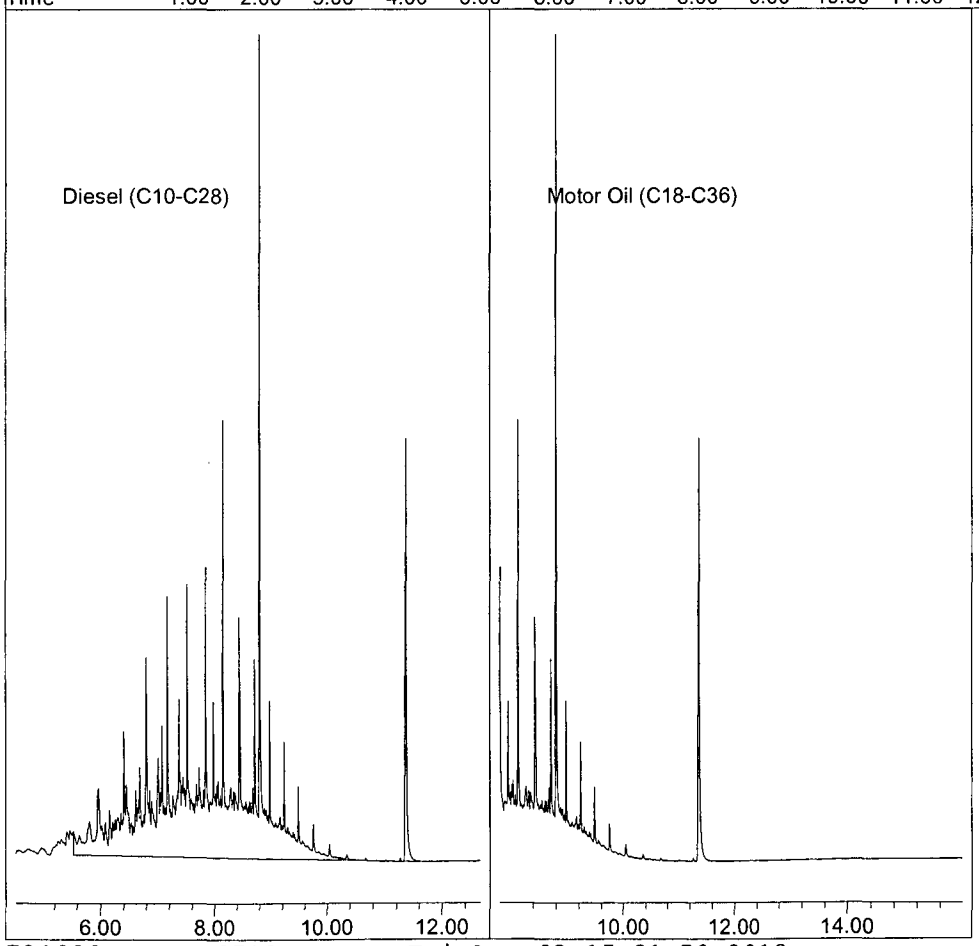
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

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

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

Data File: G:\APOLLO\DATA\120731\731020.D
Sample : DIESEL 400ppm 7/30/12





731020.D TPH0719.M Fri Aug 03 15:21:50 2012

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 Avenu
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

Quantitation Report (QT Reviewed)

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

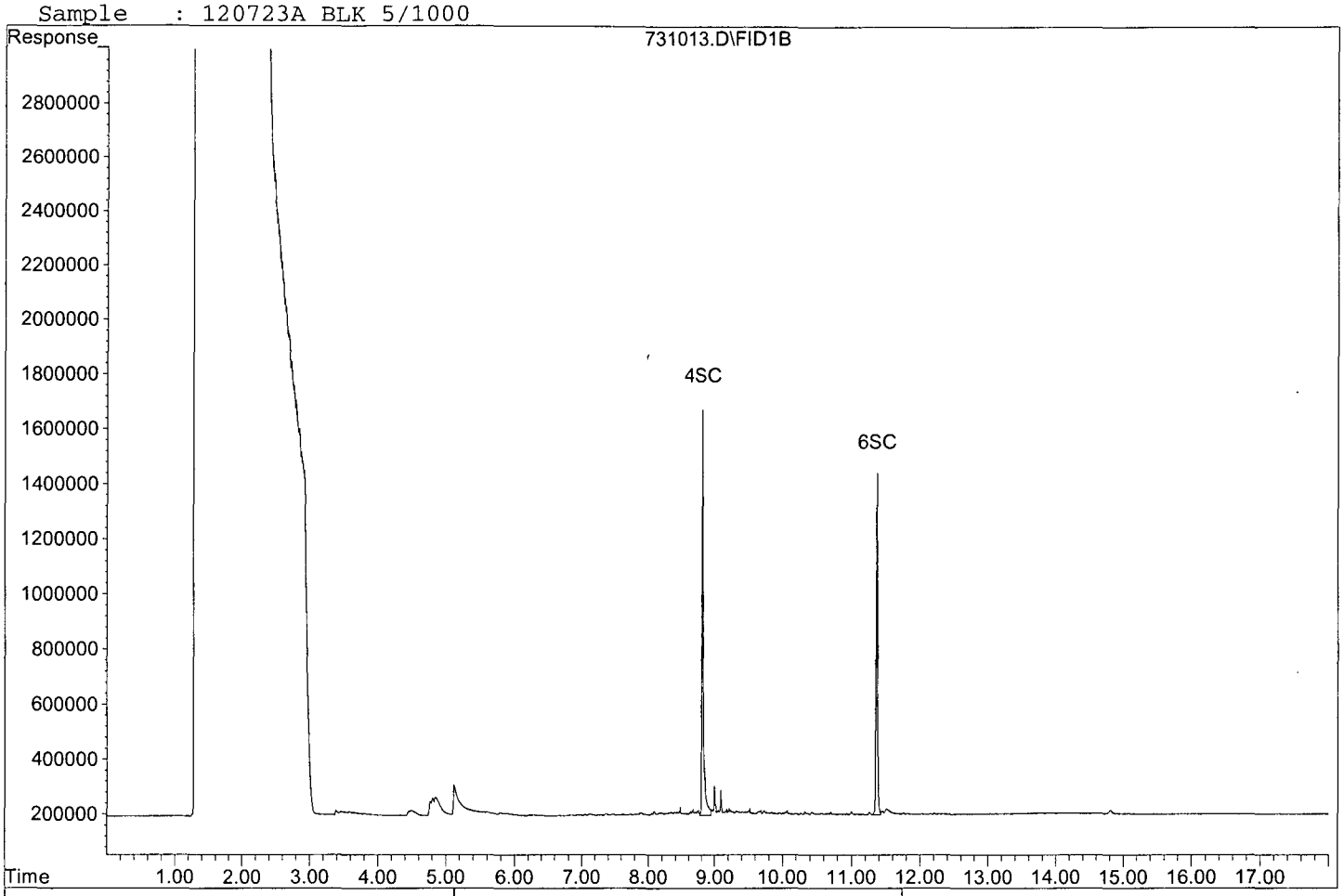
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

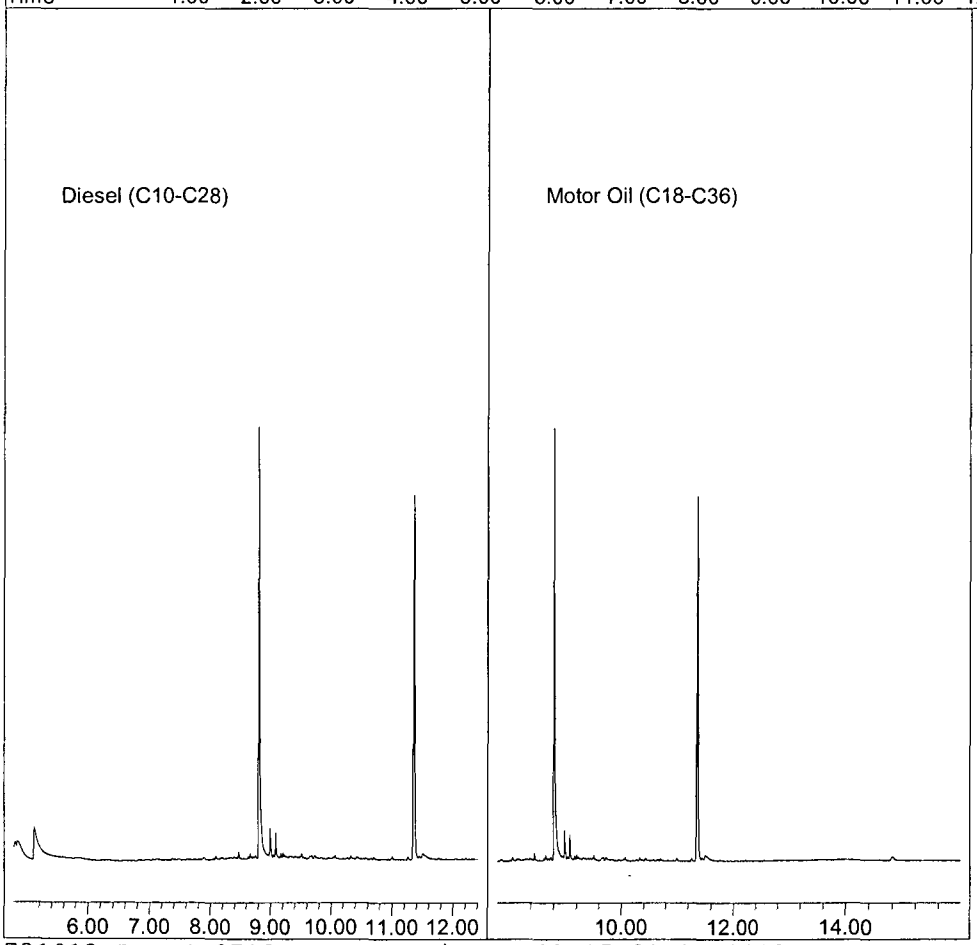
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

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			

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

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
SURROGATE: OCTACOSANE (S)	150	87.7	58.5	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	137	91.3	57-132

Comments: _____

Primary	SPK
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

Quantitation Report (QT Reviewed)

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

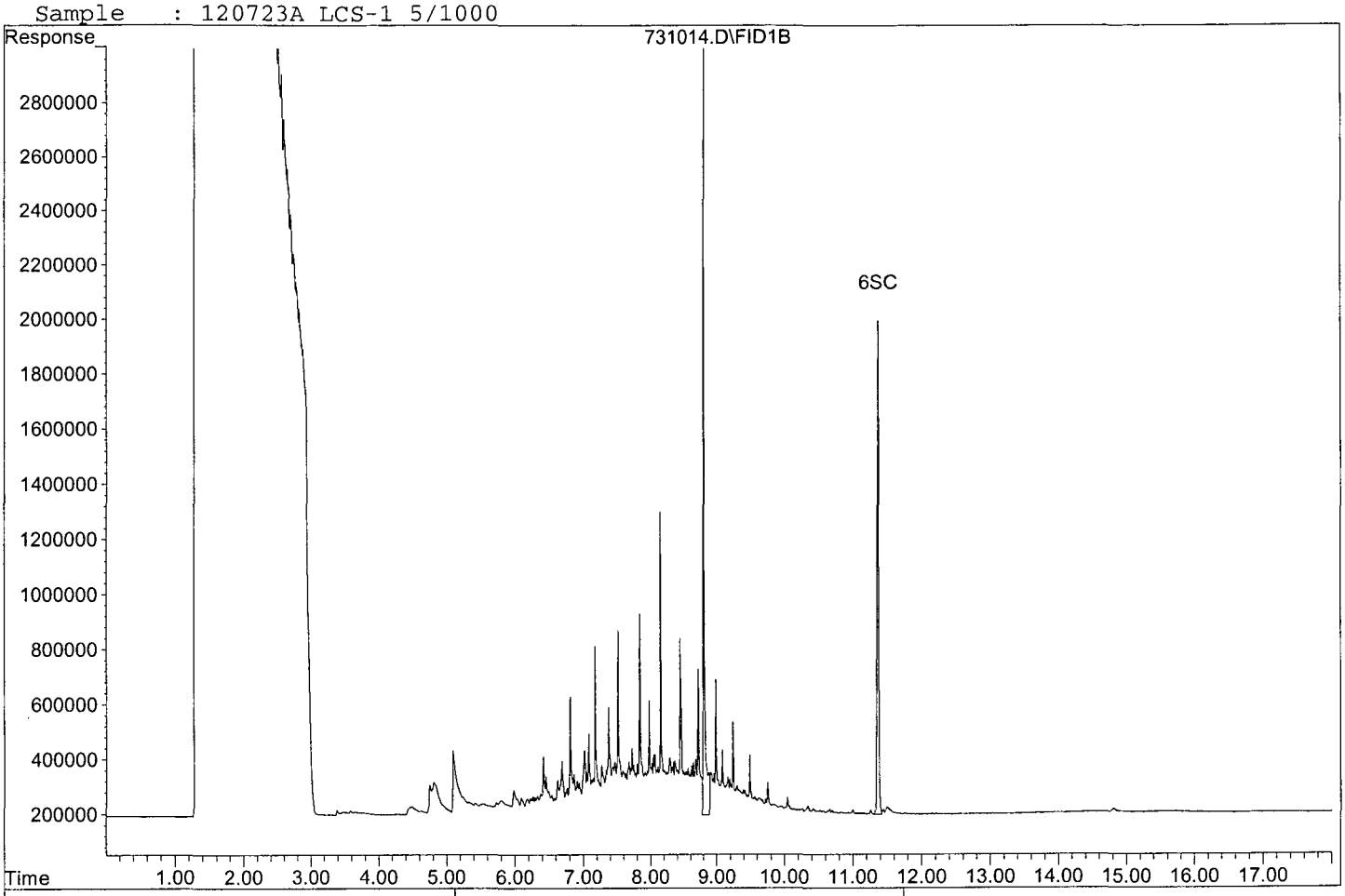
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

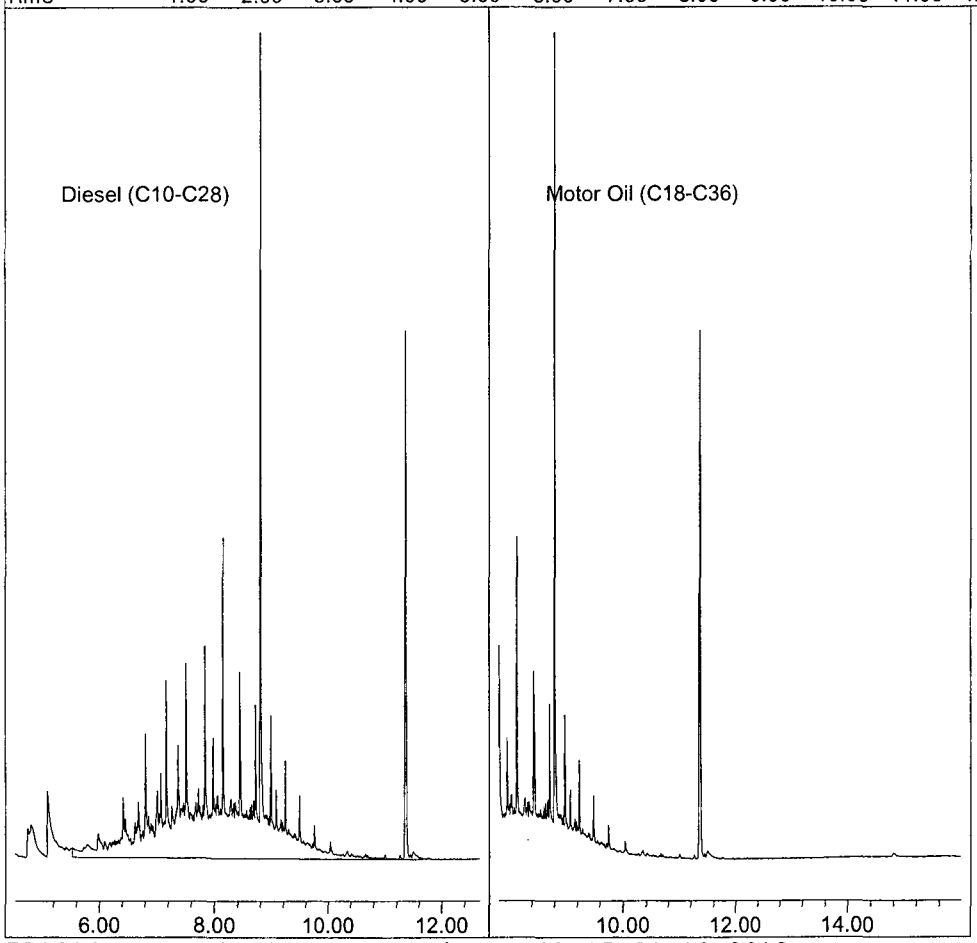
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

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

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

Data File: G:\APOLLO\DATA\120731\731014.D
Sample : 120723A LCS-1 5/1000





STANDARD | CONC | DATE | ALIQUOT | VOLUME | FINAL CONC | LOT# | INITIALS

STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOLVENT LOT# | 005 INITIALS

PCB Soil Spike

AR1016 | 1,000 mg/L | 02SI | 1250 mL | 25mL | 50 ug/mL | Acetone | CM

AR1260

Aroclor 1016 + 1260 Solution, 1,000 mg/L, 1 ml
130011-03
Lot# 163759 | Storage ≤ Ambient | Expiry 9/14/13
Solv: Hexane
R&D only, not for human consumption. Made in the USA

Aroclor 1016 + 1260 op. 6-21-12
Lot #: 163759 - 29969 ex. 6-21-13
Rec: 11/10/11 MFR exp. 09/14/13 CM
CM 6-21-12

1
AND LOT: 163759-29971
163759 op. 2-14-12 CM 6-21-12 ex. 2-14-13

#022912B | 6-21-12
ex. 9-21-12

OCL Soil Surrogate

DECA | 5,000 mg/mL | 02SI | 1mL | 250mL | 20 mg/mL | Acetone | CM

DBC

TCMX

Pesticide Surrogate Solution, 5,000 mg/L, 1 ml
02si
Cat. No: 130070-02
Lot No: 154164
Pesticide Surr. Soln, 5000mg/L
Lot #: 154164 - 29418
Rec: 8/26/11 MFR exp. 12/19/12
Exp: 12/19/2012
Storage: </= Ambient
Solvent: Tol.:Hex. 1:1
ption For Research Use Only
Opened: 6-21-12
ex. 6-21-13
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
011598-03
Lot# 183767 | Storage ≤ -10 Degrees C | Expiry 2/11/16
Solv: Methylene Chloride
R&D only, not for human consumption. Made in the USA

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
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	200uL	10mL	1000ug/mL	MC #51306

CM 6-22-12

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

CM 6-22-12

C/MS STANDARD PREP LOG#_____ PAGE#_____

006

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

MOTOR OIL CAL STD						
STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL		1mL	50mL	1000ug/mL	MC LOT# 51306

CM 6-22-12

ex. 12-22-12

CM 6-22-12

R&D only, not human consump. Made in the USA

Motor Oil Composite, 50,000 mg/L, 1 ml

116390-02

Lot# 183768 Storage ≤ -10 Degrees C Expiry 1/3/15

Solv: Methylene Chloride

Motor oil composite op. 6-22-12

Lot #: 183768 - 30232 ex. 6-22-13 CM

Rec: 1/10/12 MFR exp. 01/08/15

CM 6-22-12

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

CM 6-22-12

ex. 12-22-12

CM 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	1000

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	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	1000

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

CM 6-22-12

GC/MS STANDARD PREP LOG# _____ PAGE# _____ 039

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	OCL EN... LOT #	DATE / INITIALS
			MOTOR OIL CCV 500ppm				CM
MOTOR OIL STD	2000 ug/mL	0251 M.O. STD prep. 7-19-12	250uL ex. 1-19-13	1mL ↓	500 ug/mL ↓	MC # 51306	7-31-12 ex. 1-19-13
			DIESEL CCV 400ppm				
DIESEL STD	1000 ug/mL	Diesel STD prep. 6-22-12	400uL ex. 12/22/12	1mL ↓	400 ug/mL ↓	MC #57306	CM 7-31-12 ~~ex. 1-19-13~~

OCL Second Source

Compounds	Conc in mix	Conc in stock	Aliquot	Source stock	Final Vol
a-BHC	.10 ug/mL	100 ~~10~~ 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~~	~~# 801908D~~
g-BHC			Prep:	~~7~~ 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

LH 8/1/12

LH 8/1/12

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	7/30/13	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: ~~2/13/12~~	8/1/12
		082610B		exp: ~~8/13/12~~	2/1/13
Solvent:	Hexane	Lot: ~~010711A~~	LH 8/3/12		LH 8/3/12

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

LC/MS STANDARD PREP LOG# _____ PAGE# _____

020

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

AR 1248 CALIBRATION CURVE

AR1248 Prep:3/26/12
Exp: 9/26/12

7/18/12 DAT

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

DAT
OP: 7/18/12
EX: 7/18/13

R&D only, not for human consump
Made in the USA

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

011598-03

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

Solv: Methylene Chloride

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

7/18/12 DAT

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

THC Surrogate (Gave to Extractions)

CM 7-6-12 12-12-12	O-Terphenyl Octacosane	600 mg/L	025E CAT: 110316-05 LOT: 188683-306E4 thru 668 Op. 7-9-12 ex. 7-9-13	N/A	25mL	600 mg/mL	N/A	CM 7-9-12 ex. 7-9-13

MSE002 Surrogate

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

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

OP FAMPHUR CURVE												
PREP:	07/09/12	EXP:	07/28/12			IA	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL
	OP/FAMPHUR ST	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

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

PREP DATE:	07/09/12										
OPC CURVE											
EXP:	10/06/12										
						1	2	3	4	5	6
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	500	700	1000
	Hexane		082610B			990	950	800	500	300	NA
					Final VOL.	1000	1000	1000	1000	1000	1000

CM 7-9-12

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

SEP011

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 equip	1000 E-WB7,78	5	7	07/23/12 14:15	
120723A LCS-1		0.040	1	0.250	1 equip	1000 E-WB7,78	5	7	07/23/12 14:15	
120723A LCS-2		0.040	2	0.250	1 equip	1000 E-WB7,78	5	7	07/23/12 14:15	
AY65041	AY65041W05			0.250	1 equip	1050 E-WB7,78	5	7	07/23/12 14:15	68248-2 WEEK RUSH -- Amber Liter
AY65043	AY65043W06			0.250	1 equip	1050 E-WB7,78	5	7	07/23/12 14:15	68248-2 WEEK RUSH -- Amber Liter
AY65044	AY65044W07			0.250	1 equip	1040 E-WB7,78	5	7	07/23/12 14:15	68248-2 WEEK RUSH -- Amber Liter
AY65112	AY65112W04			0.250	1 equip	1030 E-WB7,78	5	7	07/23/12 14:15	68258-2 WEEK RUSH -- Amber Liter
AY65113	AY65113W05			0.250	1 equip	1030 E-WB7,78	5	7	07/23/12 14:15	68258-2 WEEK RUSH -- Amber Liter
AY65144 MS-1	AY65144W15	0.040	1	0.250	1 equip	1000 E-WB7,78	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
AY65144 MSD-1	AY65144W07	0.040	1	0.250	1 equip	1020 E-WB5,76	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
AY65144 MS-2	AY65144W17	0.040	2	0.250	1 equip	1010 E-WB5,76	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
AY65144 MSD-2	AY65144W19	0.040	2	0.250	1 equip	1050 E-WB5,76	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
AY65144	AY65144W05			0.250	1 equip	1010 E-WB5,76	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter

t and Lot#	
	EMD52104
4	2351C512

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

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

vent and Lot#	
:	EMD52104
2SO4	2351C512

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

	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

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

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank

EPA 8260B VOCs + Gas Water

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

APPL Inc.
908 North Temperance Avenu
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

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

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

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

Form 2 & 8

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

Form 2 & 8

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: _____

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

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

APPL ID.	Client Sample No.	File ID.	Date Analyzed
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

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

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

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

Attn: Max Solmssen

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Project: LTM Red Hill / 1022-024

ARF: 68248

Sample ID: ES077

APPL ID: AY65041

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 #: 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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68248

Sample ID: ES077

APPL ID: AY65041

Sample Collection Date: 07/17/12

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 Vial: 43
Acq On : 20 Jul 12 4:36 Operator: DG,RS,HW,ARS,SV
Sample : AY65041W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 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					
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

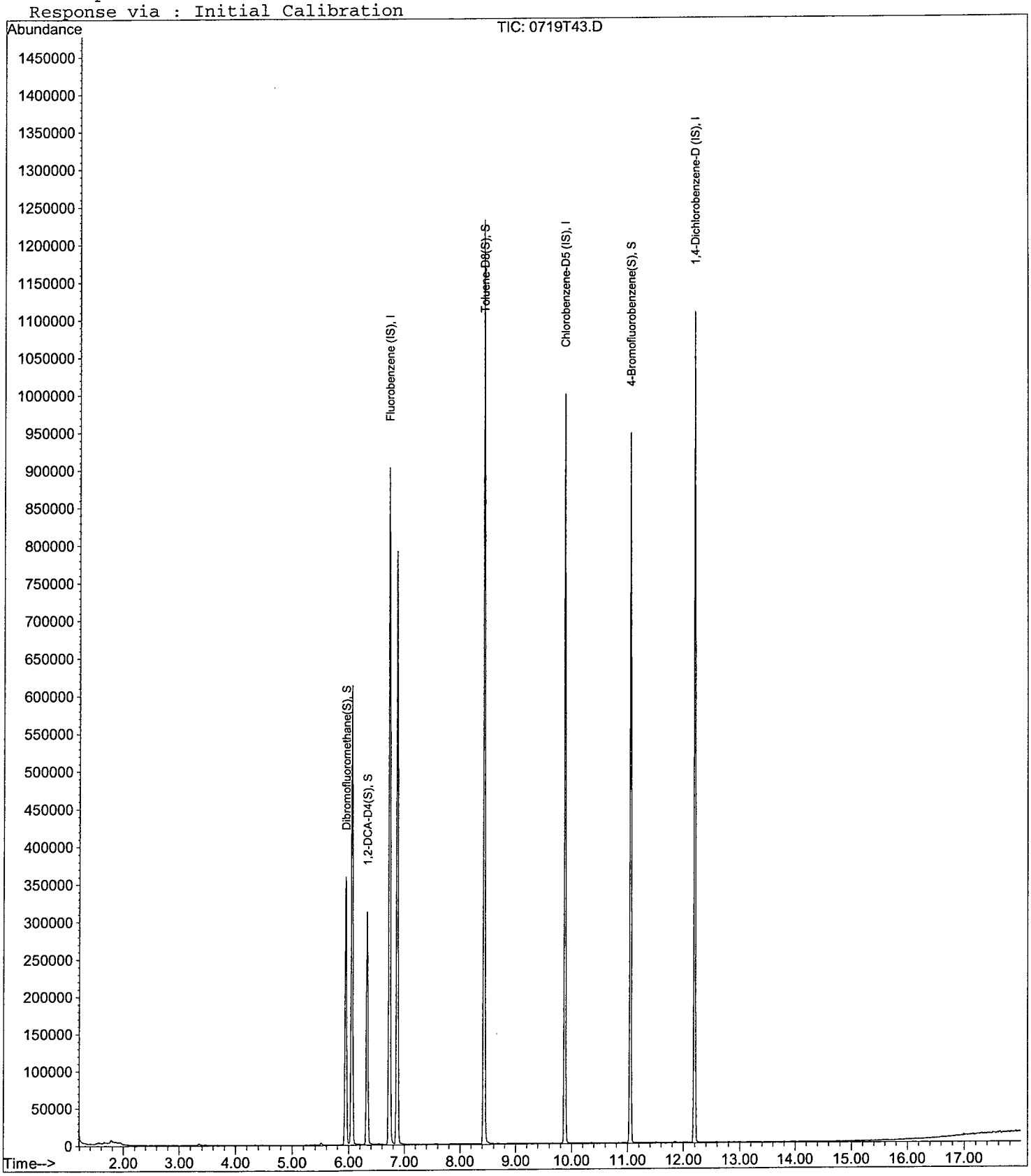
(#) = qualifier out of range (m) = manual integration

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						Qvalue
2) Gasoline	8.43	TIC	8901617m	128.24353	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

(#) = qualifier out of range (m) = manual integration
0724T15.D TGAS.M Thu Jul 26 14:53:21 2012

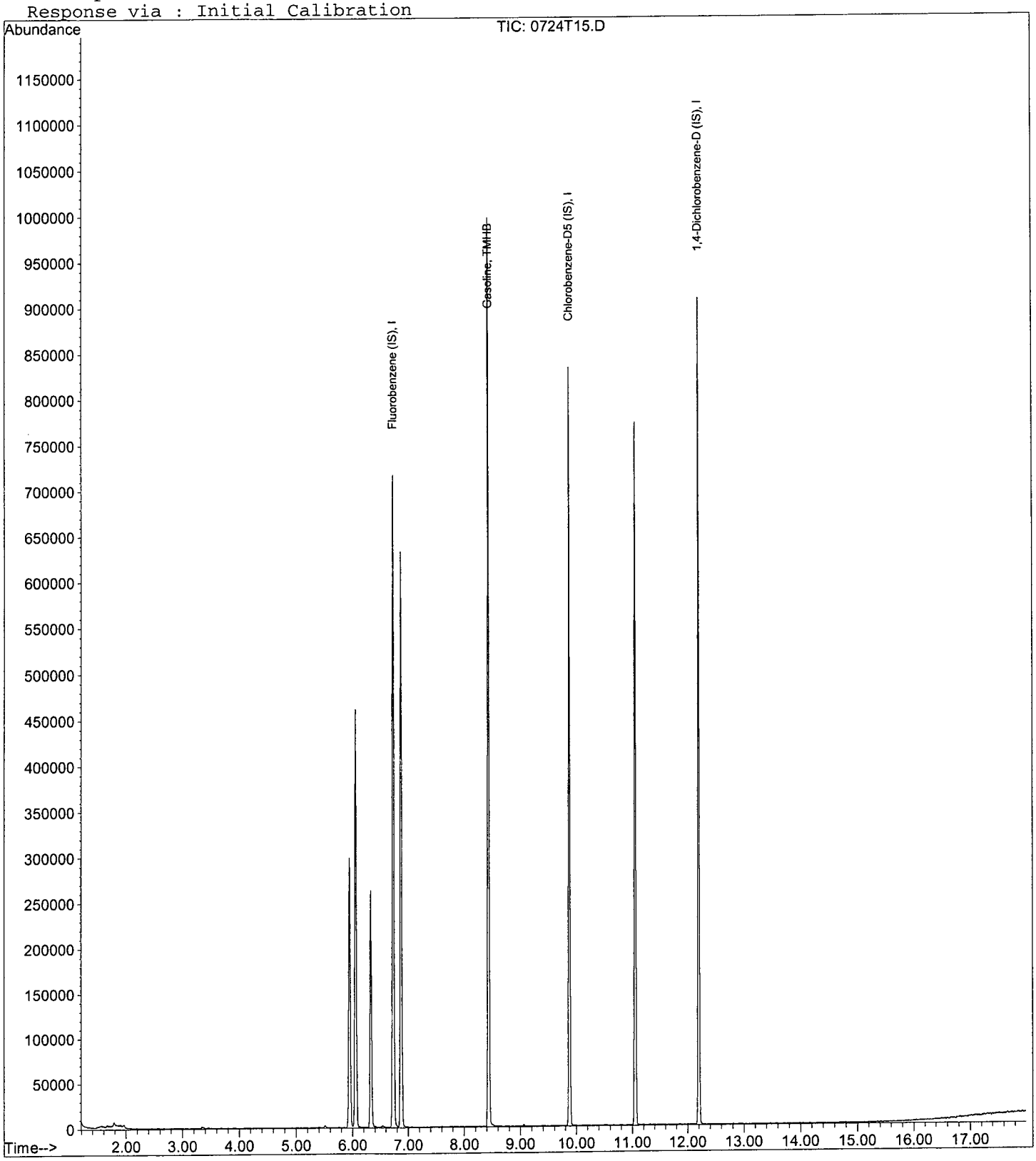
Quantitation Report

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

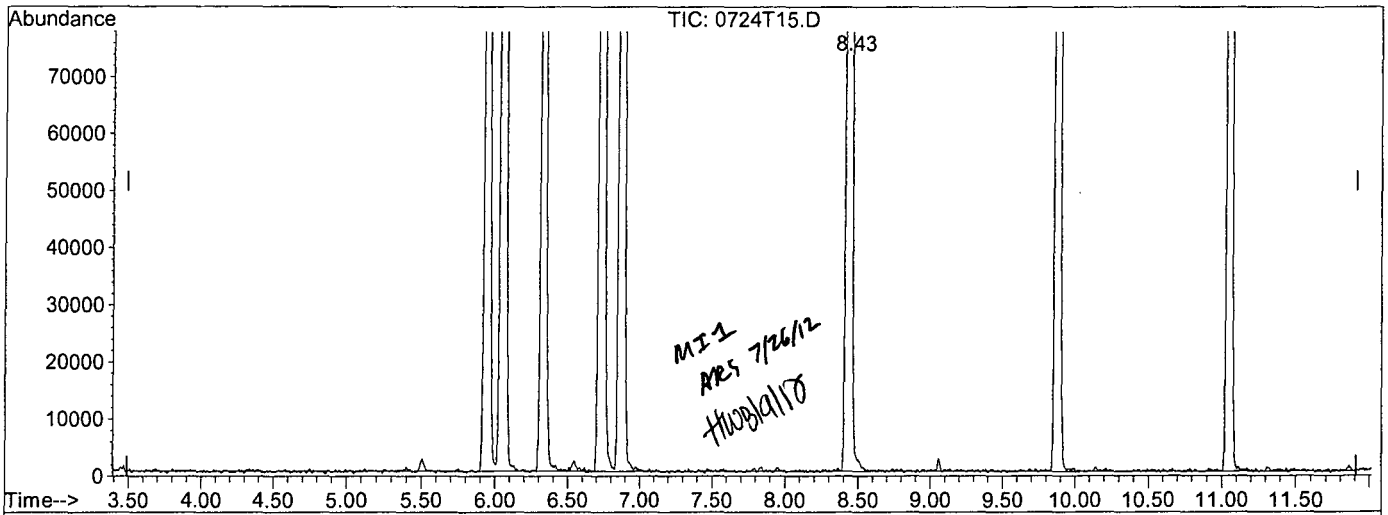
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

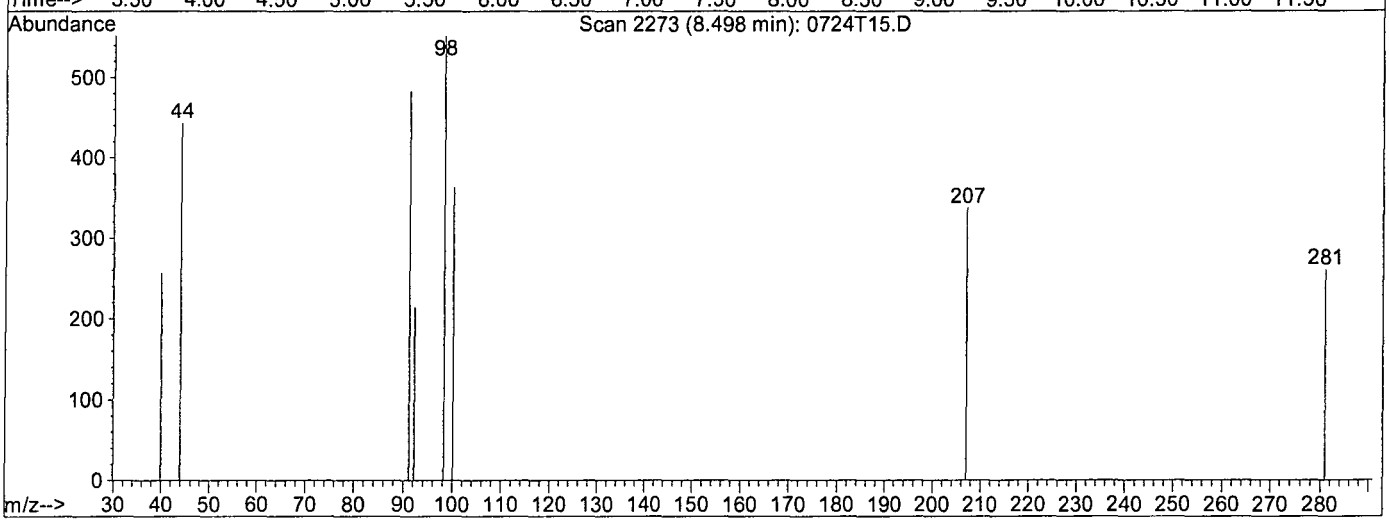


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T15.D 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 14:28 2012 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

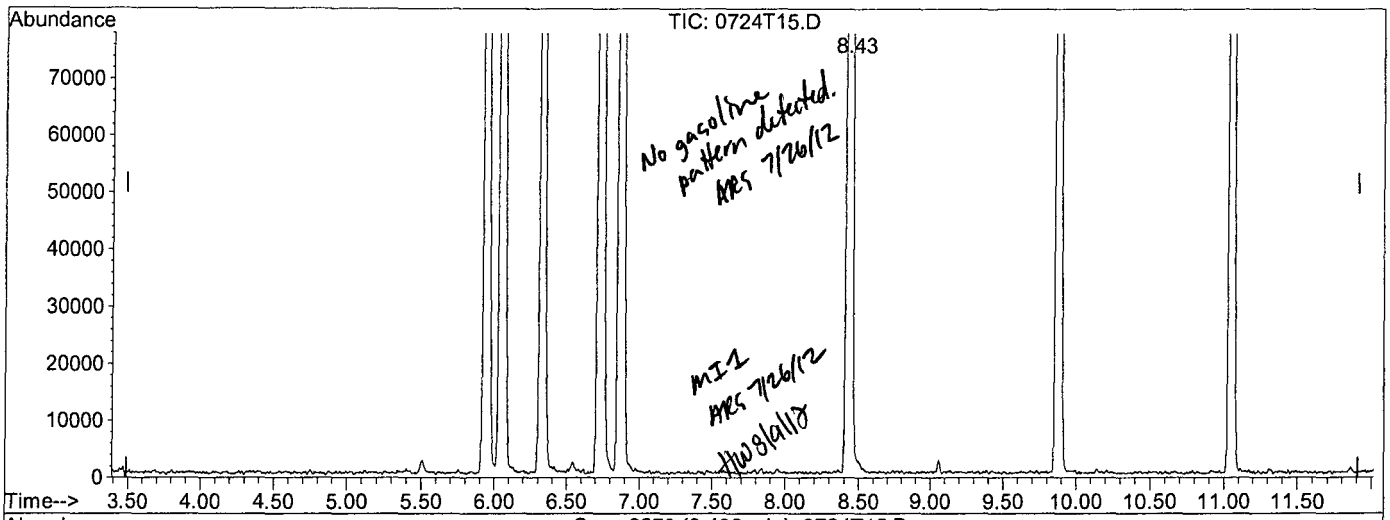
response 6862466

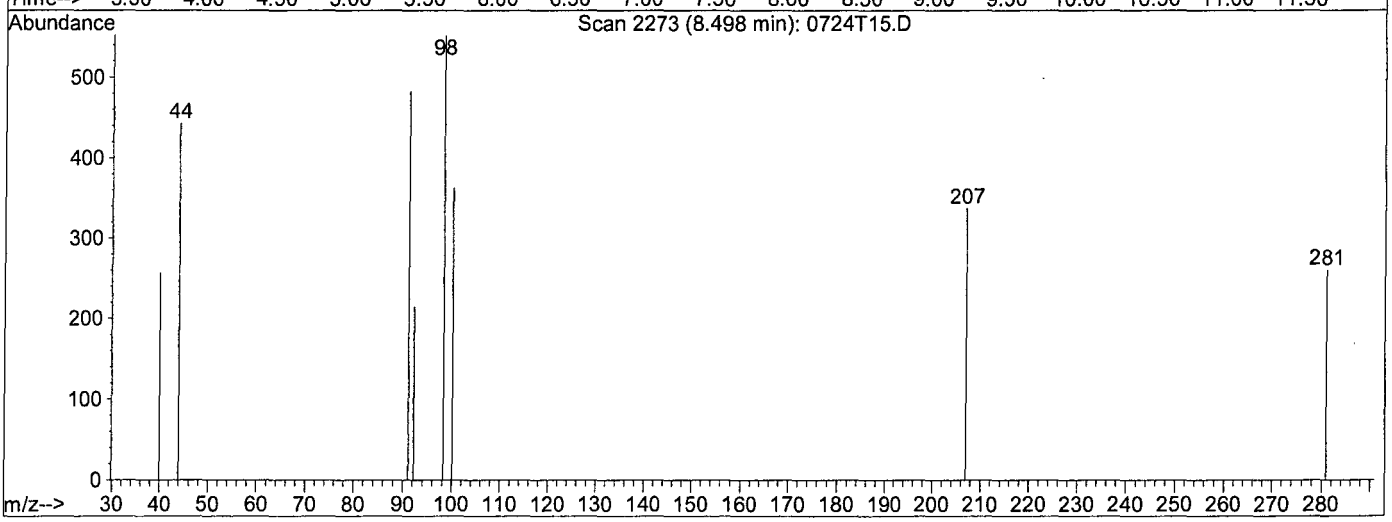
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.27#
0.00	0.00	3.72#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T15.D 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: 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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68248

Sample ID: ES078 TRIP BLANK

APPL ID: AY65042

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 #: 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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68248

Sample ID: ES078 TRIP BLANK

APPL ID: AY65042

Sample Collection Date: 07/17/12

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 Vial: 40
Acq On : 20 Jul 12 3:13 Operator: DG,RS,HW,ARS,SV
Sample : AY65042W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 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					
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

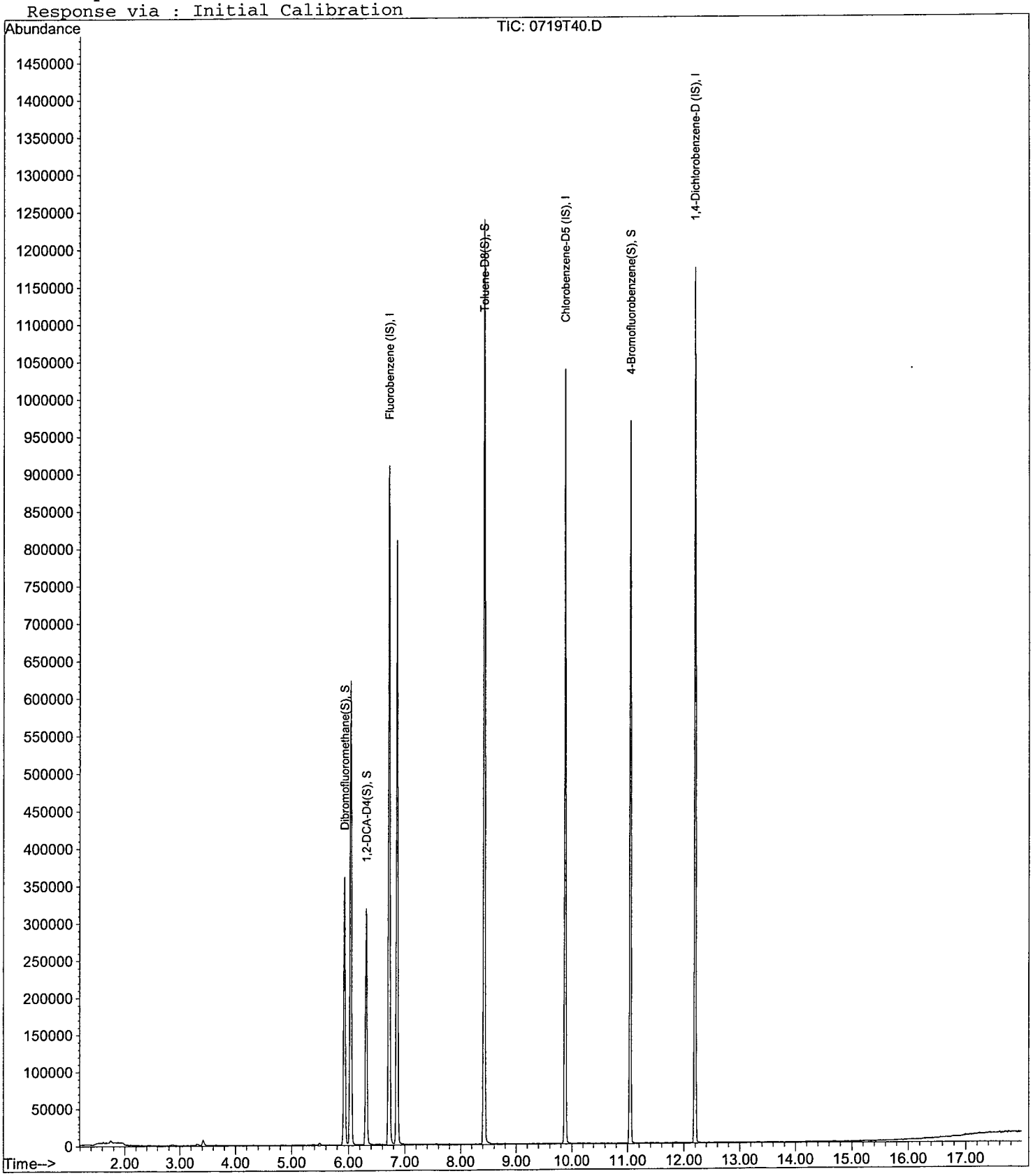
(#) = qualifier out of range (m) = manual integration

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						Qvalue
2) Gasoline	8.43	TIC	9058284m	123.86848	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

(#) = qualifier out of range (m) = manual integration
0724T14.D TGAS.M Thu Jul 26 14:53:17 2012

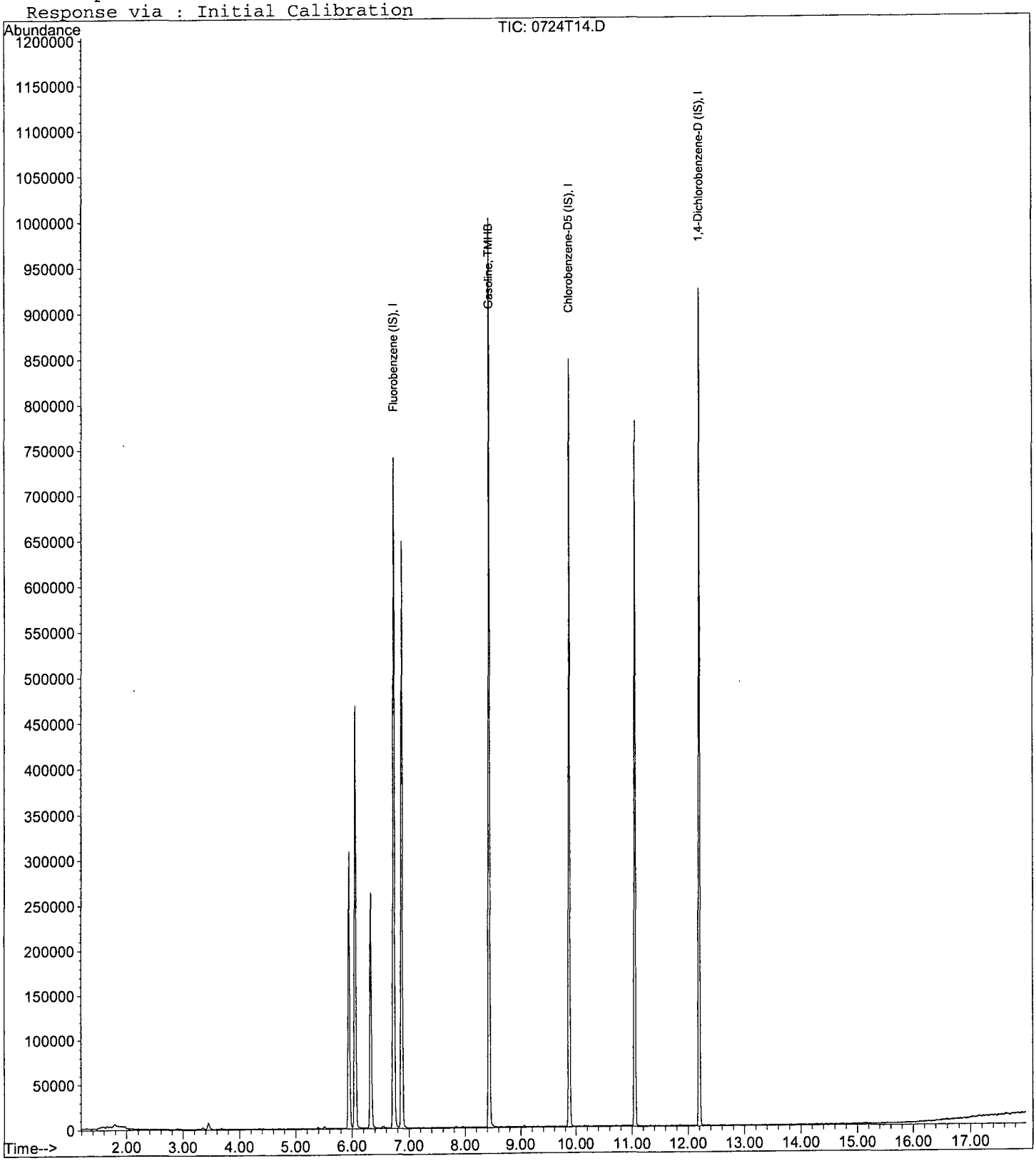
Quantitation Report

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

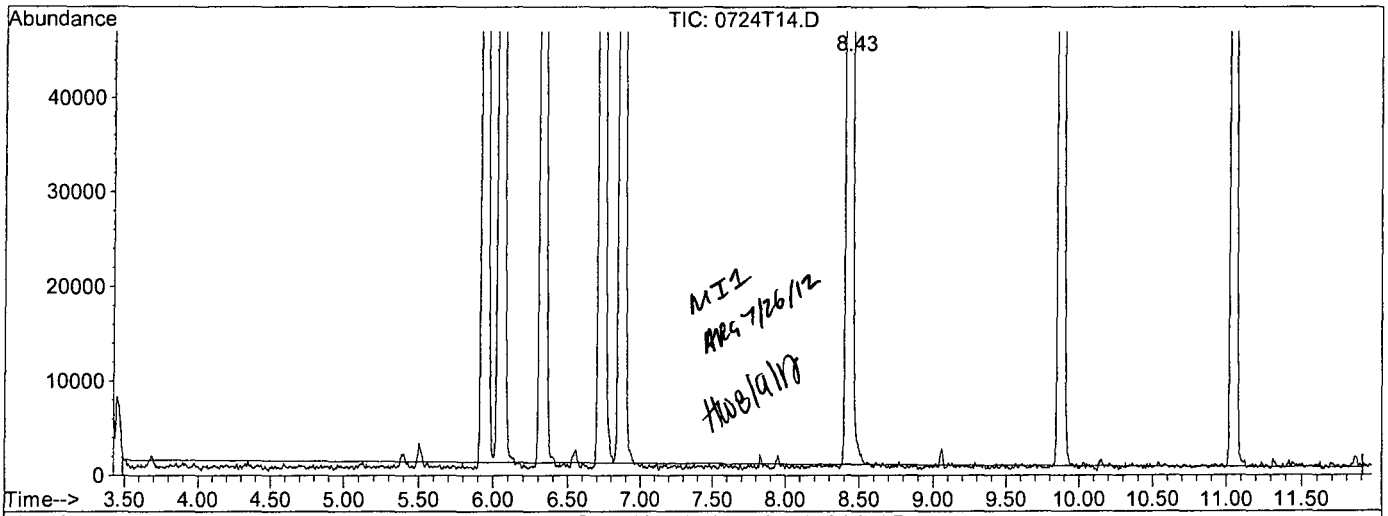
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

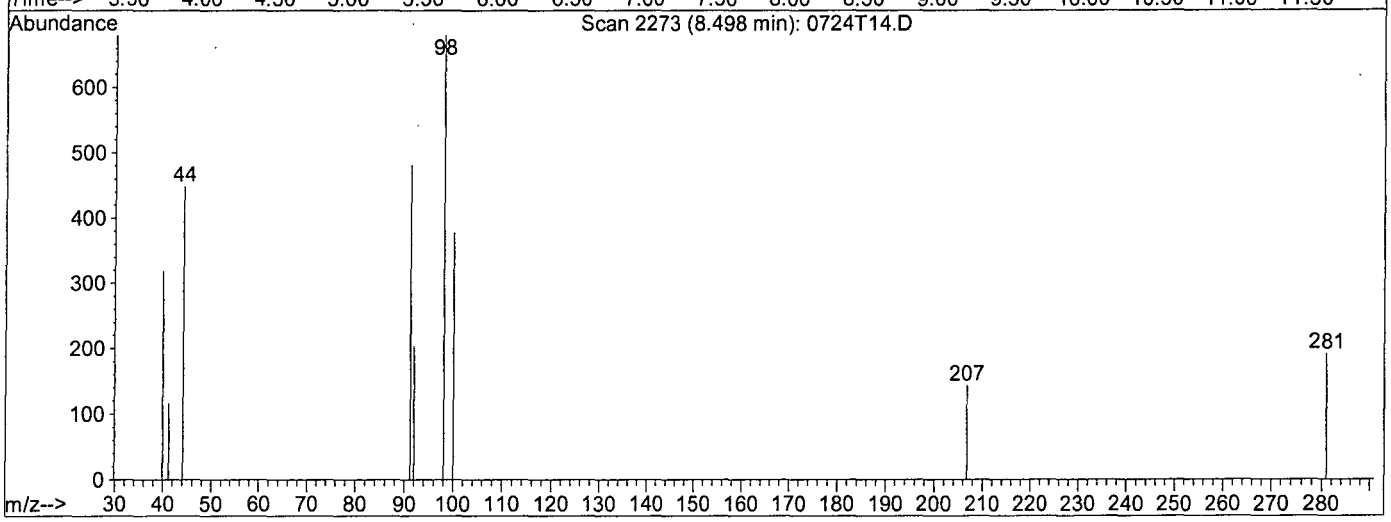


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T14.D 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 14:28 2012 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

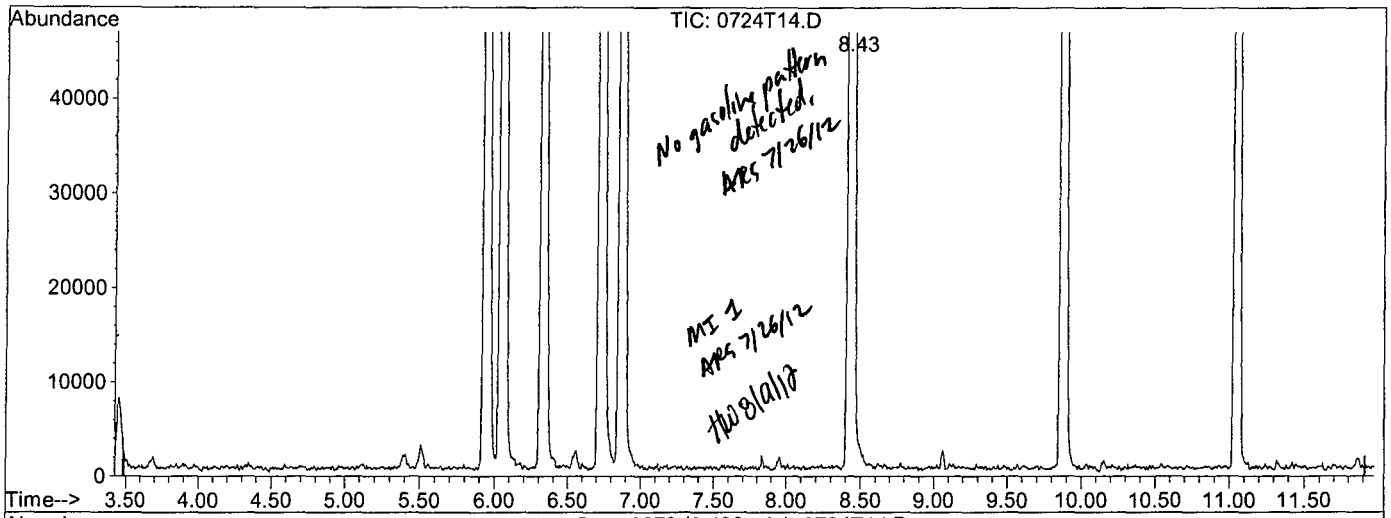
response 6980528

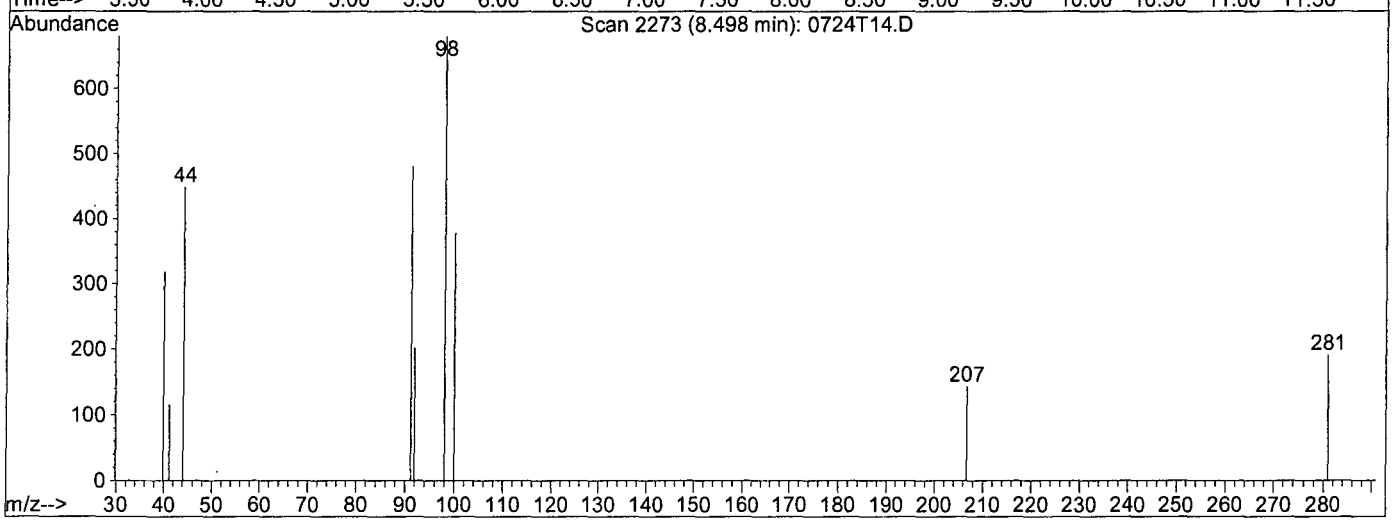
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.29#
0.00	0.00	3.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T14.D 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: 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

ARF: 68248

Sample ID: ES079

APPL ID: AY65043

Sample Collection Date: 07/17/12

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.
(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

Data File : M:\THOR\DATA\T120719\0719T44.D Vial: 44
Acq On : 20 Jul 12 5:03 Operator: DG,RS,HW,ARS,SV
Sample : AY65043W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 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

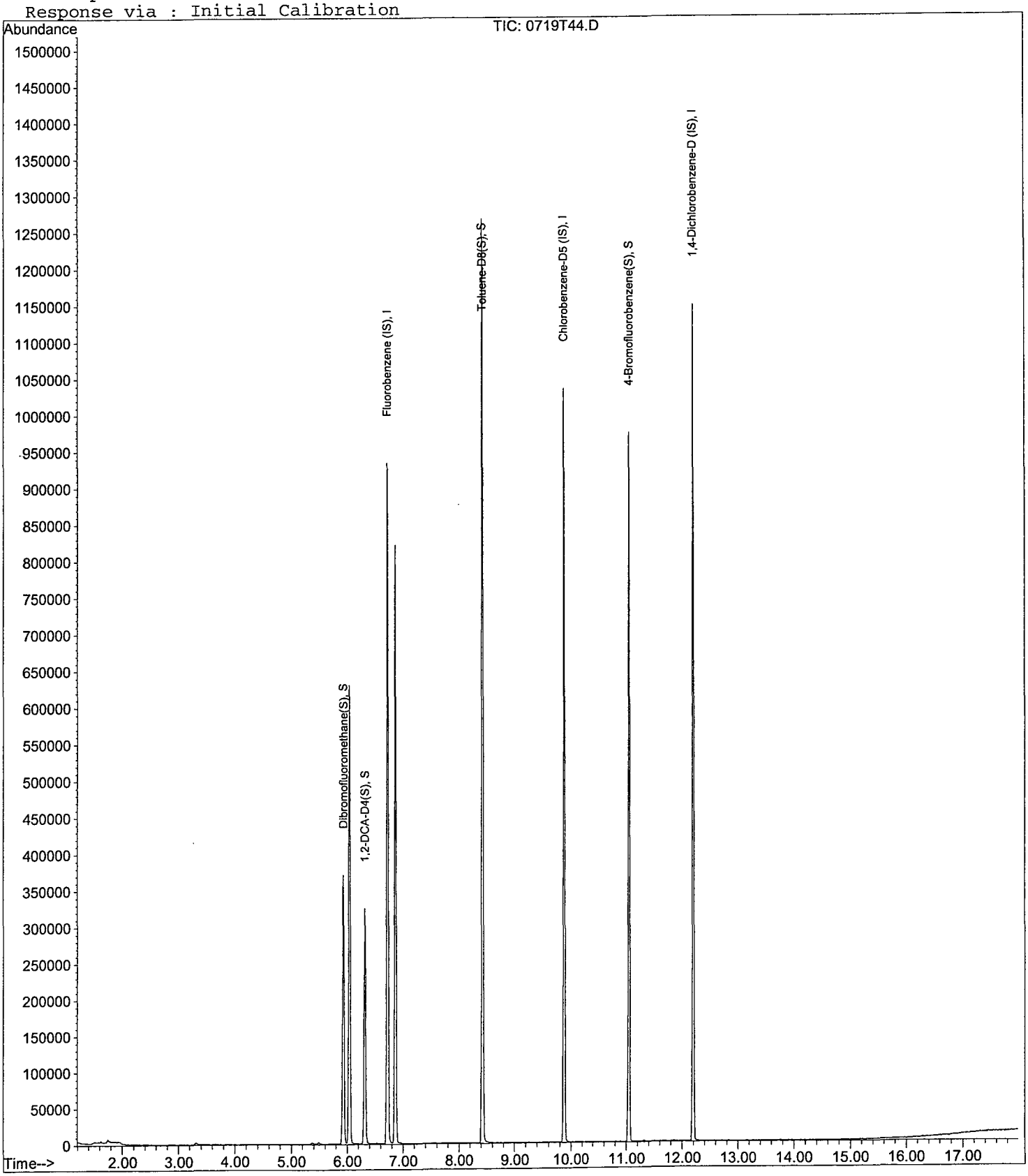
(#) = qualifier out of range (m) = manual integration

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 Vial: 15
Acq On : 24 Jul 12 23:02 Operator: DG,RS,HW,ARS,SV
Sample : AY65043W02 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	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						Qvalue
2) Gasoline	8.43	TIC	9326019m	127.50012	ppb	NO 100

No gasoline pattern detected.
ARS 7/26/12

(#) = qualifier out of range (m) = manual integration
0724T16.D TGAS.M Thu Jul 26 14:53:25 2012

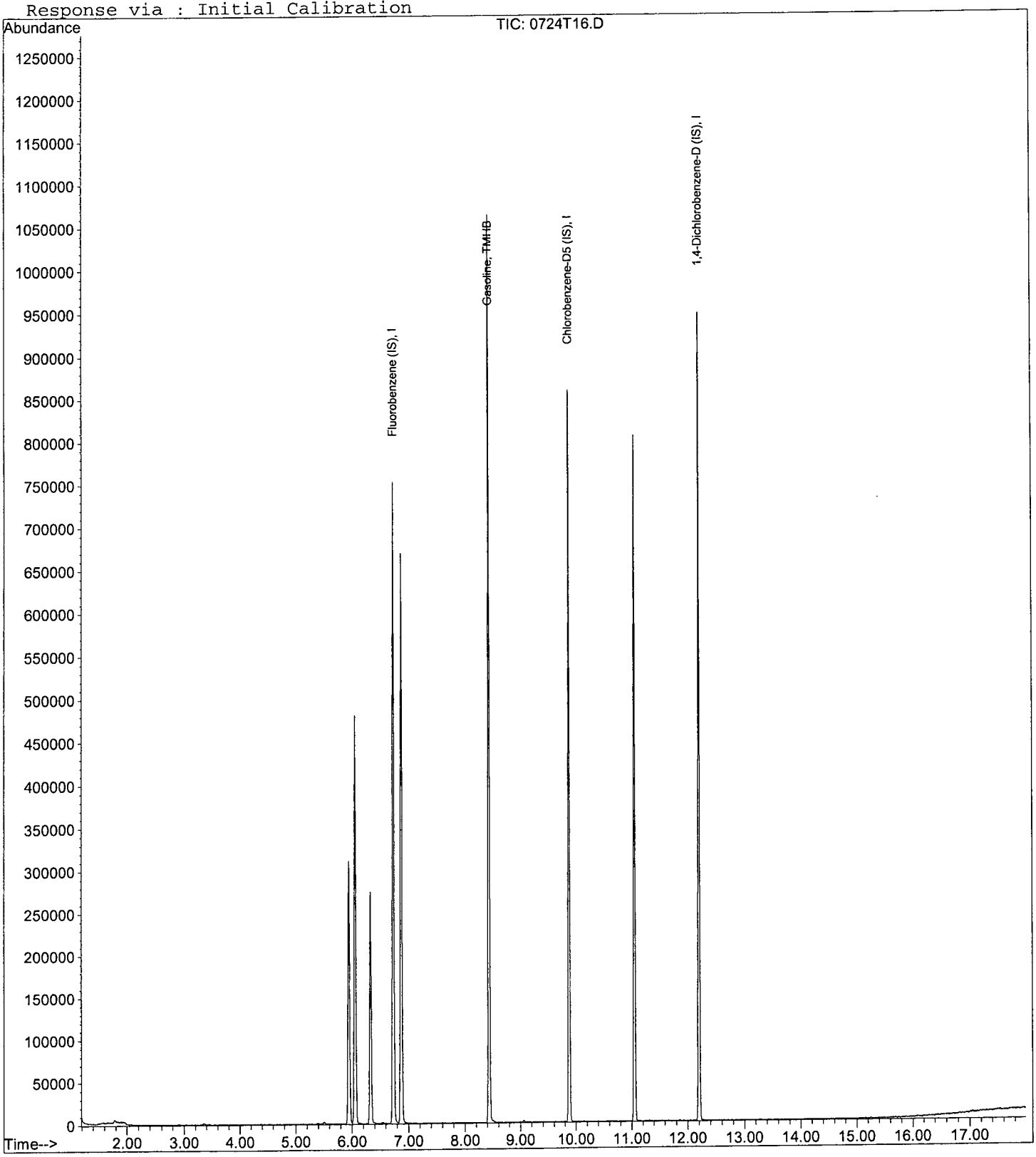
Quantitation Report

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

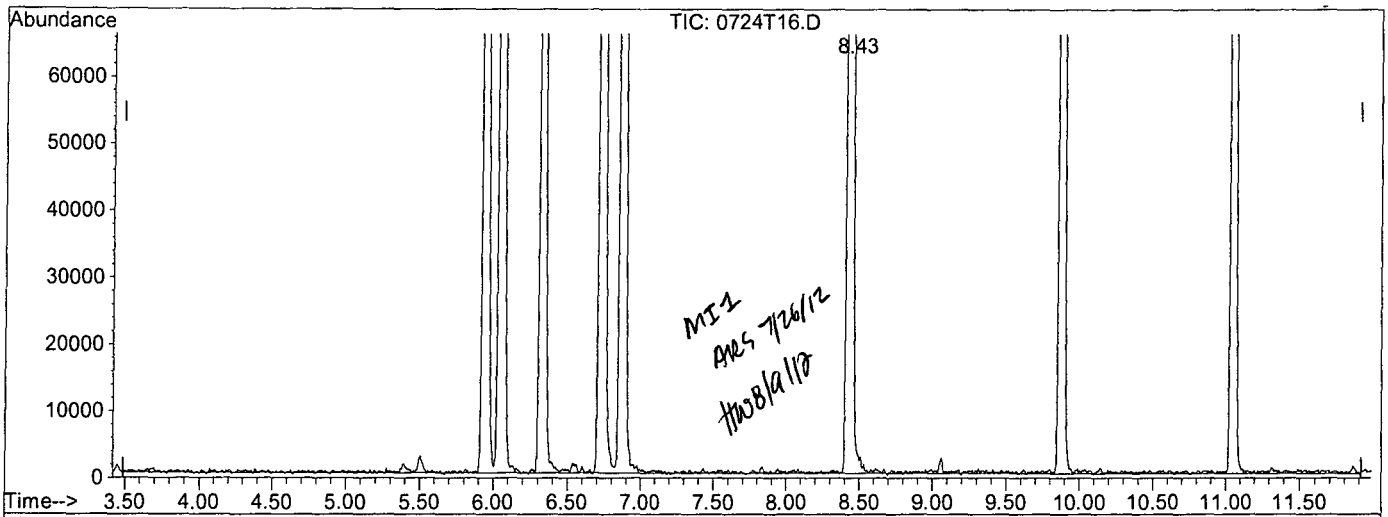
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

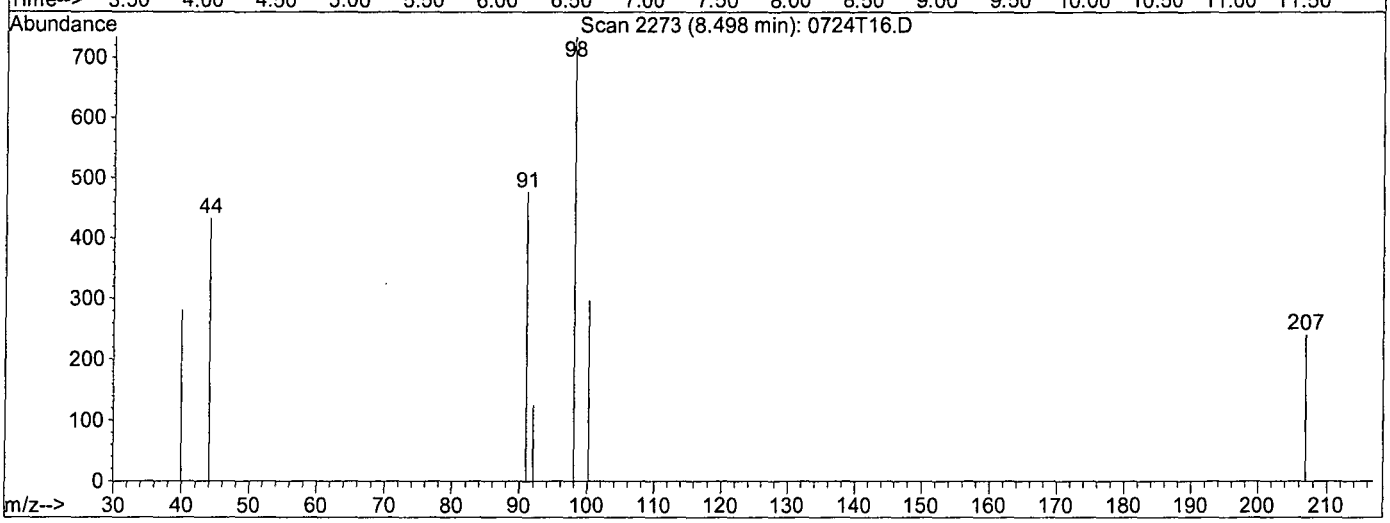


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T16.D Vial: 15
Acq On : 24 Jul 12 23:02 Operator: DG,RS,HW,ARS,SV
Sample : AY65043W02 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 14:28 2012 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

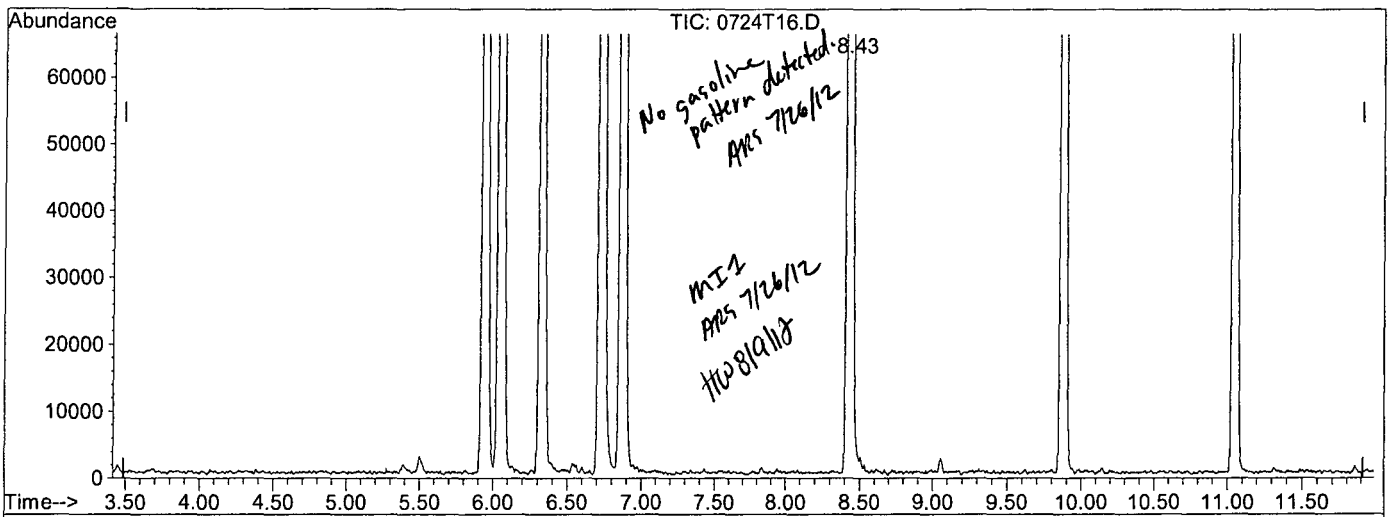
response 7232998

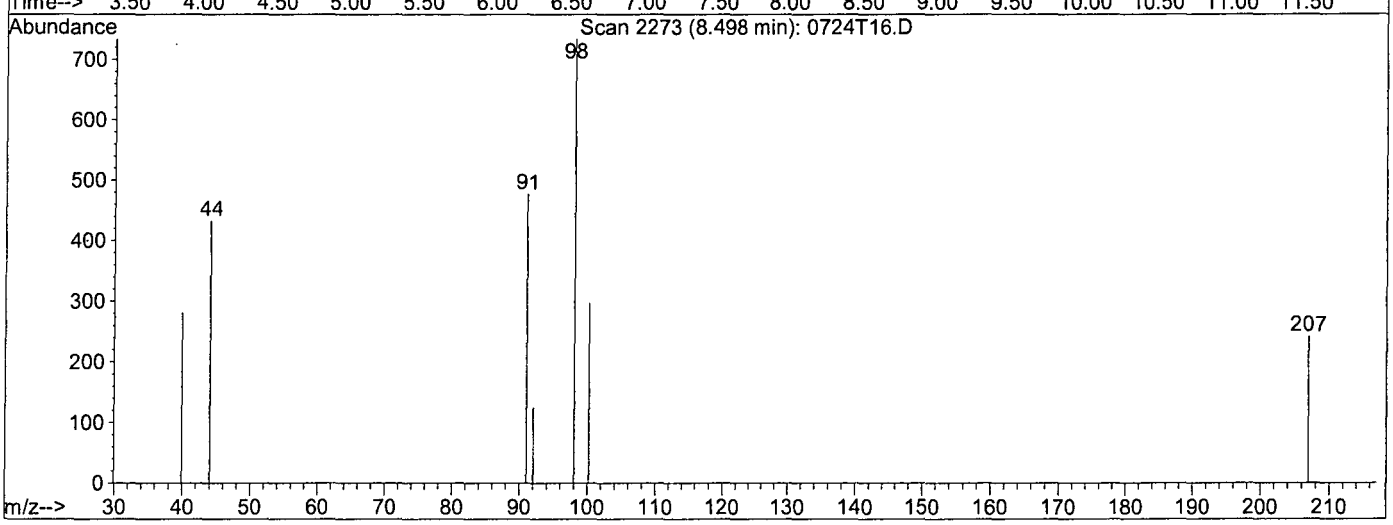
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.27#
0.00	0.00	3.73#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T16.D Vial: 15
Acq On : 24 Jul 12 23:02 Operator: DG,RS,HW,ARS,SV
Sample : AY65043W02 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: 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

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	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.
(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

Data File : M:\THOR\DATA\T120719\0719T45.D Vial: 45
Acq On : 20 Jul 12 5:31 Operator: DG,RS,HW,ARS,SV
Sample : AY65044W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 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						
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

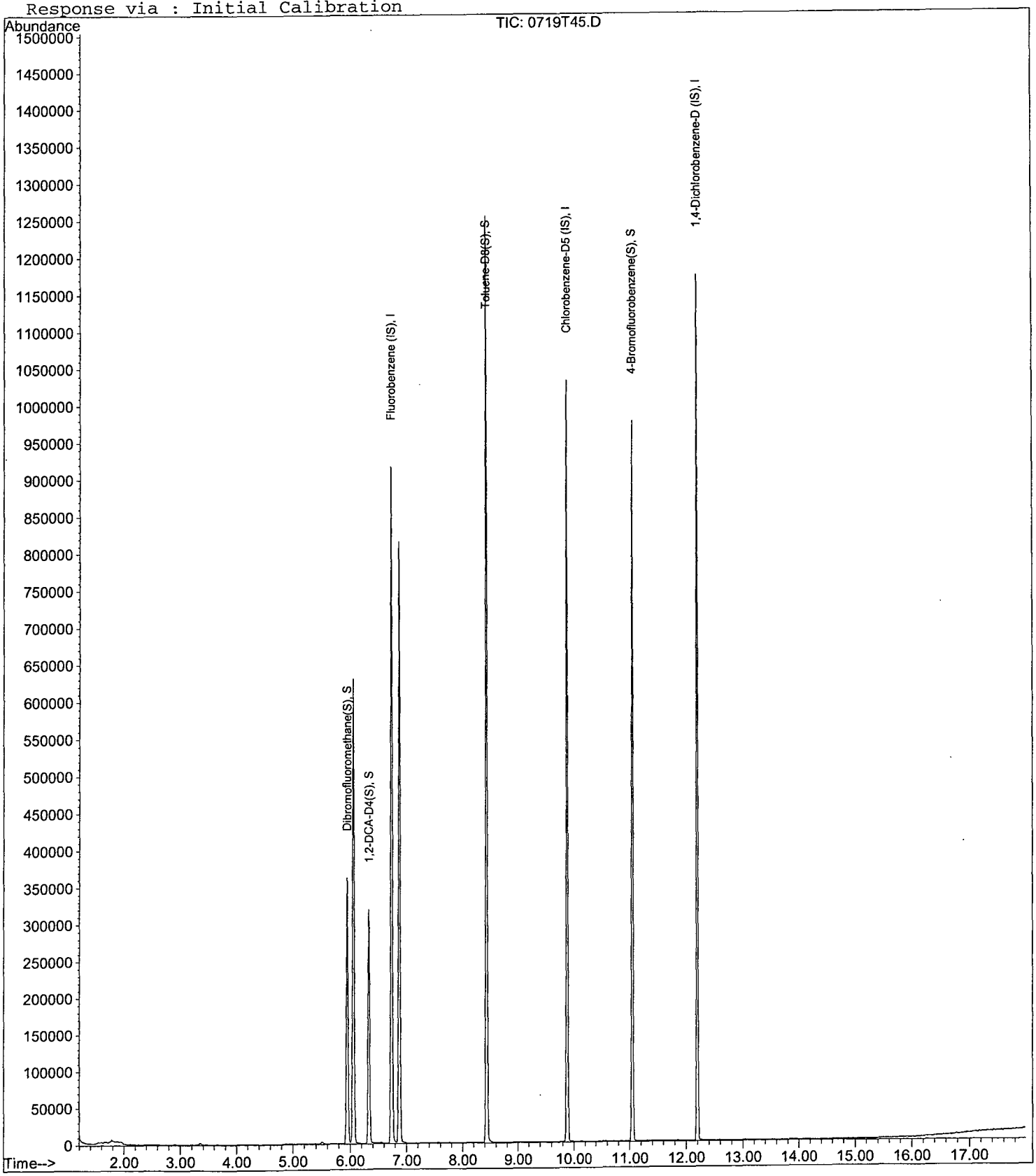
(#) = qualifier out of range (m) = manual integration

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						Qvalue
2) Gasoline	8.43	TIC	9462760m	122.57049	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

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

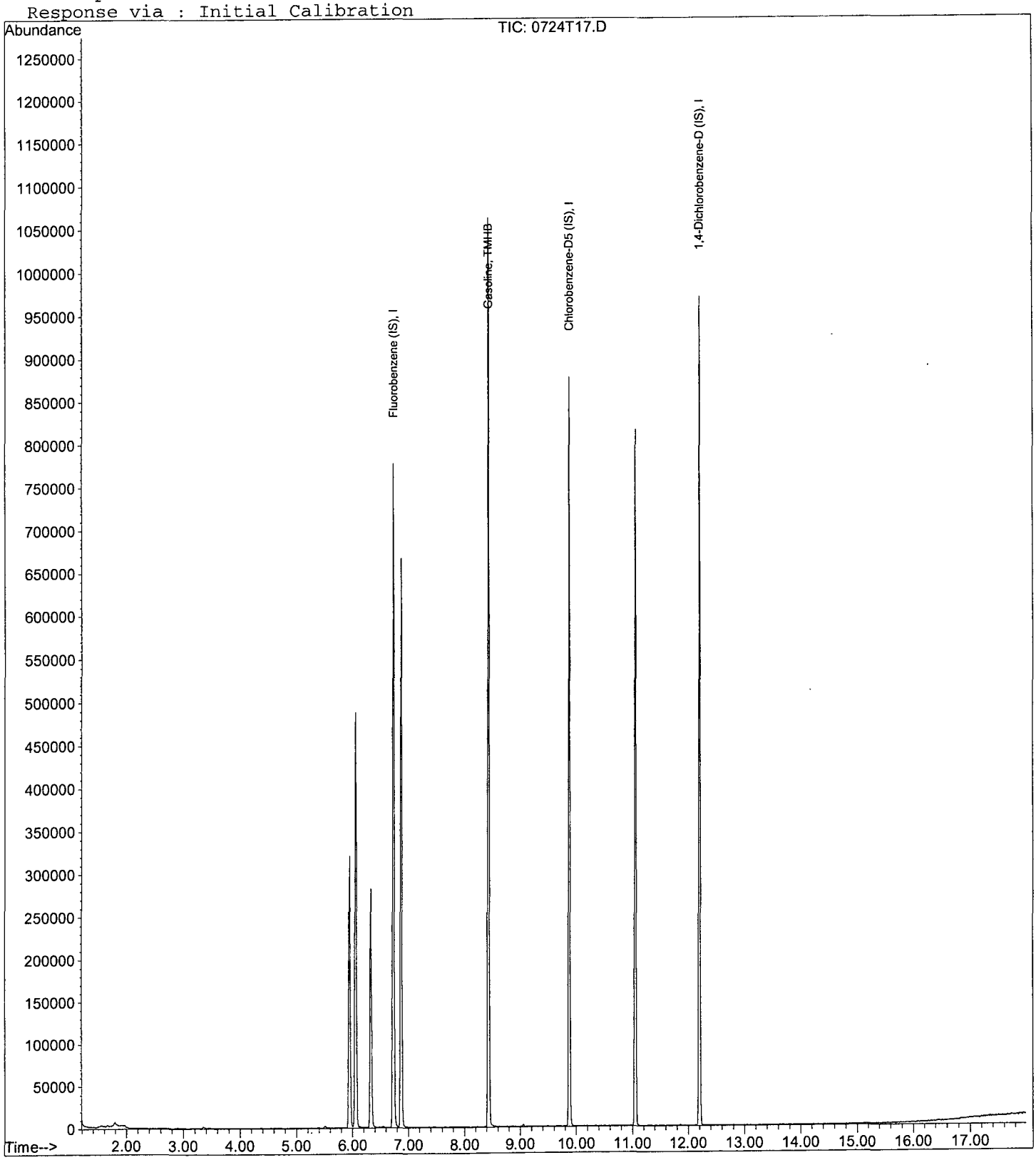
Quantitation Report

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

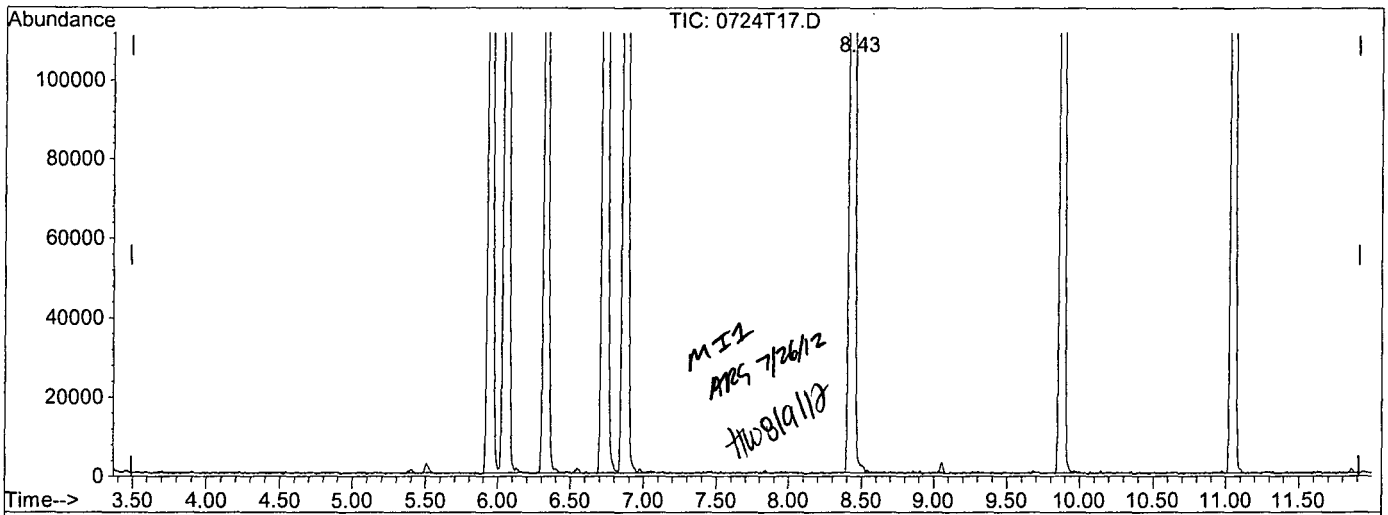
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

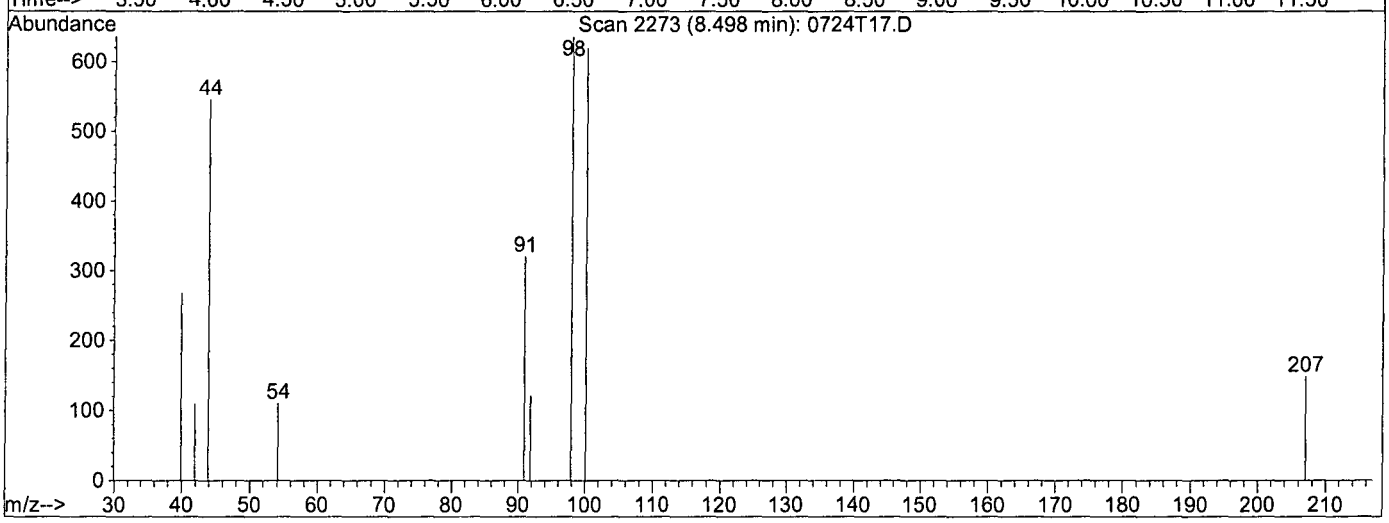


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T17.D 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 14:28 2012 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

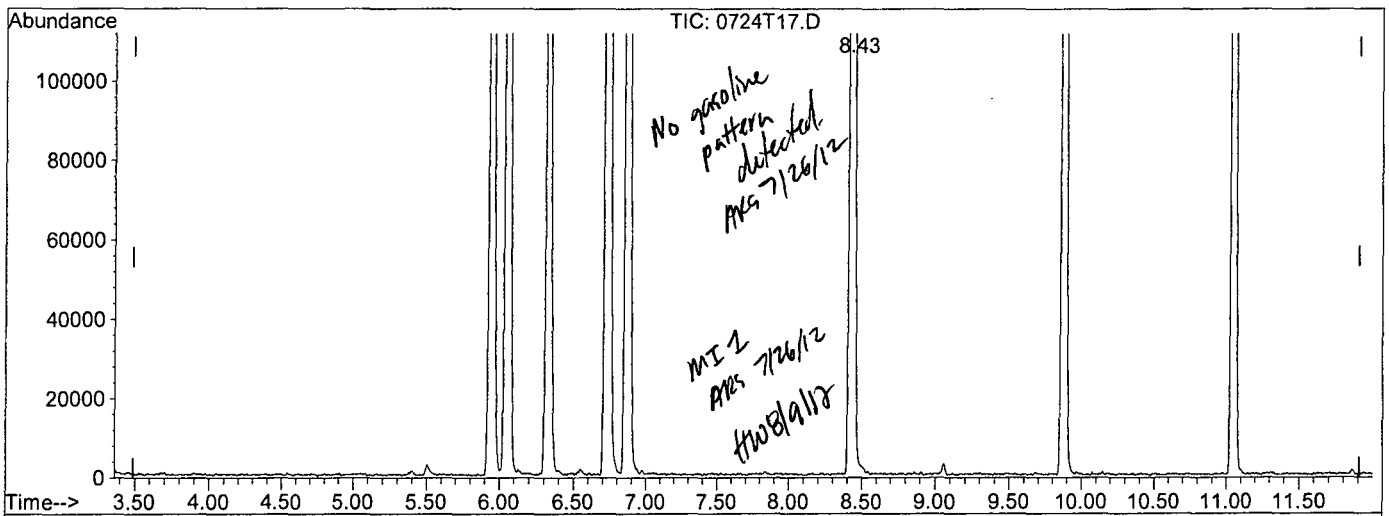
response 7321628

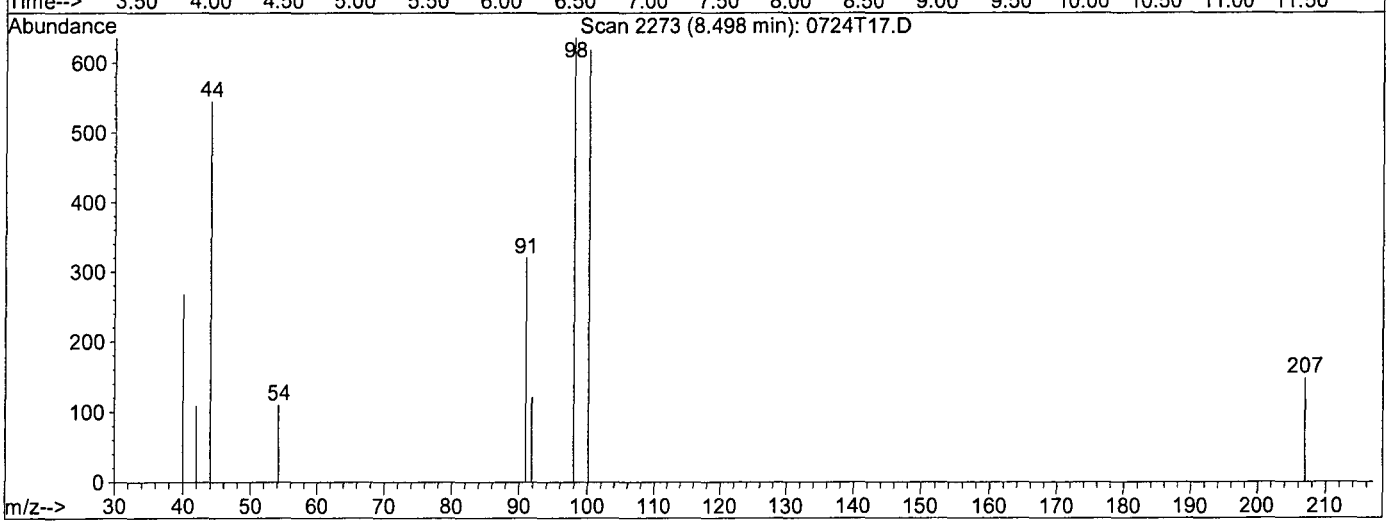
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.31#
0.00	0.00	3.72#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T17.D 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: 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. SDG No: 68248
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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	NT
11	TML	Acetone	0.3965	0.2944	0.1679	0.1468	0.1007	0.0866	0.0926	0.0801	0.0821		0.16	70	TML	0.999
12	TM	Freon-113	0.1778	0.1747	0.1931	0.2265	0.2246	0.2168	0.2084	0.2210	0.2060		0.21	9.5	TM	
13	TM*	1,1-DCE	0.3007	0.2729	0.2644	0.2720	0.2744	0.2696	0.2660	0.2835	0.2775		0.28	4.0	TM*	
14	TM	t-Butanol		0.0075	0.0074	0.0072	0.0076	0.0077	0.0092	0.0102			0.01	14	TM	
15	TML	Methyl Acetate	0.8726	0.6035	0.5101	0.4714	0.2802	0.2330	0.2248	0.2202	0.2132		0.40	57	TML	1.000
16	TM	Iodomethane	0.2492	0.2575	0.2660	0.2419	0.2622	0.2432	0.2408	0.2414	0.2418		0.25	4.0	TM	
17	TM	Acrylonitrile	0.0874	0.0549	0.0692	0.0728	0.0933	0.0806	0.0840	0.0846	0.0838		0.08	15	TM	
18	TML	Methylene chloride	0.3676	0.2647	0.1440	0.1292	0.1165	0.0964	0.0956	0.0949	0.0918		0.16	62	TML	1.000
19	TML	Carbon disulfide	0.0466	0.0453	0.0322	0.0318	0.0301	0.0270	0.0292	0.0278	0.0258		0.03	23	TML	0.999
20	TM	Methyl t-butyl ether (MtBE)	0.6119	0.5783	0.5229	0.5275	0.5662	0.5222	0.5070	0.4911	0.4631		0.53	8.6	TM	
21	TM	Trans-1,2-DCE	0.2297	0.2354	0.1695	0.1842	0.1947	0.1734	0.1779	0.1766	0.1709		0.19	13	TM	
22	TM	Diisopropyl Ether	0.1003	0.1361	0.1126	0.1164	0.1317	0.1212	0.1179	0.1198	0.1168		0.12	8.7	TM	
23	TM**	1,1-DCA	0.5526	0.4780	0.4682	0.4954	0.5506	0.5086	0.4958	0.5067	0.4843		0.50	5.9	TM**	
24	TM	Vinyl Acetate	0.2861	0.3189	0.2551	0.2716	0.3128	0.2787	0.2776	0.2848	0.2788		0.28	6.9	TM	
25	TM	Ethyl tert Butyl Ether	0.7356	0.6599	0.6680	0.6558	0.7593	0.6522	0.6460	0.6381	0.5738		0.67	8.2	TM	
26	TML	MEK (2-Butanone)	0.2041	0.1795	0.1594	0.1391	0.1113	0.1135	0.1203	0.1216	0.1272		0.14	23	TML	1.000
27	TM	Cis-1,2-DCE	0.3407	0.3327	0.3111	0.3113	0.3441	0.3184	0.3199	0.3183	0.3119		0.32	4.0	TM	
28	TM	2,2-Dichloropropane		0.2047	0.2143	0.2086	0.2158	0.2037	0.1976	0.1966	0.1845		0.20	5.0	TM	
29	TM*	Chloroform	0.7181	0.6349	0.6028	0.6230	0.6647	0.6037	0.5996	0.6037	0.5876		0.63	6.6	TM*	
30	TM	Bromochloromethane	0.1510	0.1457	0.1513	0.1633	0.1810	0.1595	0.1543	0.1538	0.1561		0.16	6.5	TM	
31	S	Dibromofluoromethane(S)	0.5051	0.3961	0.3766	0.3856	0.3635	0.3650	0.3693	0.3784	0.3815		0.39	11	S	
32	TM	1,1,1-TCA	0.4433	0.4047	0.3367	0.3737	0.3876	0.3695	0.3618	0.3671	0.3480		0.38	8.5	TM	
33	TM	Cyclohexane	0.1075	0.0984	0.0973	0.1087	0.1023	0.1026	0.0982	0.1080	0.0976		0.10	4.6	TM	
34	TM	1,1-Dichloropropene	0.2952	0.2623	0.2578	0.2666	0.2963	0.2712	0.2714	0.2756	0.2672		0.27	4.9	TM	
35	TM	2,2,4-Trimethylpentane	0.4193	0.3897	0.3643	0.3992	0.4174	0.3920	0.3860	0.4075	0.3655		0.39	5.1	TM	

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68248
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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)														

AMS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68248
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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 Vial: 5
Acq On : 19 Jul 12 11:01 Operator: DG,RS,HW,ARS,SV
Sample : 0.3ug/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)	6.74	96	427072	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	343424	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	202048	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	5177	0.77464 ppb		0.00
Spiked Amount 29.744			Recovery	= 2.606%		
36) 1,2-DCA-D4(S)	6.33	65	4744	0.76381 ppb		0.00
Spiked Amount 29.083			Recovery	= 2.627%		
56) Toluene-D8(S)	8.43	98	16030	0.78954 ppb		0.00
Spiked Amount 30.231			Recovery	= 2.613%		
64) 4-Bromofluorobenzene(S)	11.05	95	7369	0.76748 ppb		0.00
Spiked Amount 28.321			Recovery	= 2.708%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	615	0.27612 ppb		95
3) Freon 114	1.42	85	725	-0.13478 ppb	#	68
4) Chloromethane	1.45	50	2617	0.40957 ppb		87
5) Vinyl chloride	1.56	62	2565	0.30389 ppb		92
6) Bromomethane	1.87	94	2507	0.46469 ppb		98
7) Chloroethane	1.98	64	1408	0.28963 ppb		99
9) Trichlorofluoromethane	2.24	101	407	0.23329 ppb		93
11) Acetone	2.91	43	2032	0.21001 ppb	#	82
12) Freon-113	2.85	101	911	0.25960 ppb	#	62
13) 1,1-DCE	2.82	61	1541	0.32723 ppb	#	78
14) t-Butanol	3.69	59	2213	15.97947 ppb		92
15) Methyl Acetate	3.35	43	4472	-0.20827 ppb	#	84
16) Iodomethane	2.99	142	1277	0.29980 ppb	#	77
17) Acrylonitrile	3.84	52	448	0.33215 ppb	#	42
18) Methylene chloride	3.45	84	1884	0.26546 ppb		79
19) Carbon disulfide	3.07	76	239	-0.34303 ppb	#	65
20) Methyl t-butyl ether (MtBE	3.91	73	3136	0.34491 ppb	#	79
21) Trans-1,2-DCE	3.87	96	1177	0.36216 ppb	#	64
22) Diisopropyl Ether	4.71	59	514	0.25243 ppb	#	40
23) 1,1-DCA	4.51	63	2832	0.32862 ppb	#	79
24) Vinyl Acetate	4.71	87	1466	0.30118 ppb		75
25) Ethyl tert Butyl Ether	5.21	59	3770	0.33165 ppb		100
26) MEK (2-Butanone)	5.40	43	1046	0.82334 ppb		91
27) Cis-1,2-DCE	5.32	96	1746	0.31627 ppb		76
28) 2,2-Dichloropropane	5.32	77	1192	0.74979 ppb		93
29) Chloroform	5.76	83	3680	0.34387 ppb		87
30) Bromochloromethane	5.63	128	774	0.28796 ppb		75
32) 1,1,1-TCA	5.96	97	2272	0.35284 ppb		87
33) Cyclohexane	6.03	41	551	0.31531 ppb	#	6
34) 1,1-Dichloropropene	6.16	75	1513	0.32355 ppb	#	82
35) 2,2,4-Trimethylpentane	6.55	57	2149	0.31975 ppb		81
37) Carbon Tetrachloride	6.16	117	1836	0.30422 ppb		83
38) Tert Amyl Methyl Ether	6.59	73	4153	0.34325 ppb	#	92
39) 1,2-DCA	6.42	62	2269	0.32331 ppb	#	74
40) Benzene	6.40	78	6818	0.35570 ppb		94
41) TCE	7.14	95	1650	0.31670 ppb		90
42) 2-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

Data File : M:\THOR\DATA\T120719\0719T05.D Vial: 5
Acq On : 19 Jul 12 11:01 Operator: DG,RS,HW,ARS,SV
Sample : 0.3ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

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

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

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
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

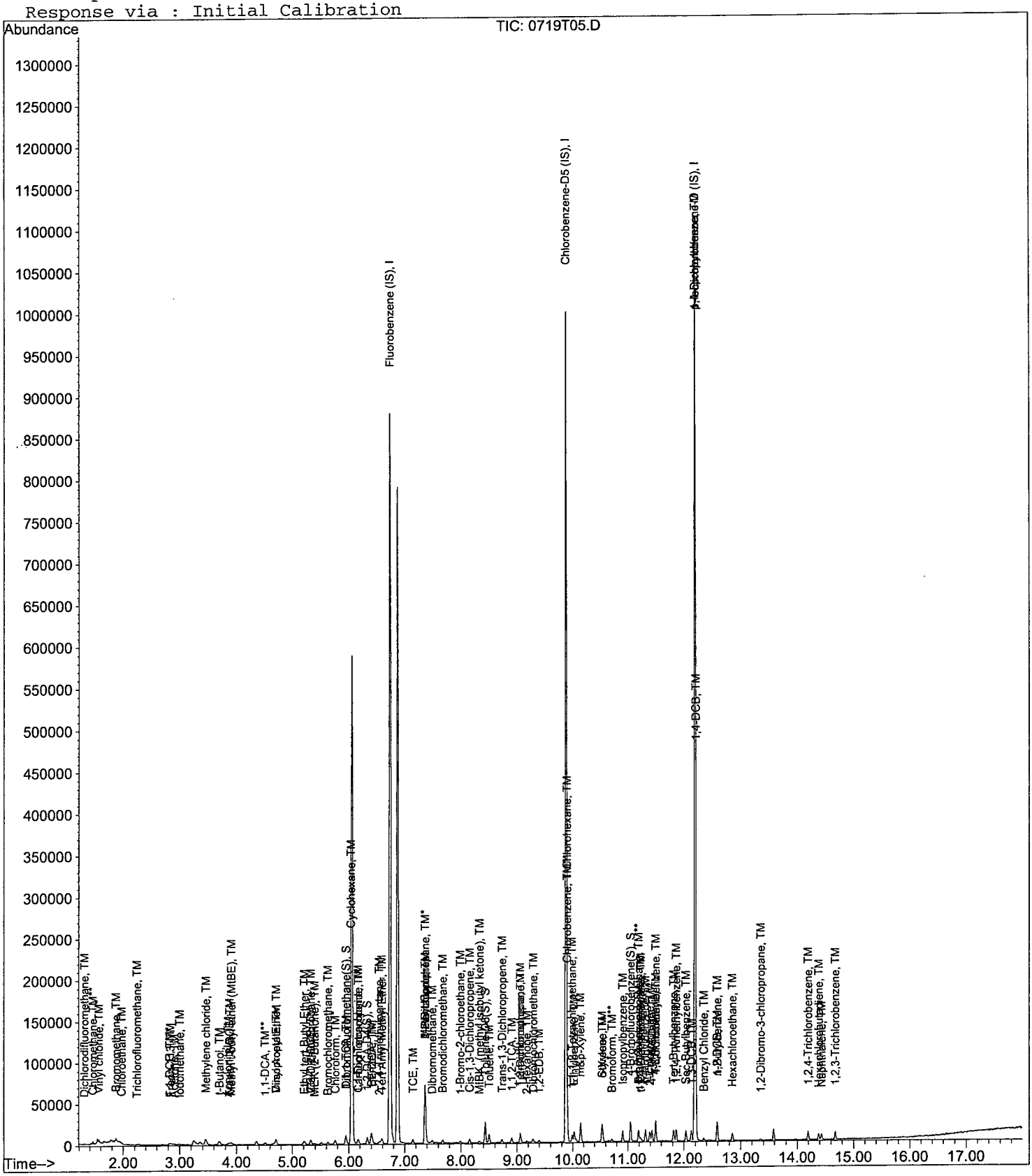
(#) = qualifier out of range (m) = manual integration

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



195

Data File : M:\THOR\DATA\T120719\0719T06.D Vial: 6
Acq On : 19 Jul 12 11:29 Operator: DG,RS,HW,ARS,SV
Sample : 0.5ug/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	440576	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	363776	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	205952	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	6980	1.01241 ppb		0.00
Spiked Amount 29.744			Recovery =	3.402%		
36) 1,2-DCA-D4(S)	6.33	65	7179	1.12044 ppb		0.00
Spiked Amount 29.083			Recovery =	3.851%		
56) Toluene-D8(S)	8.43	98	22596	1.05068 ppb		0.00
Spiked Amount 30.231			Recovery =	3.477%		
64) 4-Bromofluorobenzene(S)	11.05	95	10075	0.99060 ppb		0.00
Spiked Amount 28.321			Recovery =	3.499%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	1093	0.47570 ppb		85
3) Freon 114	1.42	85	922	-0.07628 ppb		90
4) Chloromethane	1.45	50	4079	0.61881 ppb		92
5) Vinyl chloride	1.56	62	4275	0.49095 ppb		97
6) Bromomethane	1.87	94	3318	0.59617 ppb		96
7) Chloroethane	1.98	64	2744	0.54714 ppb		97
8) Dichlorofluoromethane	2.18	67	178	0.48209 ppb	#	41
9) Trichlorofluoromethane	2.24	101	742	0.41227 ppb		86
11) Acetone	2.90	43	2594	0.55965 ppb		96
12) Freon-113	2.86	101	1539	0.42512 ppb	#	88
13) 1,1-DCE	2.82	61	2405	0.49505 ppb		96
14) t-Butanol	3.69	59	3316	23.21003 ppb		95
16) Iodomethane	2.98	142	2269	0.51637 ppb	#	76
17) Acrylonitrile	3.82	52	484	0.34784 ppb	#	38
18) Methylene chloride	3.46	84	2332	0.50714 ppb		95
20) Methyl t-butyl ether (MtBE	3.91	73	5096	0.54331 ppb	#	93
21) Trans-1,2-DCE	3.86	96	2074	0.61860 ppb	#	74
22) Diisopropyl Ether	4.70	59	1199	0.57079 ppb	#	86
23) 1,1-DCA	4.51	63	4212	0.47377 ppb	#	92
24) Vinyl Acetate	4.70	87	2810	0.55961 ppb		62
25) Ethyl tert Butyl Ether	5.21	59	5815	0.49588 ppb		97
26) MEK (2-Butanone)	5.39	43	1582	1.04859 ppb	#	79
27) Cis-1,2-DCE	5.33	96	2932	0.51483 ppb		90
28) 2,2-Dichloropropane	5.32	77	1804	1.09997 ppb		93
29) Chloroform	5.76	83	5594	0.50670 ppb		93
30) Bromochloromethane	5.62	128	1284	0.46305 ppb		86
32) 1,1,1-TCA	5.96	97	3566	0.53682 ppb		84
33) Cyclohexane	6.03	41	867	0.48093 ppb	#	20
34) 1,1-Dichloropropene	6.16	75	2311	0.47905 ppb	#	87
35) 2,2,4-Trimethylpentane	6.55	57	3434	0.49528 ppb		94
37) Carbon Tetrachloride	6.17	117	3159	0.50739 ppb		79
38) Tert Amyl Methyl Ether	6.59	73	6331	0.50723 ppb	#	88
39) 1,2-DCA	6.42	62	3515	0.48550 ppb	#	91
40) Benzene	6.40	78	10831	0.54774 ppb		95
41) TCE	7.14	95	2816	0.52393 ppb		86
42) 2-Pentanone	7.36	43	96700	22.83691 ppb		100
43) 1,2-Dichloropropane	7.37	63	3334	0.51674 ppb	#	85
44) Bromodichloromethane	7.68	83	4425	0.49576 ppb	#	92
45) Methyl Cyclohexane	7.36	83	1985	0.51726 ppb		81
46) Dibromomethane	7.50	93	1649	0.46985 ppb		78
48) MIBK (methyl isobutyl ket	8.33	43	1720	0.56481 ppb	#	91

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

Data File : M:\THOR\DATA\T120719\0719T06.D Vial: 6
Acq On : 19 Jul 12 11:29 Operator: DG,RS,HW,ARS,SV
Sample : 0.5ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

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

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

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
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

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

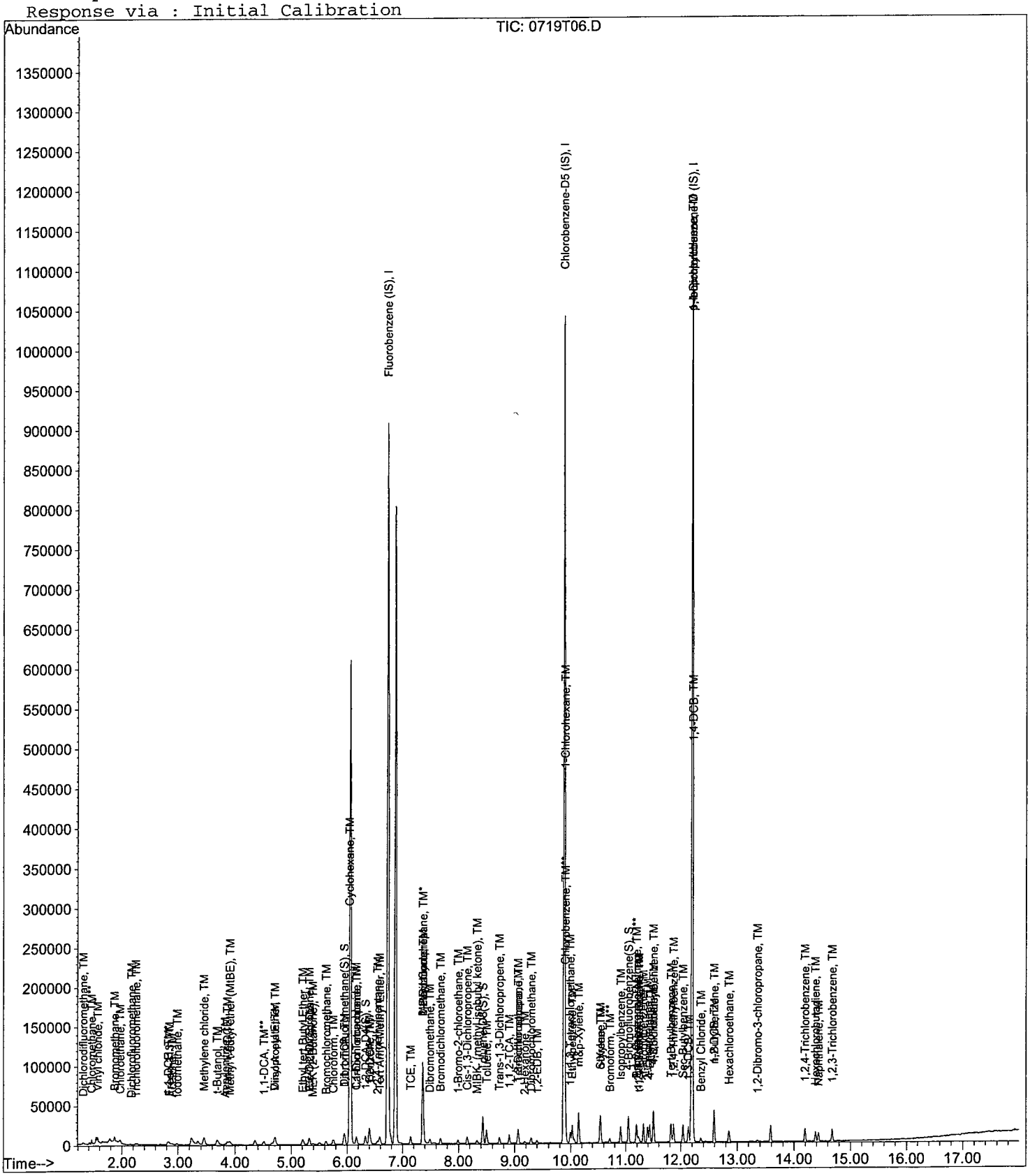
Quantitation Report

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

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

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

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



Data File : M:\THOR\DATA\T120719\0719T07.D Vial: 7
Acq On : 19 Jul 12 11:57 Operator: DG,RS,HW,ARS,SV
Sample : 1.0ug/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)	6.74	96	442240	25.00000	ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	361536	25.00000	ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	203840	25.00000	ppb		0.00
System Monitoring Compounds							
31) Dibromofluoromethane(S)	5.95	111	13324	1.92530	ppb		0.00
Spiked Amount 29.744			Recovery = 6.472%				
36) 1,2-DCA-D4(S)	6.33	65	12530	1.94822	ppb		0.00
Spiked Amount 29.083			Recovery = 6.698%				
56) Toluene-D8(S)	8.43	98	40197	1.88068	ppb		0.00
Spiked Amount 30.231			Recovery = 6.222%				
64) 4-Bromofluorobenzene(S)	11.05	95	19479	1.92710	ppb		0.00
Spiked Amount 28.321			Recovery = 6.804%				
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.31	85	2509	1.08786	ppb		90
3) Freon 114	1.42	85	2408	0.42008	ppb		95
4) Chloromethane	1.45	50	7357	1.11191	ppb		88
5) Vinyl chloride	1.56	62	8016	0.91712	ppb		91
6) Bromomethane	1.87	94	6361	1.13863	ppb		87
7) Chloroethane	1.98	64	5042	1.00157	ppb		95
8) Dichlorofluoromethane	2.18	67	223	0.65944	ppb	#	41
9) Trichlorofluoromethane	2.24	101	1709	0.94597	ppb		98
11) Acetone	2.90	43	2970	0.81592	ppb		89
12) Freon-113	2.86	101	3415	0.93978	ppb	#	73
13) 1,1-DCE	2.83	61	4677	0.95909	ppb		93
14) t-Butanol	3.69	59	6579	45.87583	ppb		98
15) Methyl Acetate	3.35	43	9023	0.97185	ppb		97
16) Iodomethane	2.98	142	4706	1.06694	ppb		95
17) Acrylonitrile	3.83	52	1224	0.87635	ppb	#	55
18) Methylene chloride	3.46	84	2548	0.63556	ppb		95
19) Carbon disulfide	3.07	76	570	0.36158	ppb	#	65
20) Methyl t-butyl ether (MtBE	3.91	73	9249	0.98236	ppb	#	88
21) Trans-1,2-DCE	3.87	96	2998	0.89083	ppb		94
22) Diisopropyl Ether	4.70	59	1992	0.94474	ppb		97
23) 1,1-DCA	4.51	63	8283	0.92818	ppb	#	90
24) Vinyl Acetate	4.70	87	4513	0.89537	ppb		98
25) Ethyl tert Butyl Ether	5.21	59	11816	1.00382	ppb		97
26) MEK (2-Butanone)	5.39	43	2819	1.59789	ppb		87
27) Cis-1,2-DCE	5.33	96	5504	0.96281	ppb		89
28) 2,2-Dichloropropane	5.32	77	3790	2.30222	ppb		89
29) Chloroform	5.76	83	10664	0.96229	ppb		98
30) Bromochloromethane	5.62	128	2677	0.96179	ppb		97
32) 1,1,1-TCA	5.96	97	5956	0.89324	ppb		87
33) Cyclohexane	6.03	41	1722	0.95160	ppb	#	36
34) 1,1-Dichloropropene	6.17	75	4561	0.94189	ppb		89
35) 2,2,4-Trimethylpentane	6.56	57	6445	0.92606	ppb		83
37) Carbon Tetrachloride	6.16	117	5937	0.95000	ppb		98
38) Tert Amyl Methyl Ether	6.59	73	12173	0.97161	ppb	#	90
39) 1,2-DCA	6.42	62	7205	0.99143	ppb		93
40) Benzene	6.40	78	18340	0.92399	ppb		97
41) TCE	7.15	95	5307	0.98367	ppb		92
42) 2-Pentanone	7.36	43	207854	48.90262	ppb		98
43) 1,2-Dichloropropane	7.37	63	6147	0.94914	ppb		99
44) Bromodichloromethane	7.68	83	8505	0.94929	ppb		94
45) Methyl Cyclohexane	7.36	83	3516	0.91277	ppb	#	49

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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T07.D Vial: 7
Acq On : 19 Jul 12 11:57 Operator: DG,RS,HW,ARS,SV
Sample : 1.0ug/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

	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

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

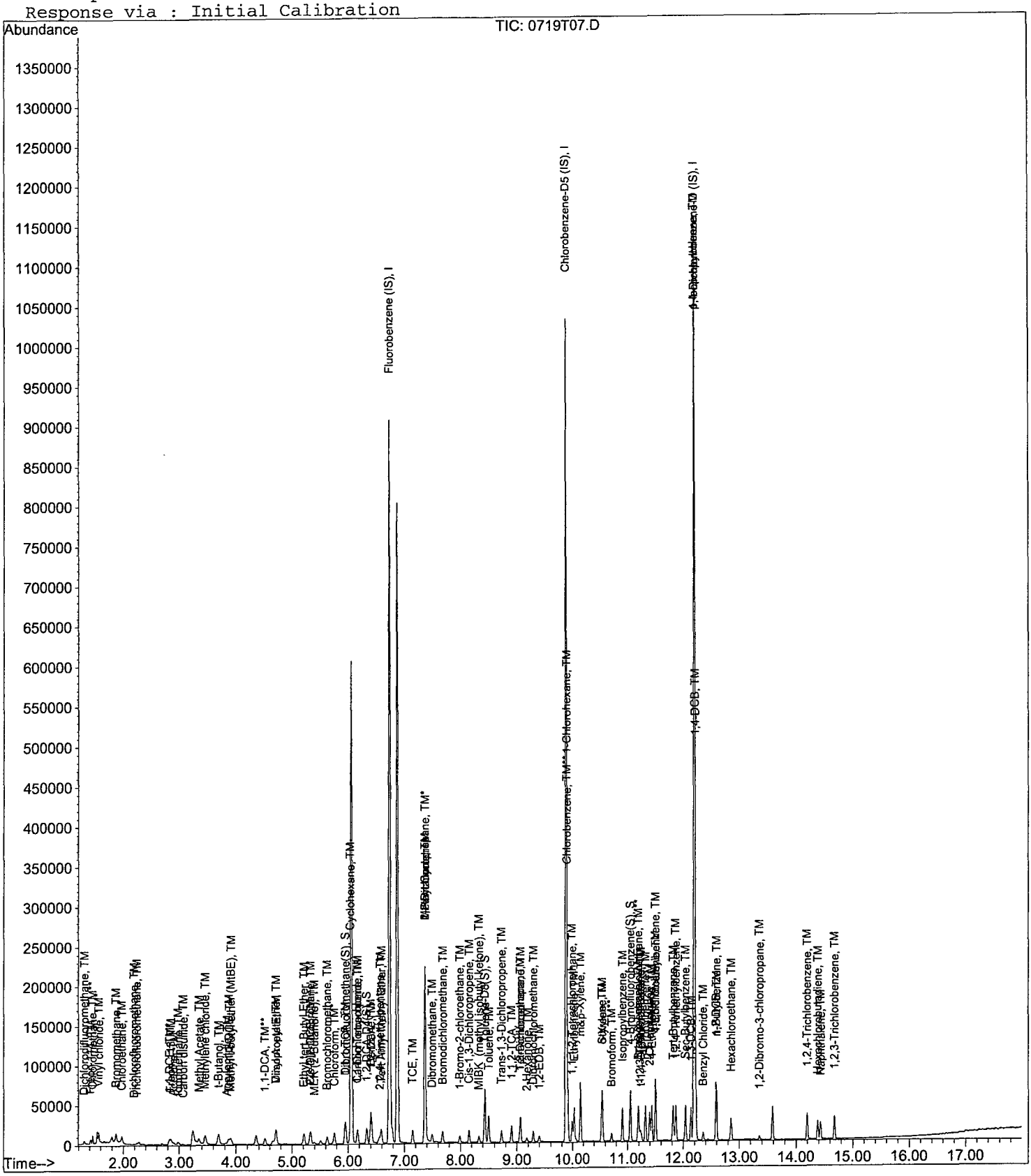
Quantitation Report

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

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

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

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



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Quantitation Report (Not Reviewed)

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

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

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

	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

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

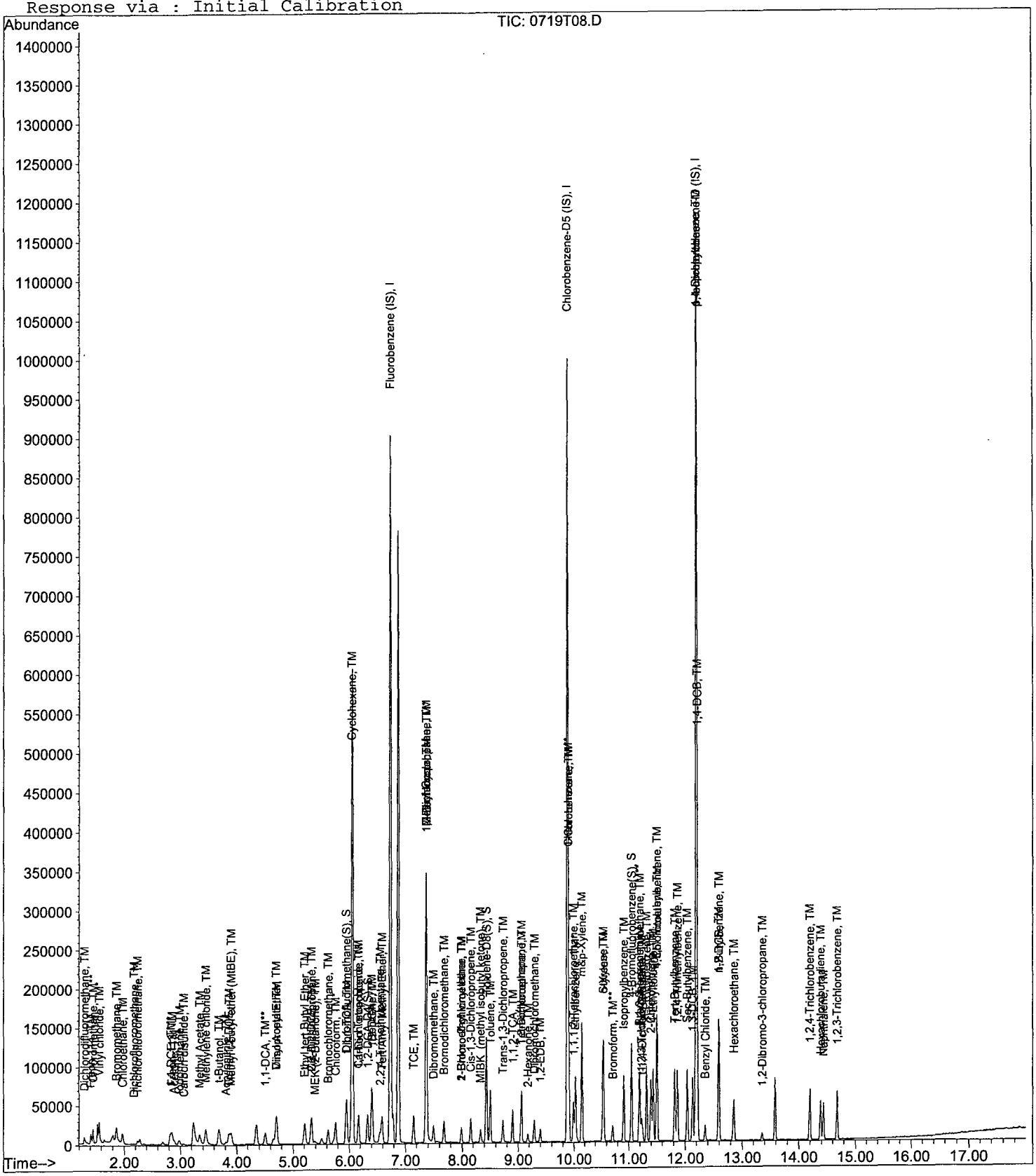
Quantitation Report

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

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

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

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



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T09.D Vial: 9
Acq On : 19 Jul 12 12:53 Operator: DG,RS,HW,ARS,SV
Sample : 5.0ug/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	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						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

Data File : M:\THOR\DATA\T120719\0719T09.D Vial: 9
Acq On : 19 Jul 12 12:53 Operator: DG,RS,HW,ARS,SV
Sample : 5.0ug/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

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

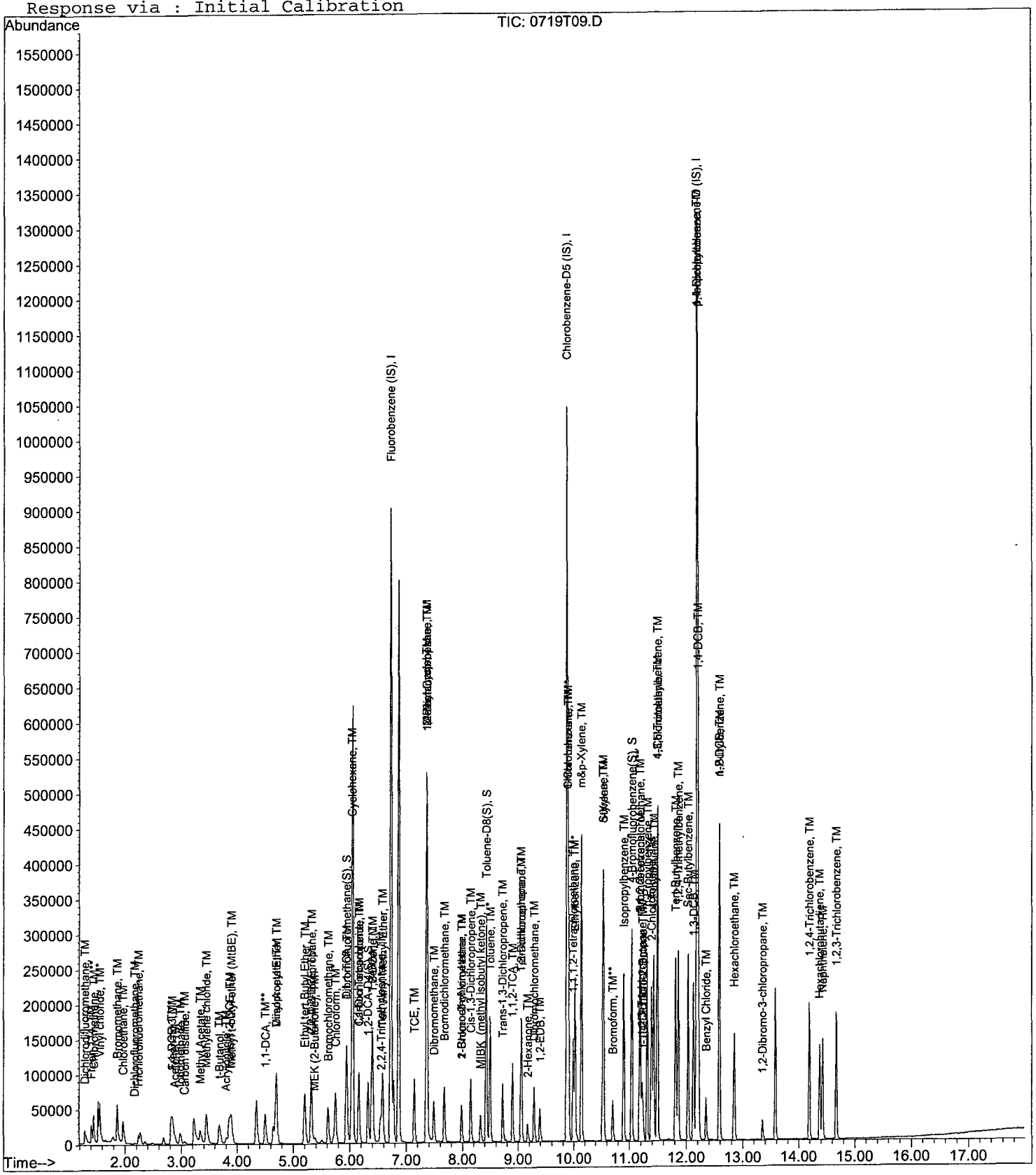
(#) = qualifier out of range (m) = manual integration

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



207

Data File : M:\THOR\DATA\T120719\0719T10.D Vial: 10
Acq On : 19 Jul 12 13:20 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/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)	6.74	96	461760	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	382656	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	222464	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	168520	23.32155 ppb	0.00
Spiked Amount 29.744			Recovery = 78.409%		
36) 1,2-DCA-D4(S)	6.33	65	155567	23.16569 ppb	0.00
Spiked Amount 29.083			Recovery = 79.654%		
56) Toluene-D8(S)	8.43	98	509225	22.50992 ppb	0.00
Spiked Amount 30.231			Recovery = 74.460%		
64) 4-Bromofluorobenzene(S)	11.05	95	243014	22.71494 ppb	0.00
Spiked Amount 28.321			Recovery = 80.206%		
Target Compounds					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

Data File : M:\THOR\DATA\T120719\0719T10.D Vial: 10
Acq On : 19 Jul 12 13:20 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

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

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

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Dibromomethane	7.49	93	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

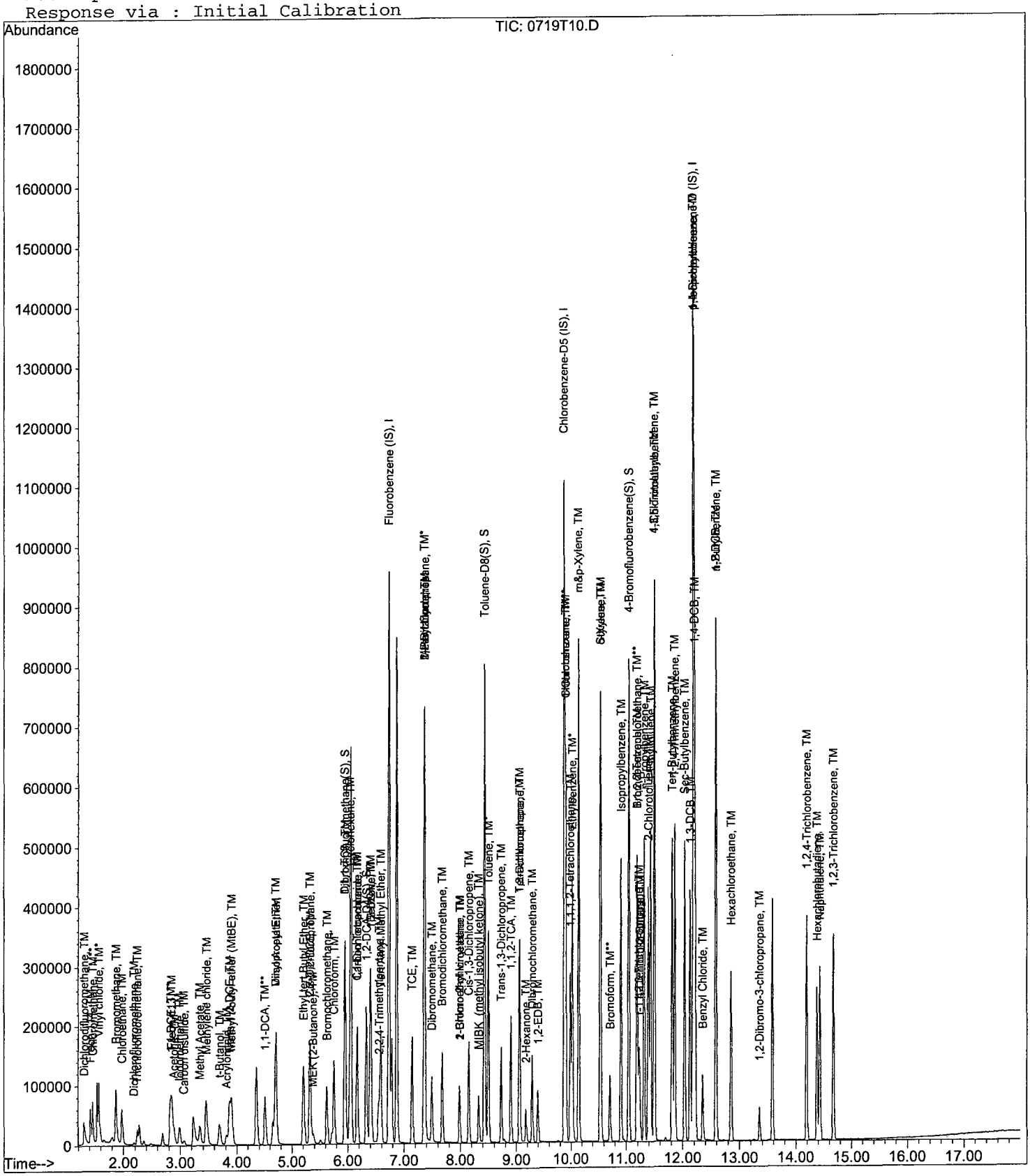
(#) = qualifier out of range (m) = manual integration

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



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Quantitation Report (Not Reviewed)

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						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

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

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

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

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

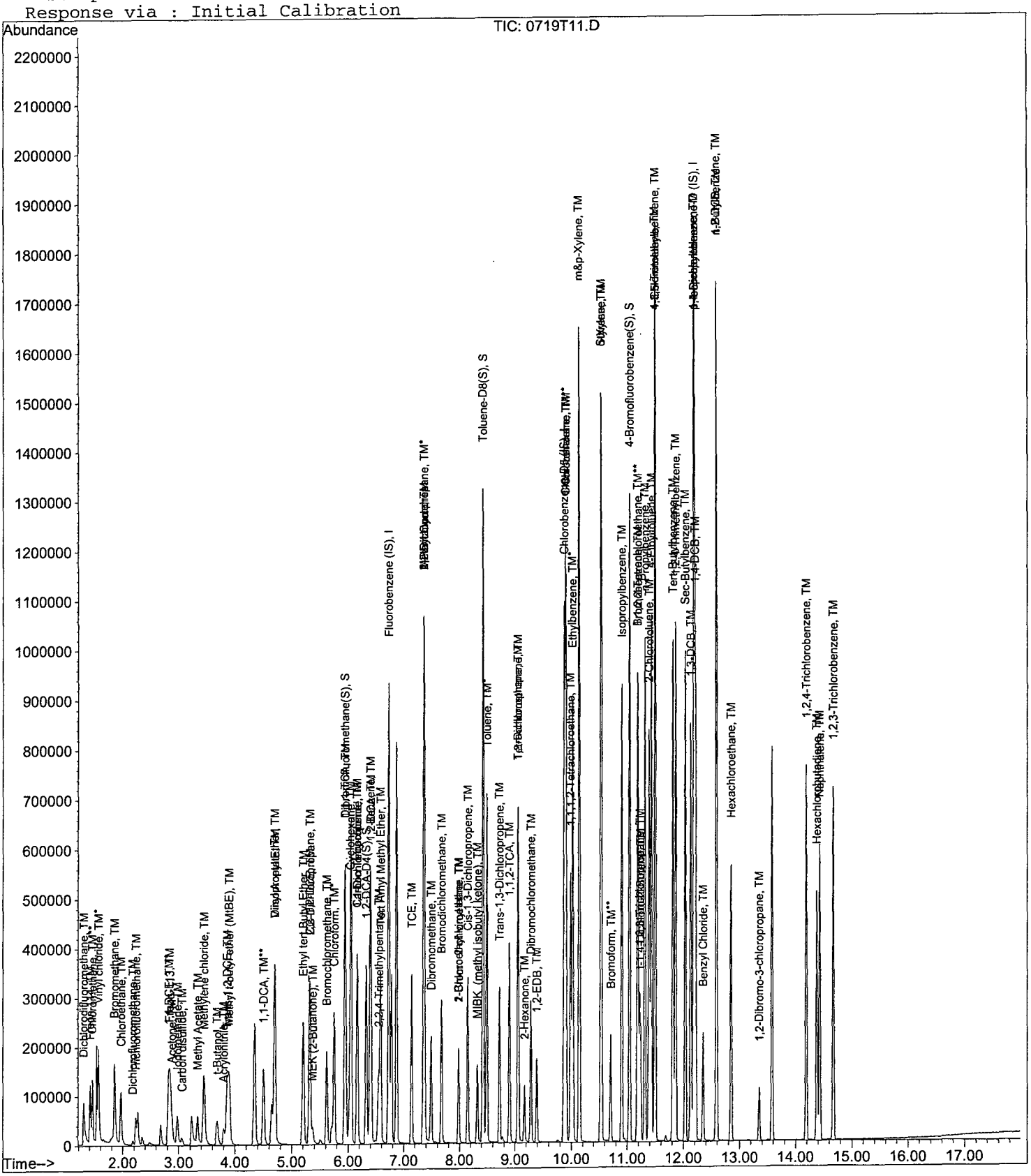
(#) = qualifier out of range (m) = manual integration

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 Vial: 12
Acq On : 19 Jul 12 14:16 Operator: DG,RS,HW,ARS,SV
Sample : 40ug/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	450048	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	369920	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	219712	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	544884	77.36909 ppb		0.00
Spiked Amount 29.744			Recovery = 260.117%			
36) 1,2-DCA-D4(S)	6.33	65	488560	74.64543 ppb		0.00
Spiked Amount 29.083			Recovery = 256.659%			
56) Toluene-D8(S)	8.43	98	1669961	76.36095 ppb		0.00
Spiked Amount 30.231			Recovery = 252.593%			
64) 4-Bromofluorobenzene(S)	11.05	95	804405	77.77781 ppb		0.00
Spiked Amount 28.321			Recovery = 274.630%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	101464	43.22988 ppb		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

Data File : M:\THOR\DATA\T120719\0719T12.D Vial: 12
Acq On : 19 Jul 12 14:16 Operator: DG,RS,HW,ARS,SV
Sample : 40ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

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

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

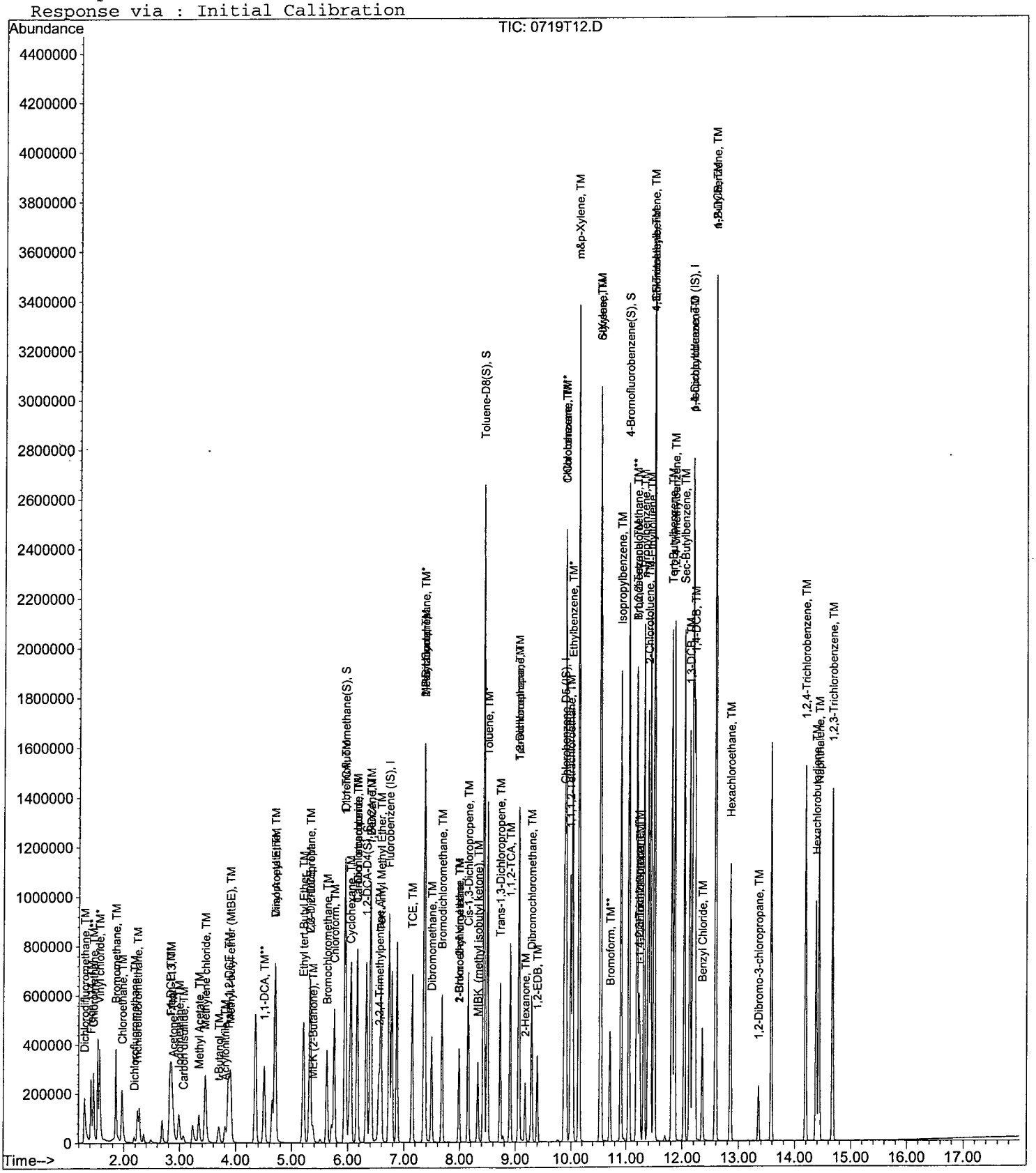
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Dibromomethane	7.49	93	141296	39.41227	ppb		93
47)	2-Chloroethyl vinyl ether	7.99	106	4618	39.97505	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	121497	39.05746	ppb		99
49)	1-Bromo-2-chloroethane	7.99	63	181376	39.55356	ppb		99
50)	Cis-1,3-Dichloropropene	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

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

Data File : M:\THOR\DATA\T120719\0719T12.D Vial: 12
Acq On : 19 Jul 12 14:16 Operator: DG,RS,HW,ARS,SV
Sample : 40ug/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

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



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

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

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

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

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

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

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

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

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

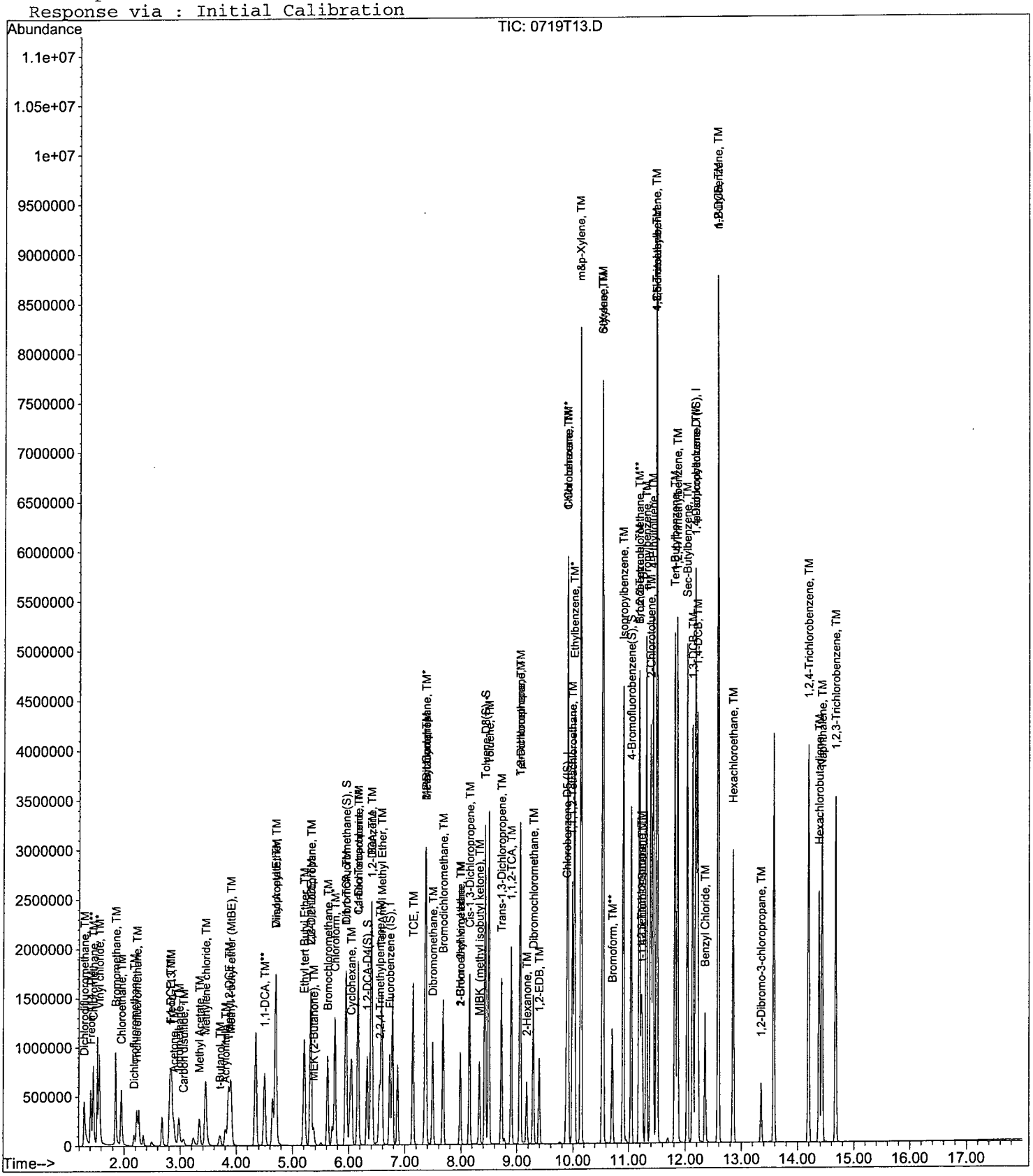
Quantitation Report

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



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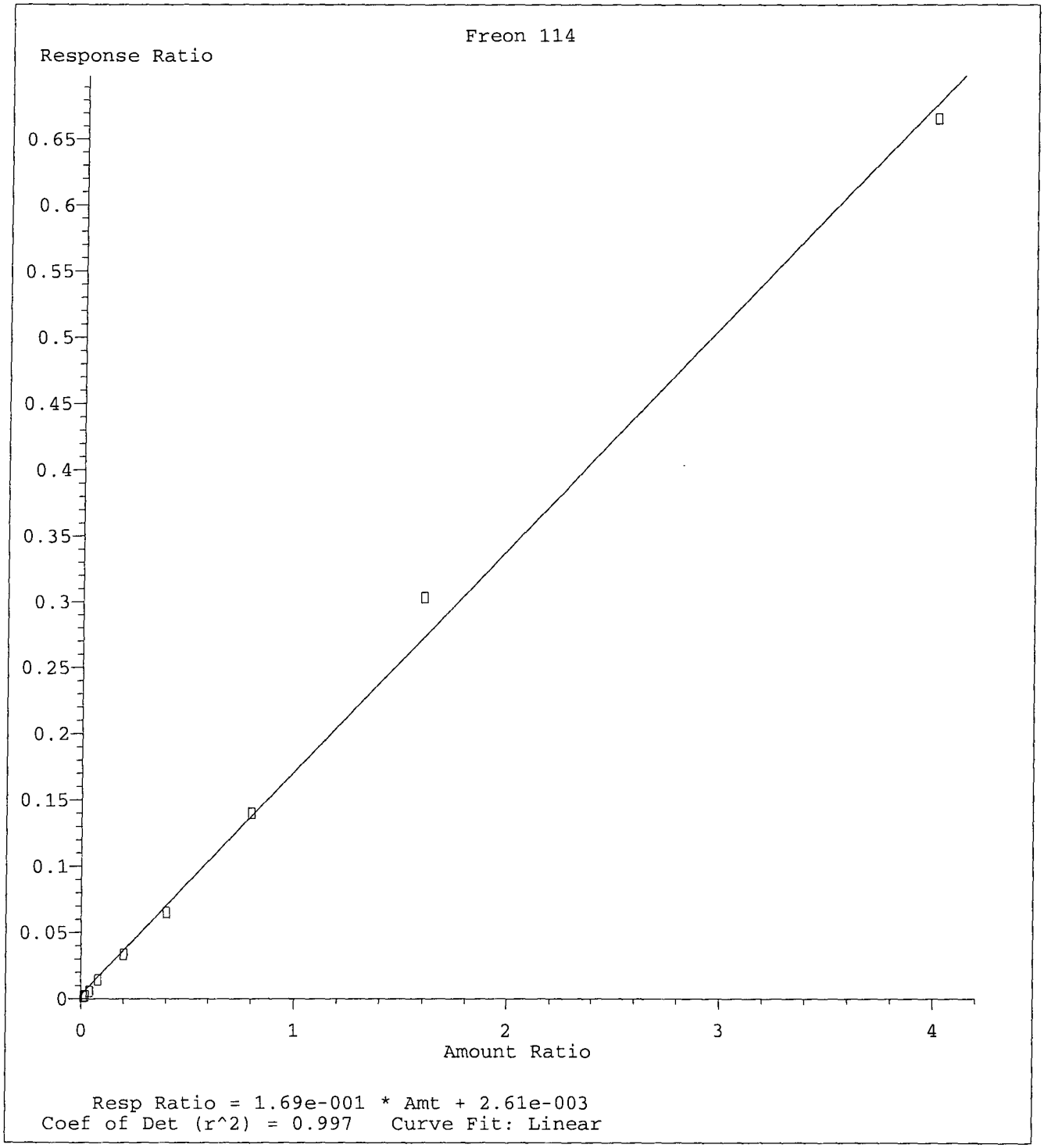
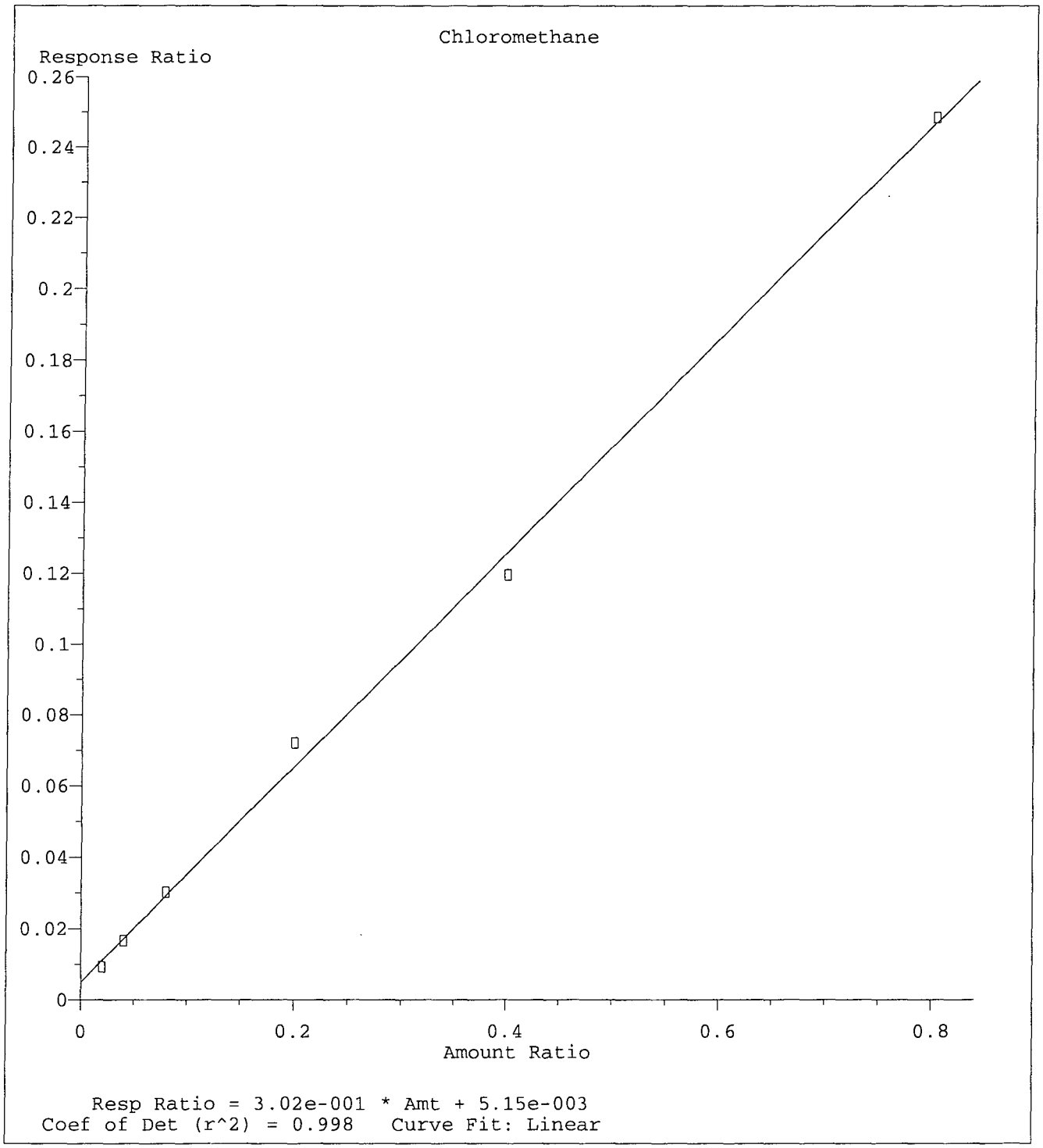


Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



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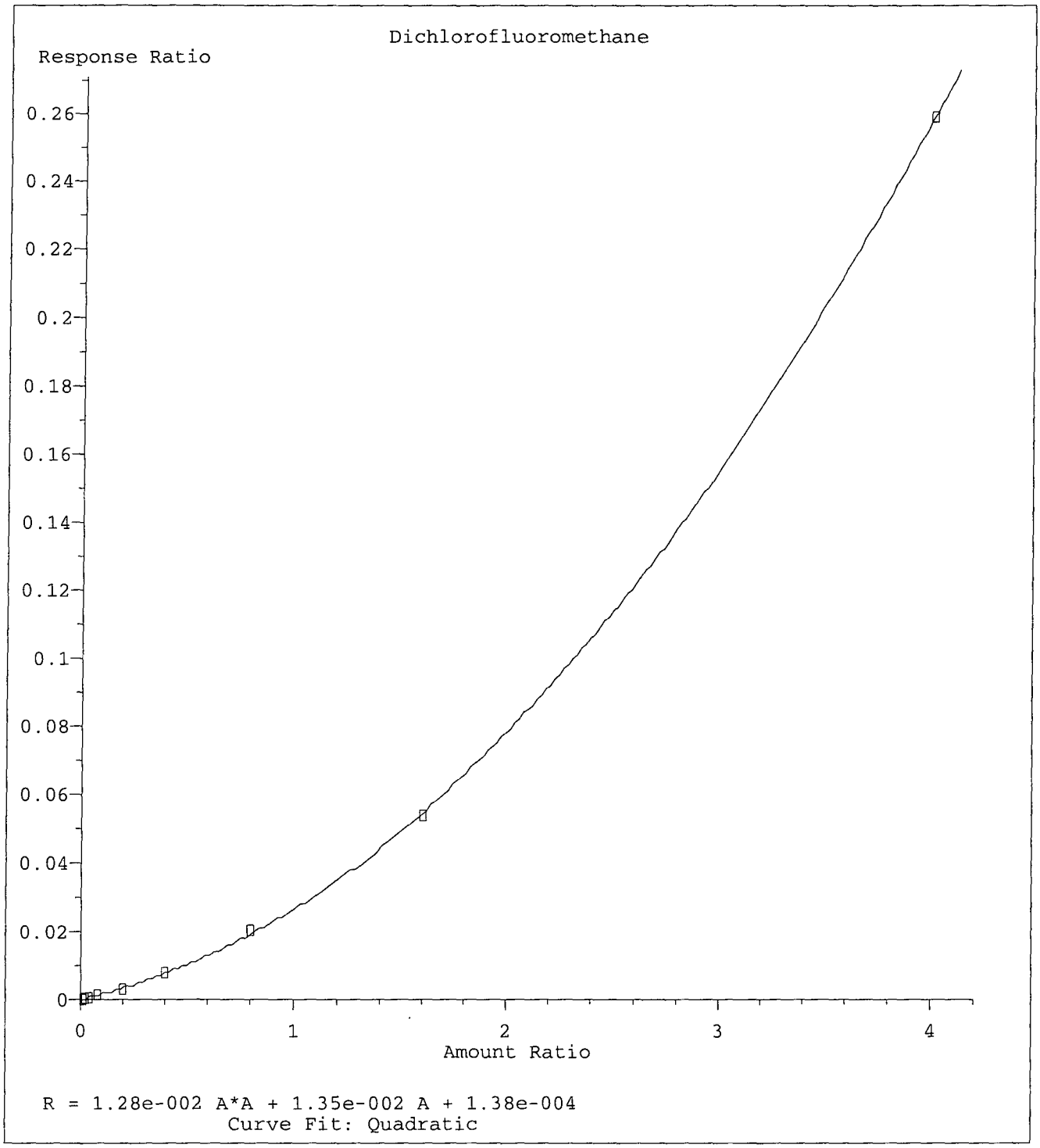
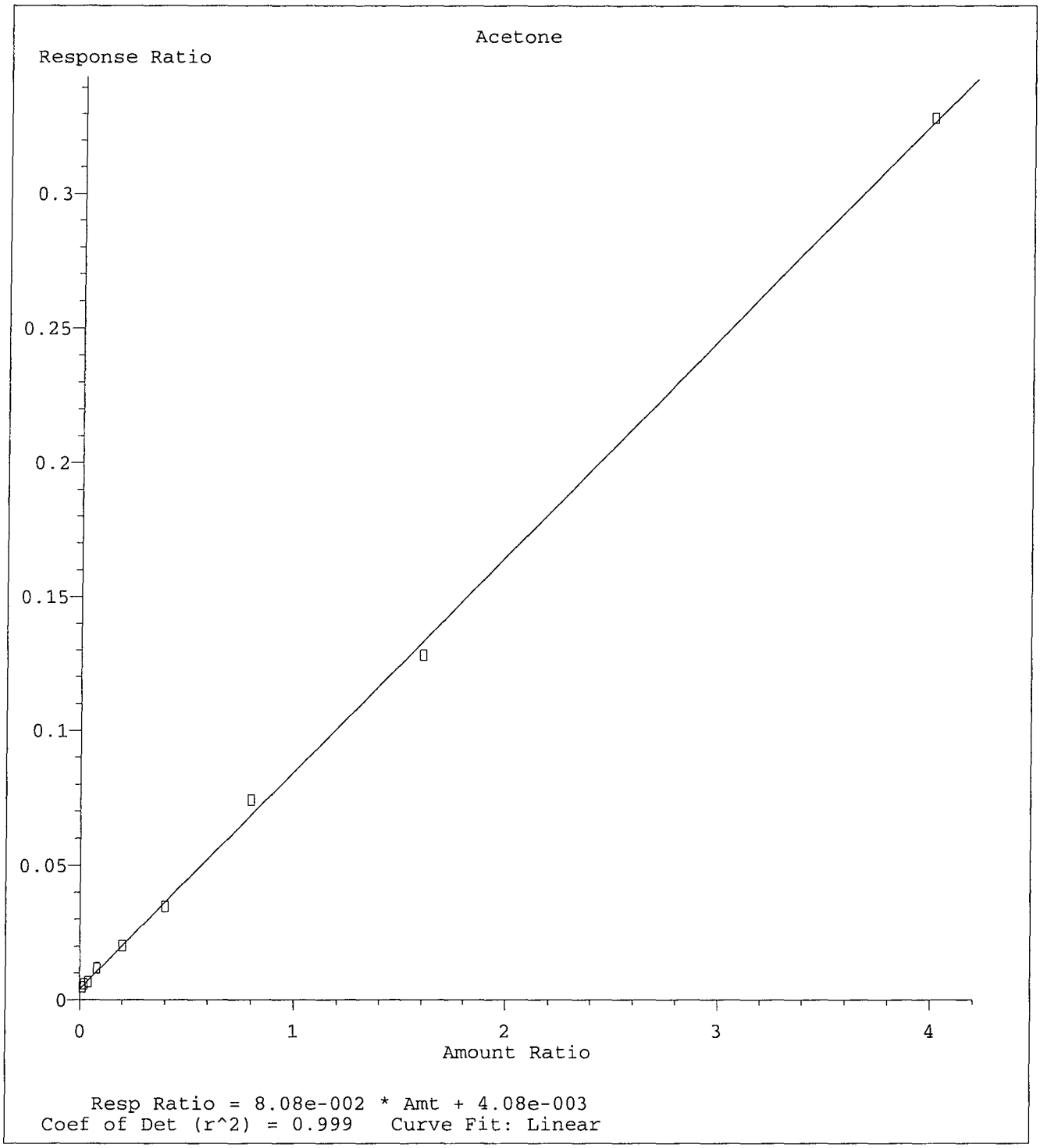
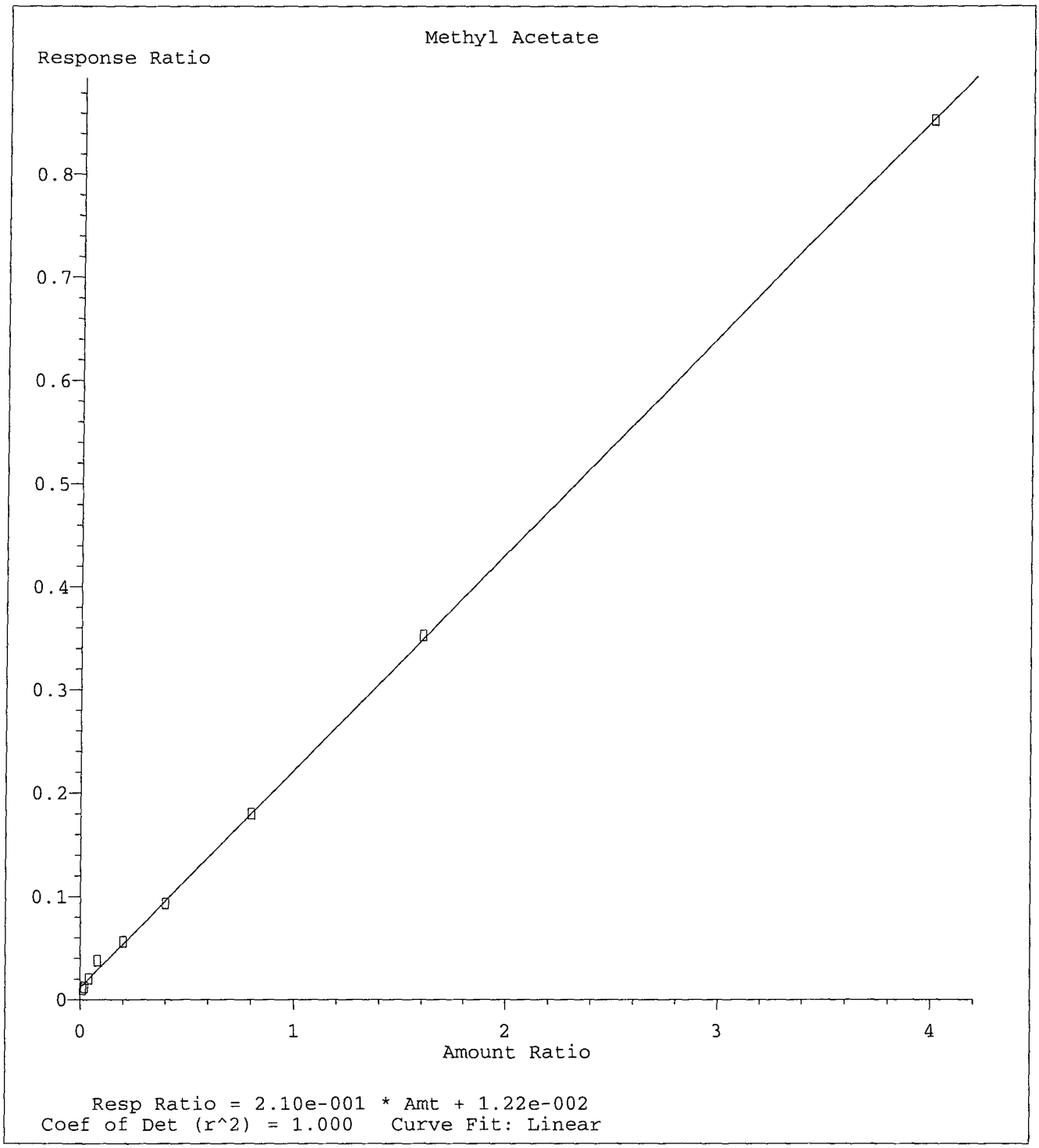
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



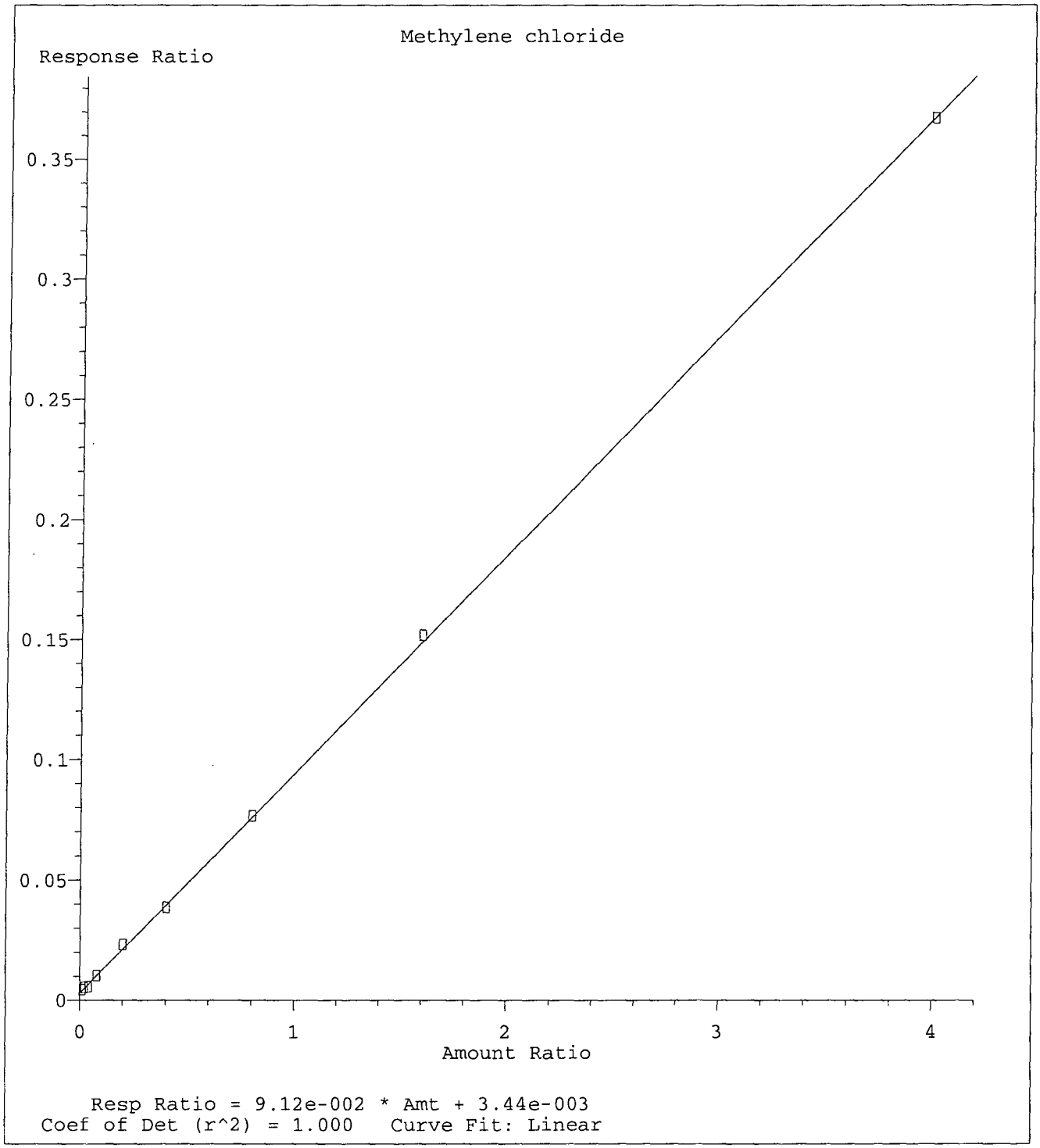
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



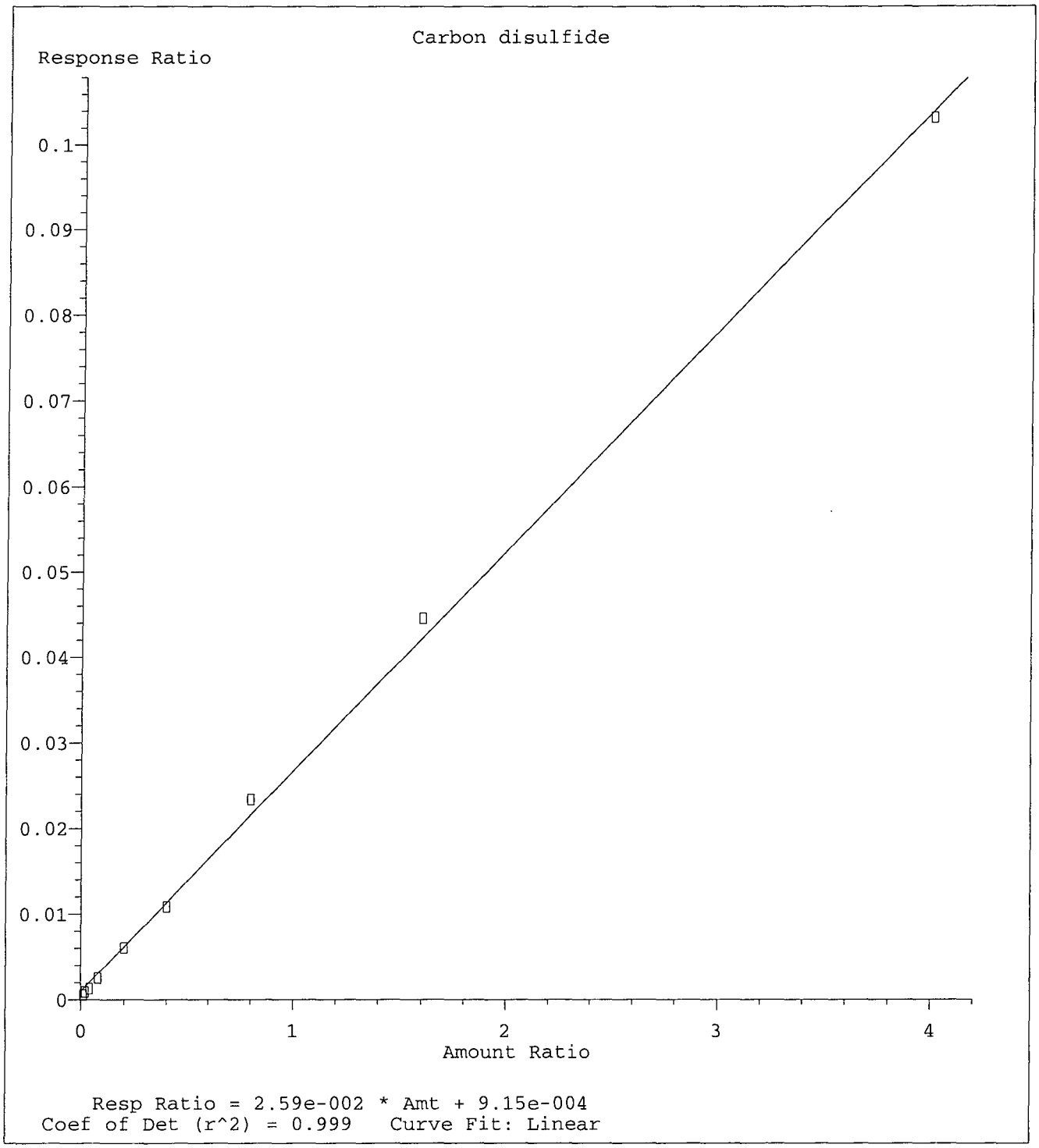
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



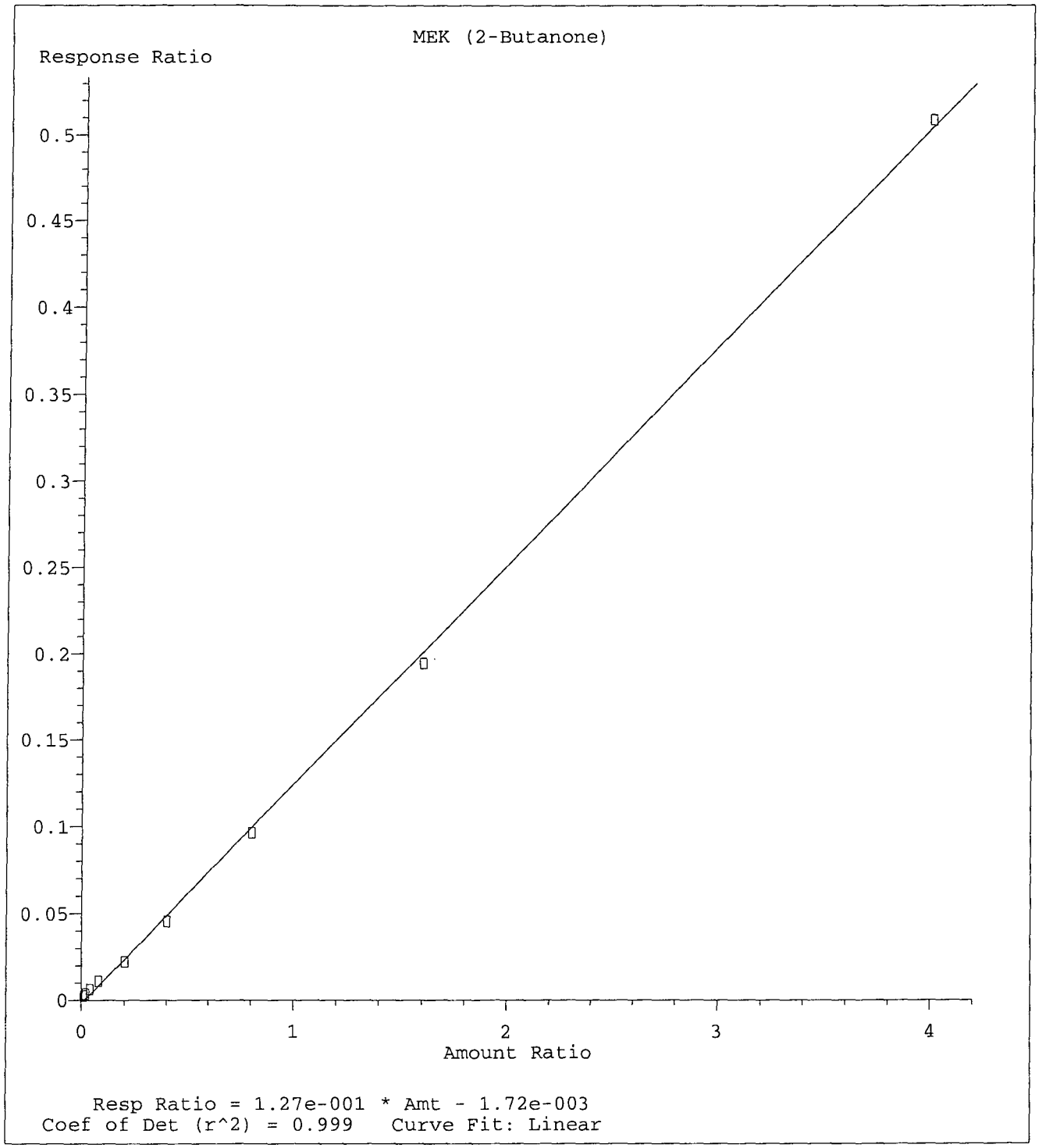
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



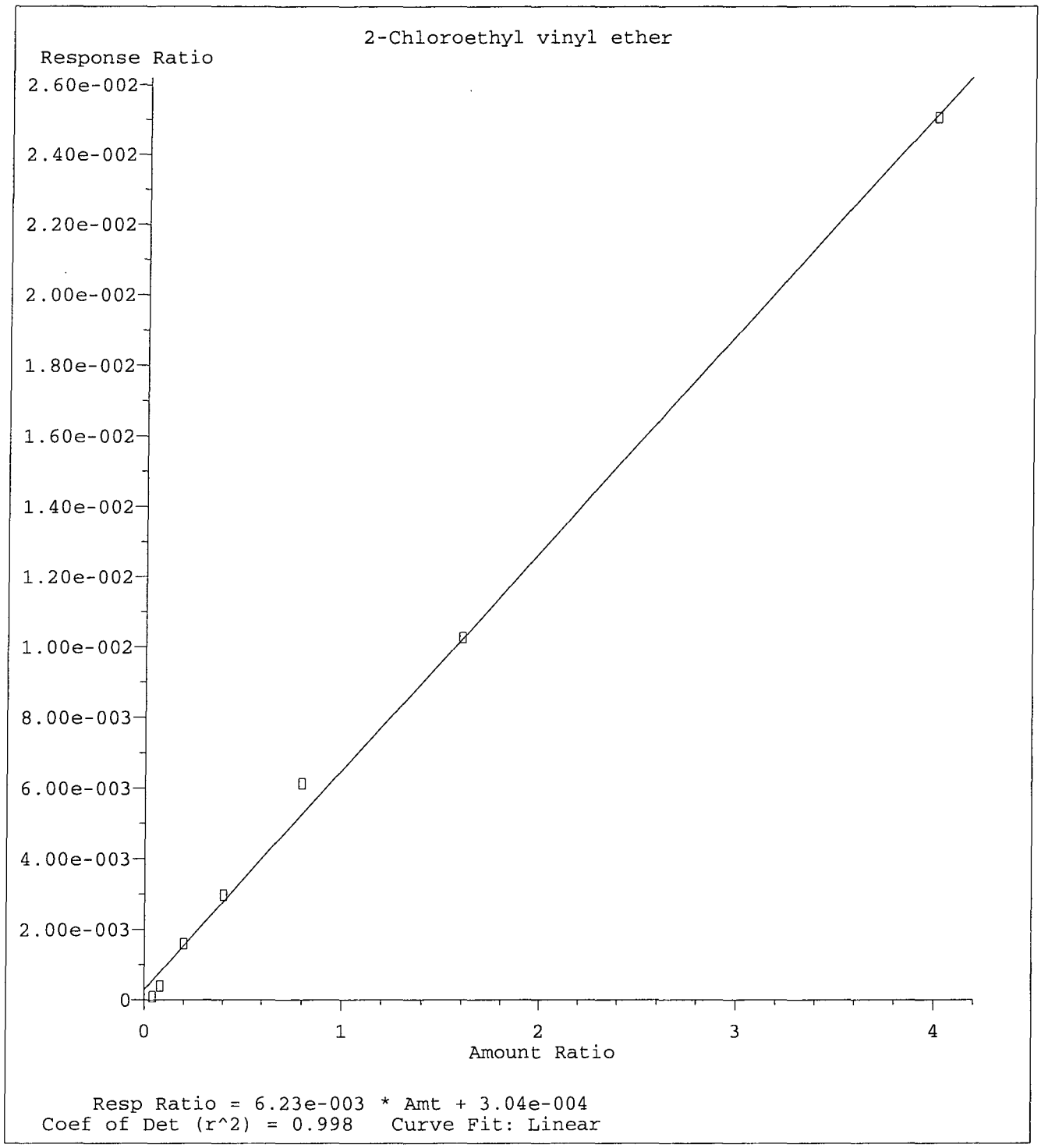
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



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



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		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 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		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68248
Date Analyzed: 07/19/12
Instrument: Thor
Cal. Date: 07/19/12
Data File: 0719T31.D

		Compound	MEAN	CCRF	%D	%Drift		
81	TM	Tert-Butylbenzene	2.745	2.818	2.7	TM		
82	TM	1,2,4-Trimethylbenzene	3.100	3.213	3.6	TM		
83	TM	Sec-Butylbenzene	3.664	3.850	5.1	TM		
84	TM	p-Isopropyltoluene	3.096	3.241	4.7	TM		
85	TM	Benzyl Chloride	0.9252	0.6126	34	TM		*NT
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		
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			5.2			

KRS 7/27/12

Quantitation Report (Not Reviewed)

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

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	459584	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	371008	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	216768	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	225058	31.29333 ppb		0.00
Spiked Amount 31.881			Recovery = 98.155%			
36) 1,2-DCA-D4(S)	6.33	65	220138	32.93626 ppb		0.00
Spiked Amount 33.647			Recovery = 97.888%			
56) Toluene-D8(S)	8.43	98	802051	36.56718 ppb		0.00
Spiked Amount 37.345			Recovery = 97.917%			
64) 4-Bromofluorobenzene(S)	11.05	95	313456	30.21914 ppb		0.00
Spiked Amount 29.515			Recovery = 102.384%			
Target Compounds						Qvalue
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: $\frac{(91788)(25)}{(459584)(0.4941)}$ (1) = 10.10522903 ✓ ARS 7/27/12

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

Quantitation Report (Not Reviewed)

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

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	Bromodichloromethane	7.68	83	89098	9.56942	ppb		98
45)	Methyl Cyclohexane	7.36	83	38326	9.57410	ppb		95
46)	Dibromomethane	7.49	93	36747	10.03731	ppb		99
47)	2-Chloroethyl vinyl ether	7.99	106	1154	8.86120	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	32328	10.17680	ppb		97
49)	1-Bromo-2-chloroethane	7.99	63	45864	9.79426	ppb		99
50)	Cis-1,3-Dichloropropene	8.15	75	86842	9.42535	ppb		98
51)	Toluene	8.50	91	246468	10.12718	ppb		98
52)	Trans-1,3-Dichloropropene	8.72	75	75443	9.28657	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

ARS 7/27/12

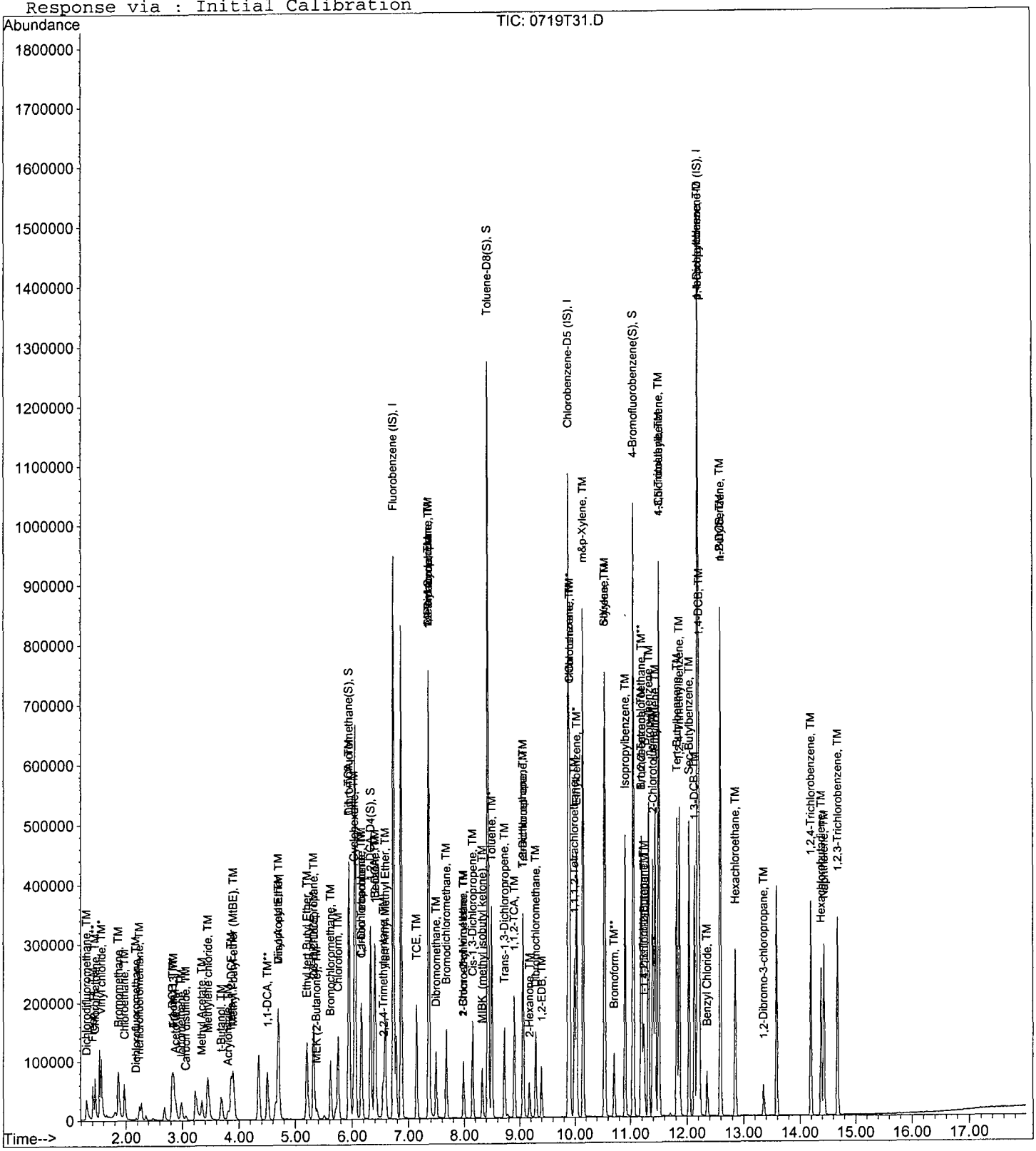
(#) = qualifier out of range (m) = manual integration

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

Vial: 31
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

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

SDG No: 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		*NT
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

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing 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: 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		

AR 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		*NT
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		
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			6.9			

ARS 7/27/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T30.D Vial: 30
Acq On : 19 Jul 12 22:35 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/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 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						
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						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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T30.D Vial: 30
Acq On : 19 Jul 12 22:35 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/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 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

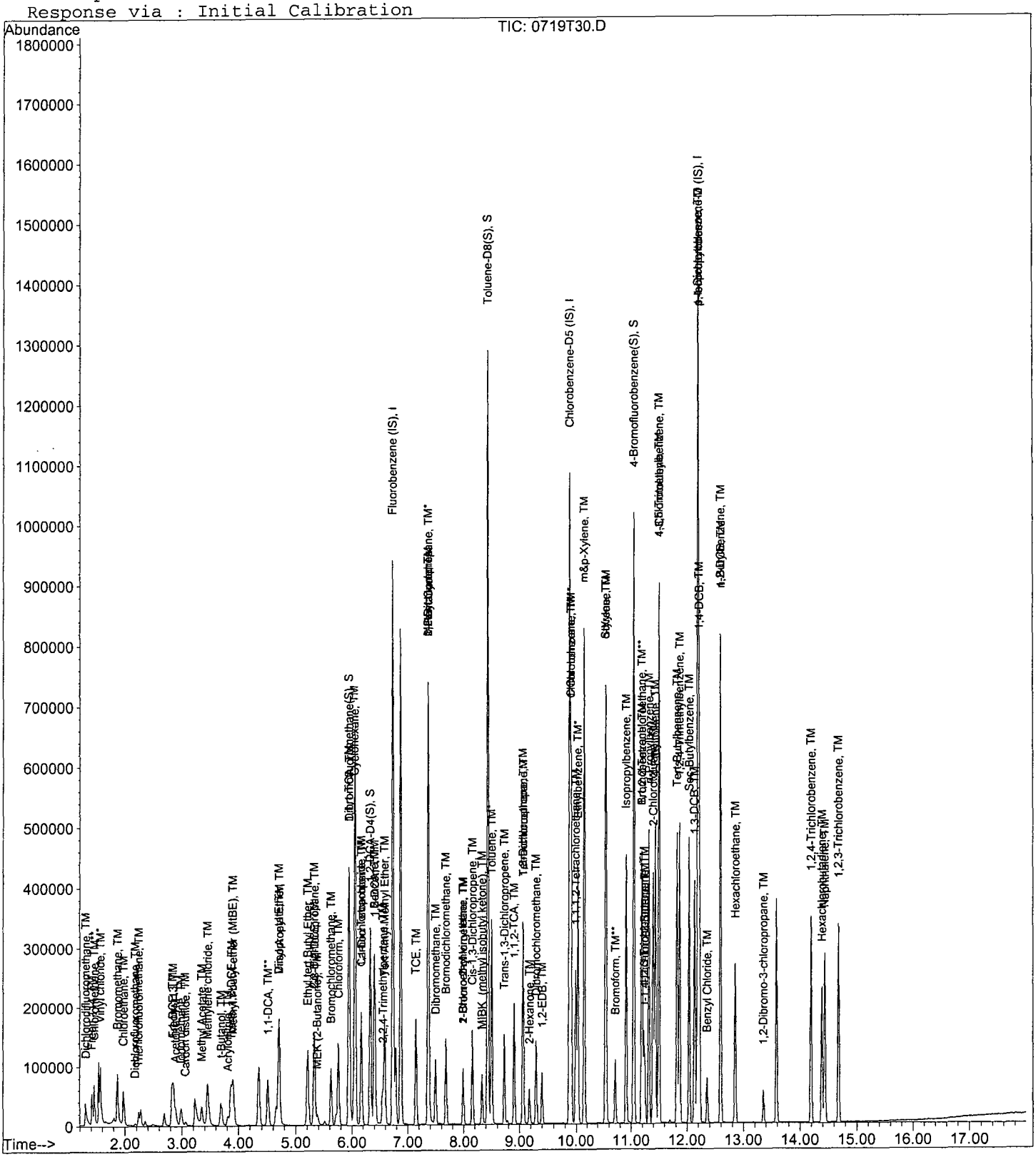
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T30.D Vial: 30
Acq On : 19 Jul 12 22:35 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/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 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. SDG No: 68248
Case No: Initial Cal. Date: 07/24/12
Matrix: Water Instrument: Thor (TGAS.M) Initials:

0724T03.D 0724T04.D 0724T05.D 0724T06.D 0724T07.D

		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)														
5																
6																
7																
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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

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						
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						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

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

ARS 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

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

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

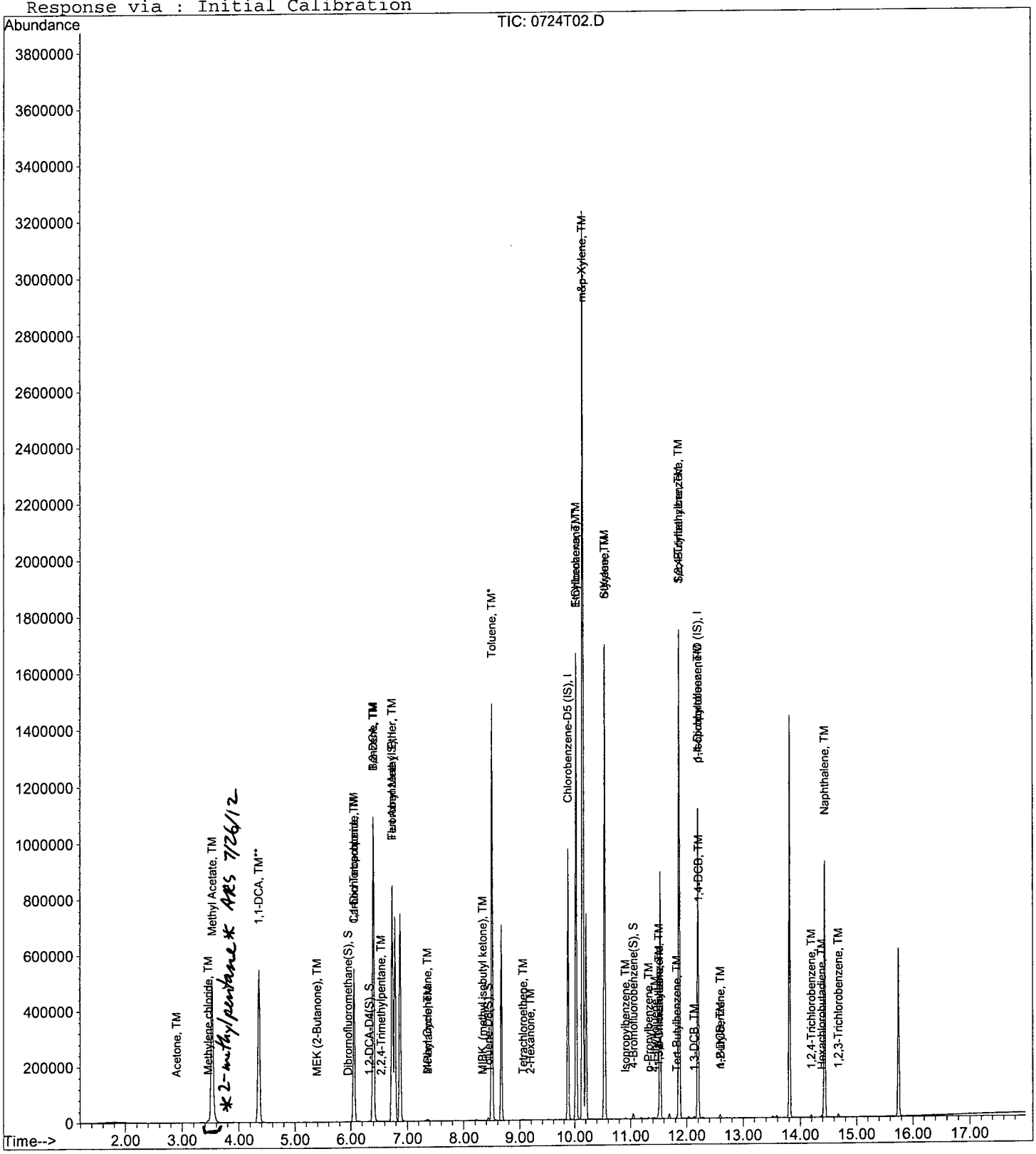
Quantitation Report

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



Quantitation Report (QT Reviewed)

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						Qvalue
2) Gasoline	9.87	TIC	4150901m	35.99979	ppb	100

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

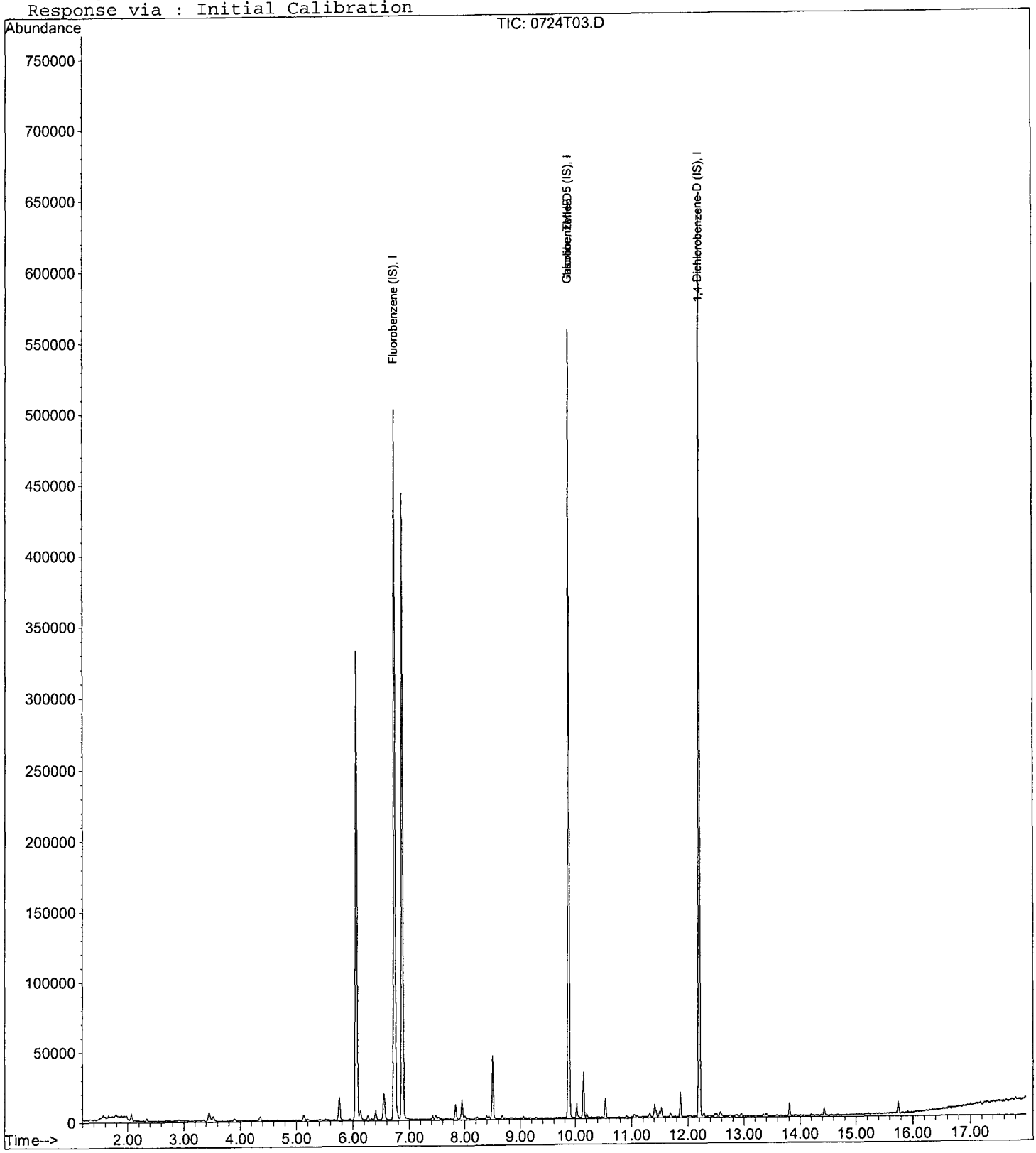
Quantitation Report

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

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

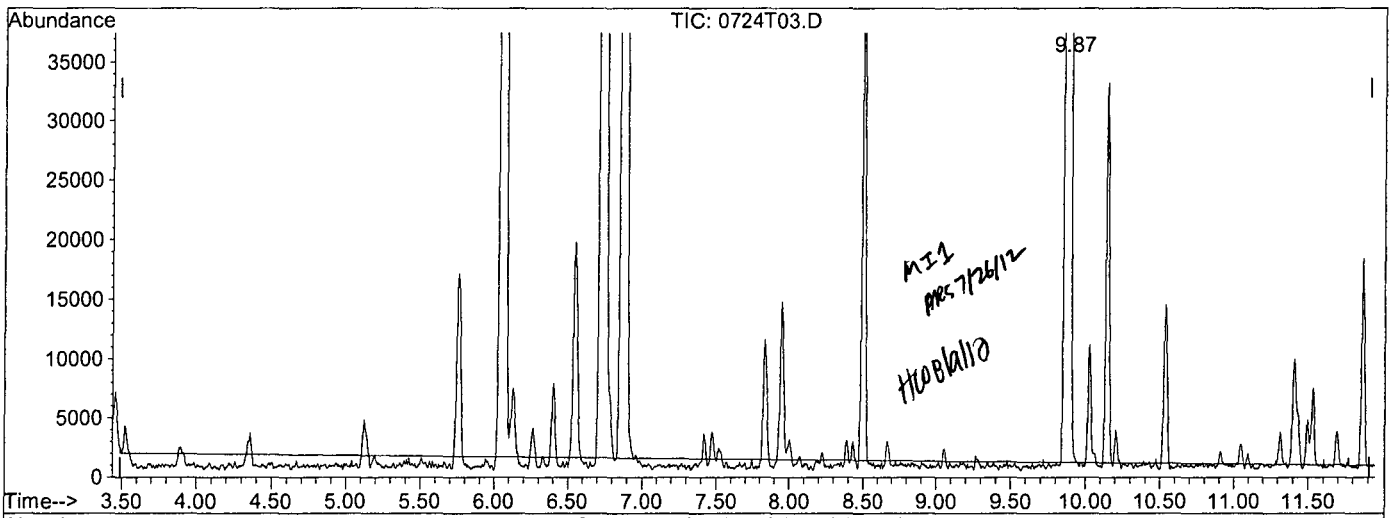
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

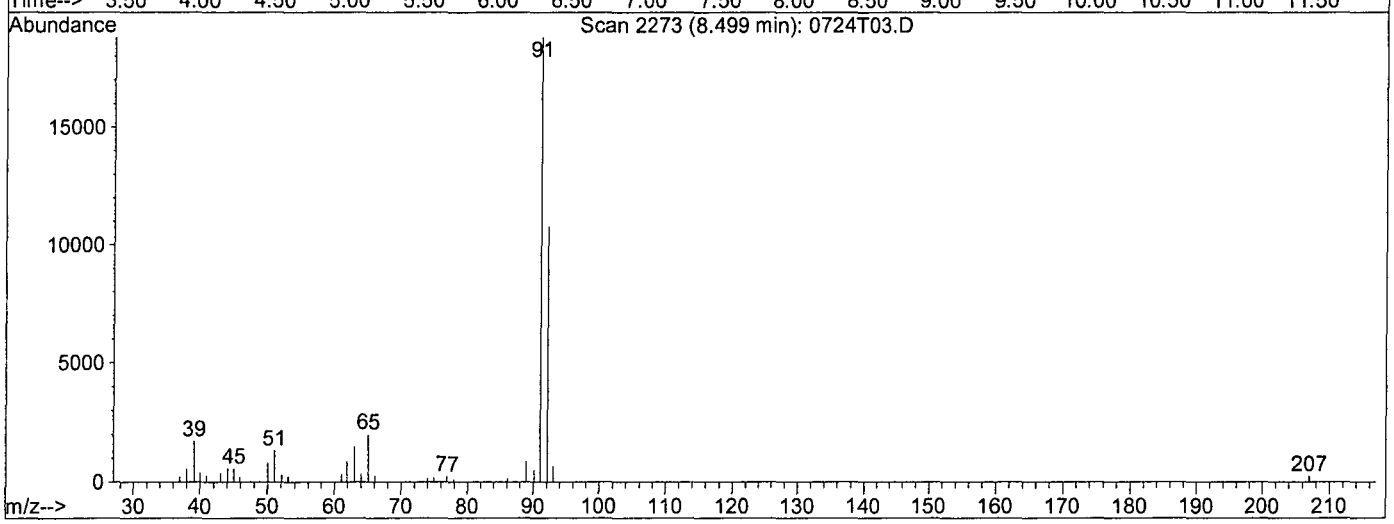


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T03.D 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 8:05 2012 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

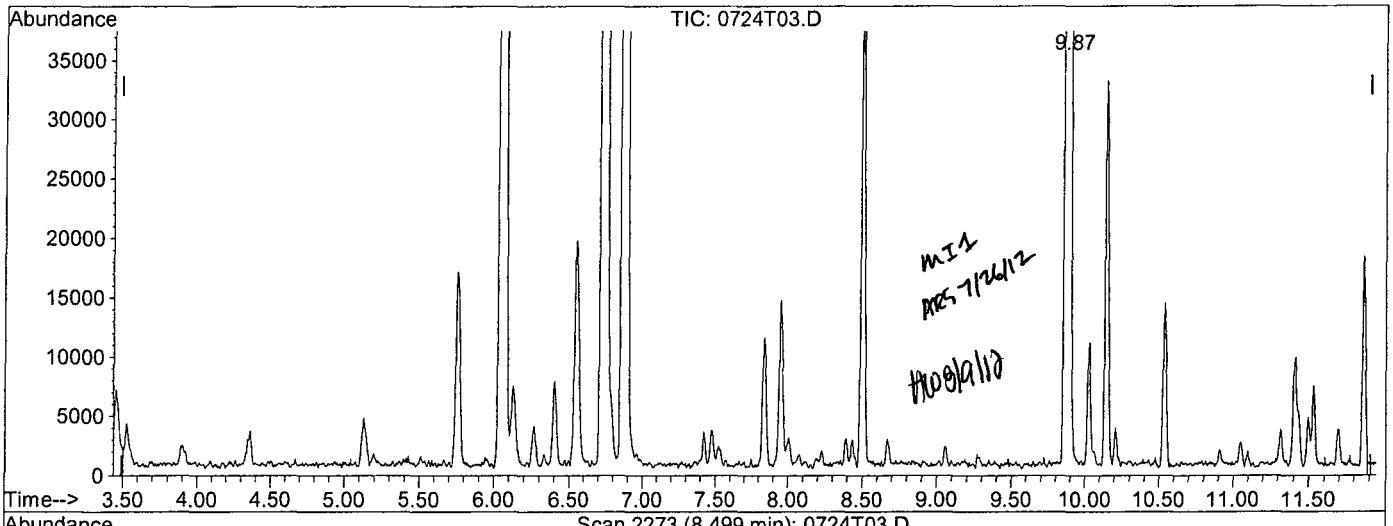
response 2510316

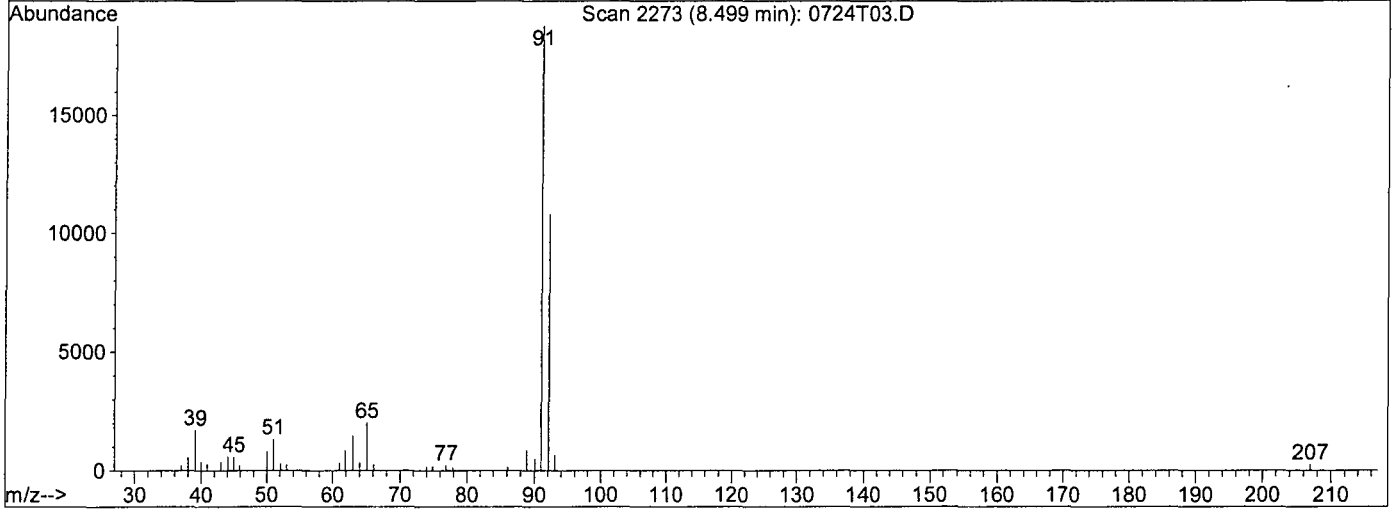
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	2.49#
0.00	1.80	7.14#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T03.D 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: 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

Quantitation Report (QT Reviewed)

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						Qvalue
2) Gasoline	9.87	TIC	6089943m	102.65354	ppb	100

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

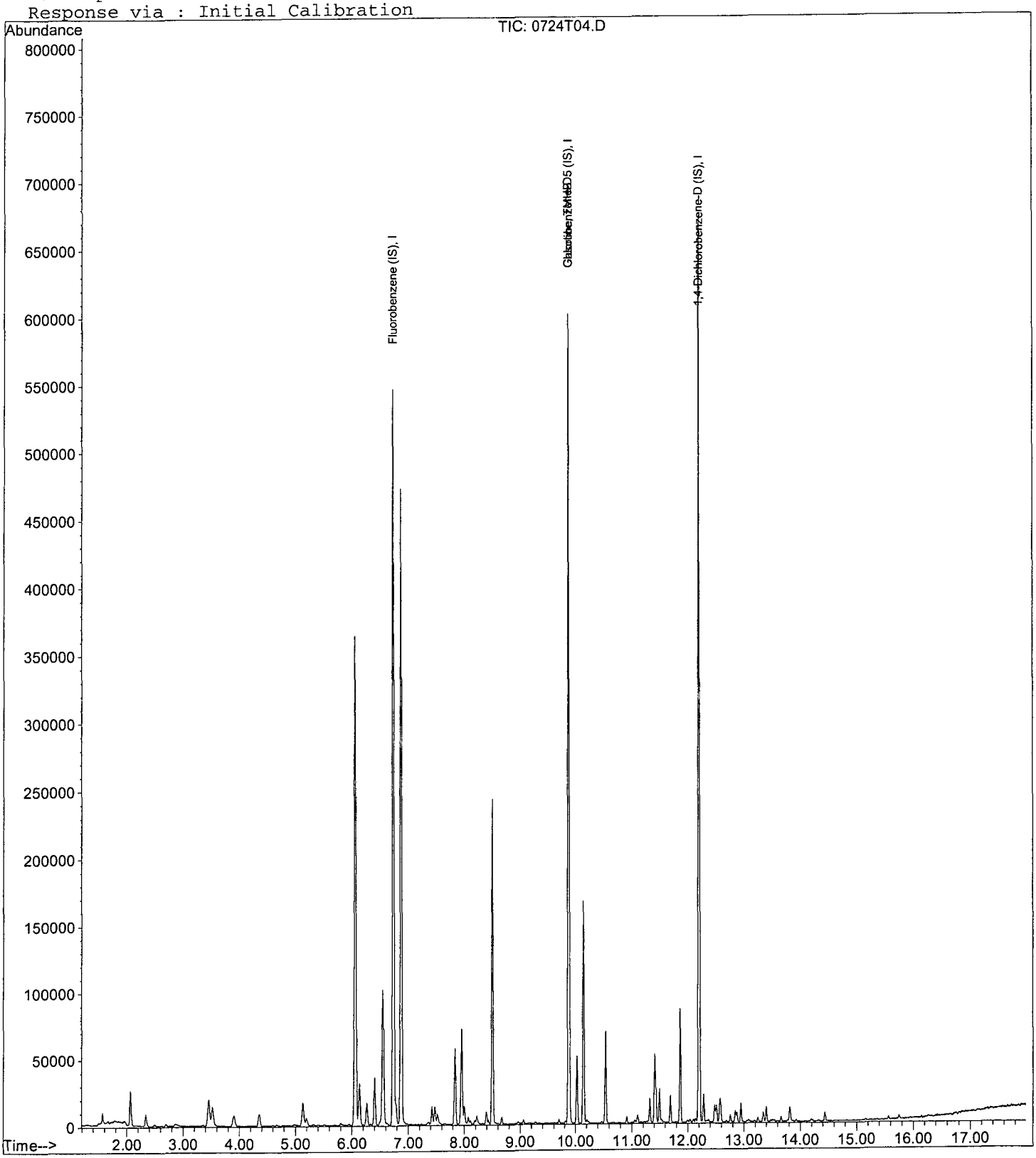
Quantitation Report

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

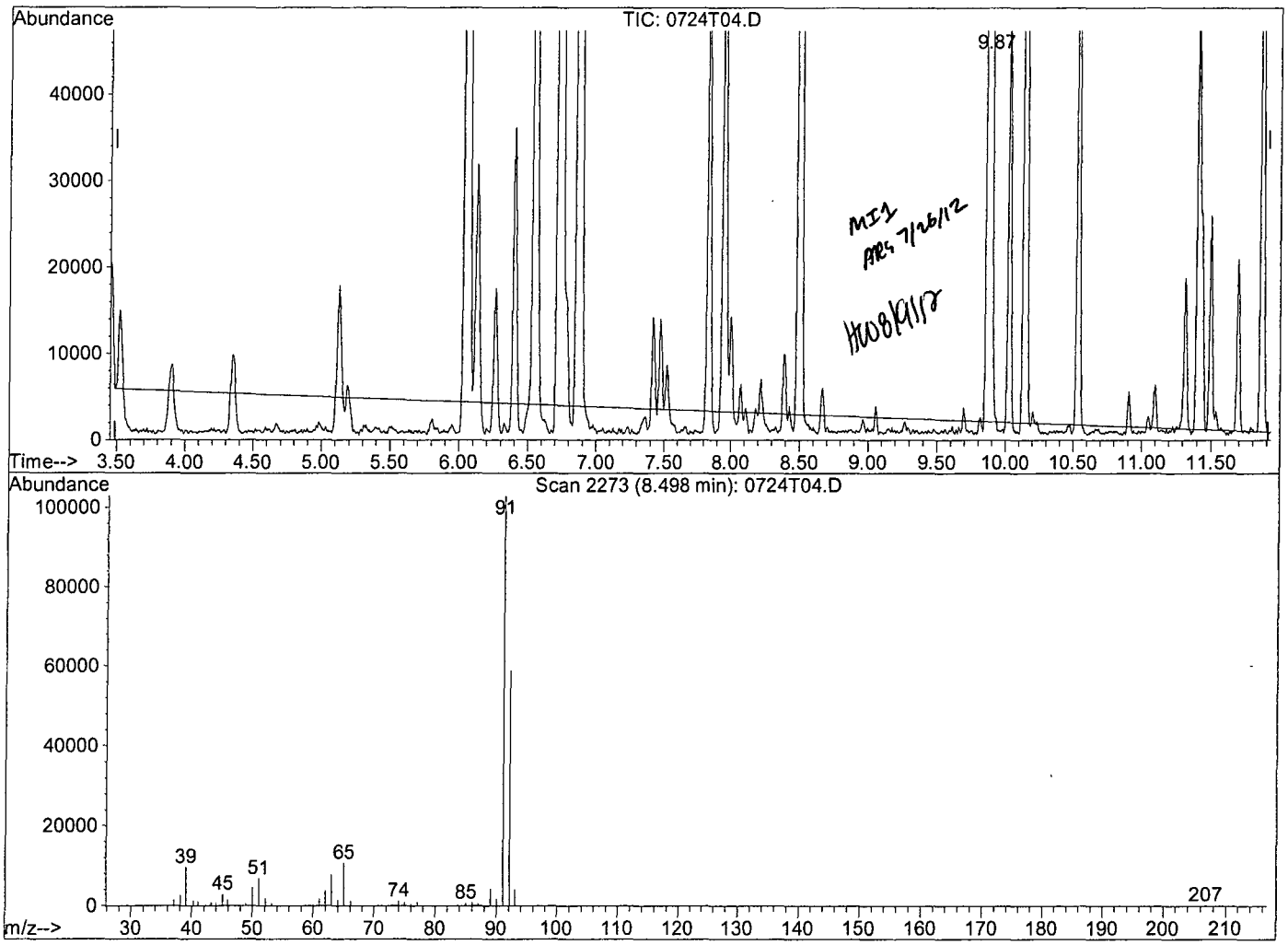
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T04.D 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 8:05 2012 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

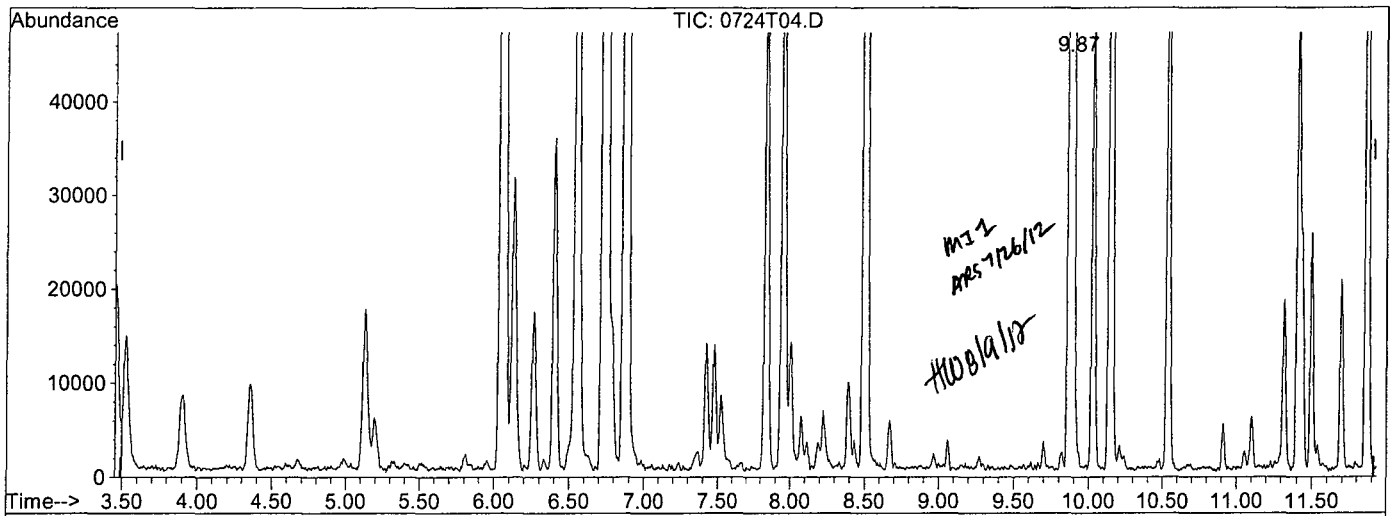
response 4384009

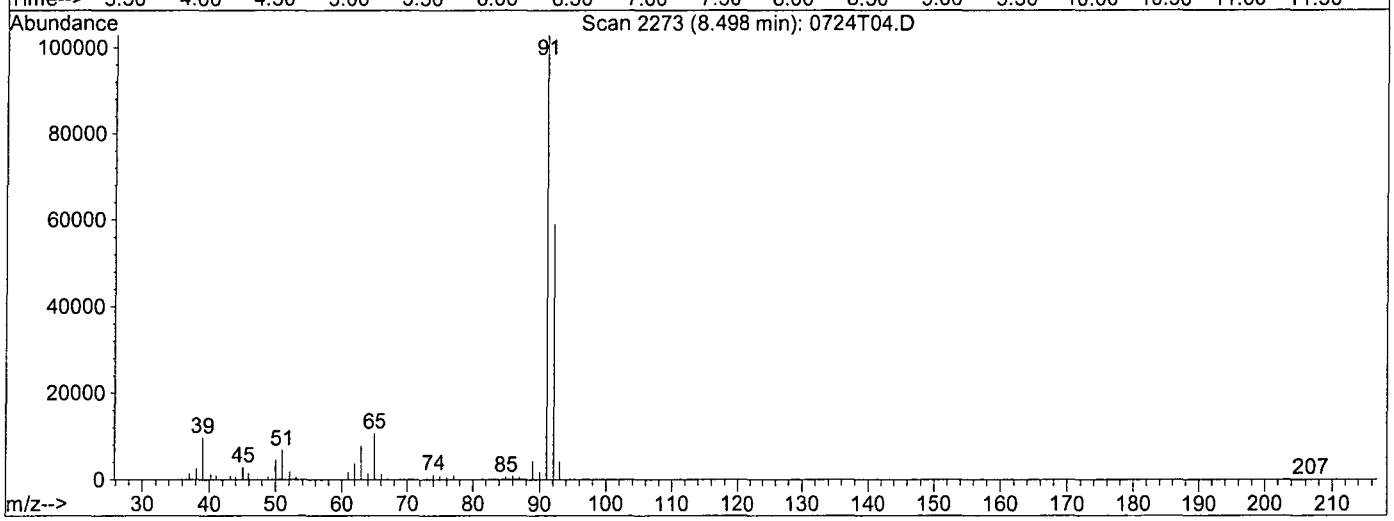
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.47#
0.00	1.80	4.27#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T04.D 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: 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

Quantitation Report (QT Reviewed)

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						Qvalue
2) Gasoline	8.50	TIC	11731974m	288.59877	ppb	100

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

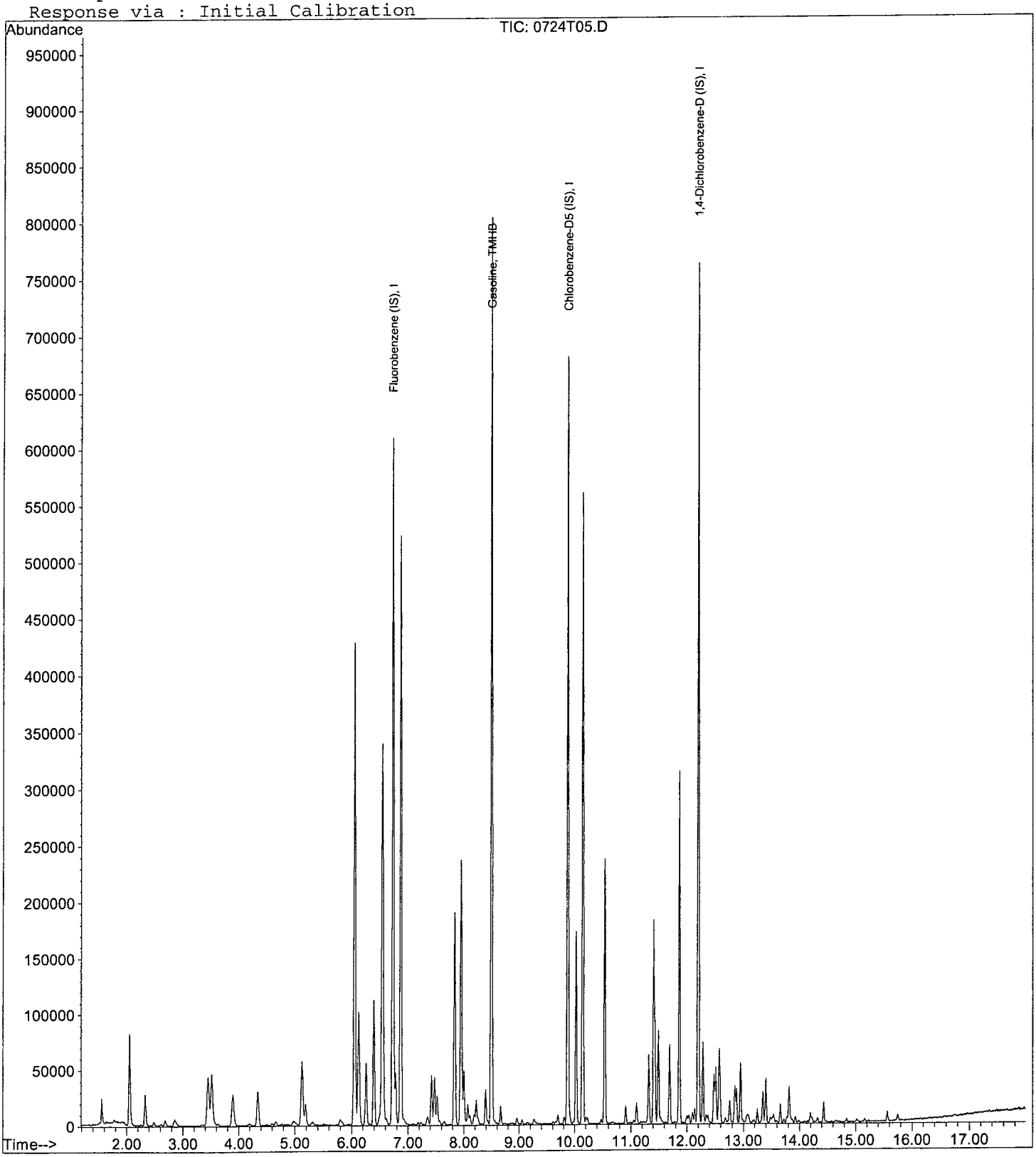
Quantitation Report

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

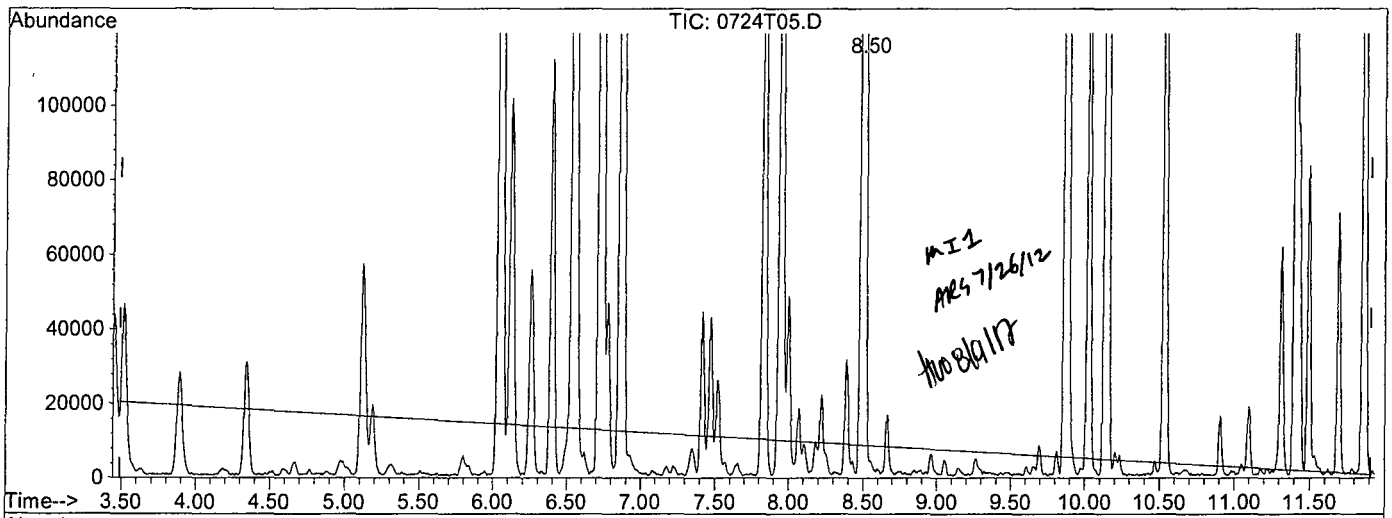
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T05.D 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: 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

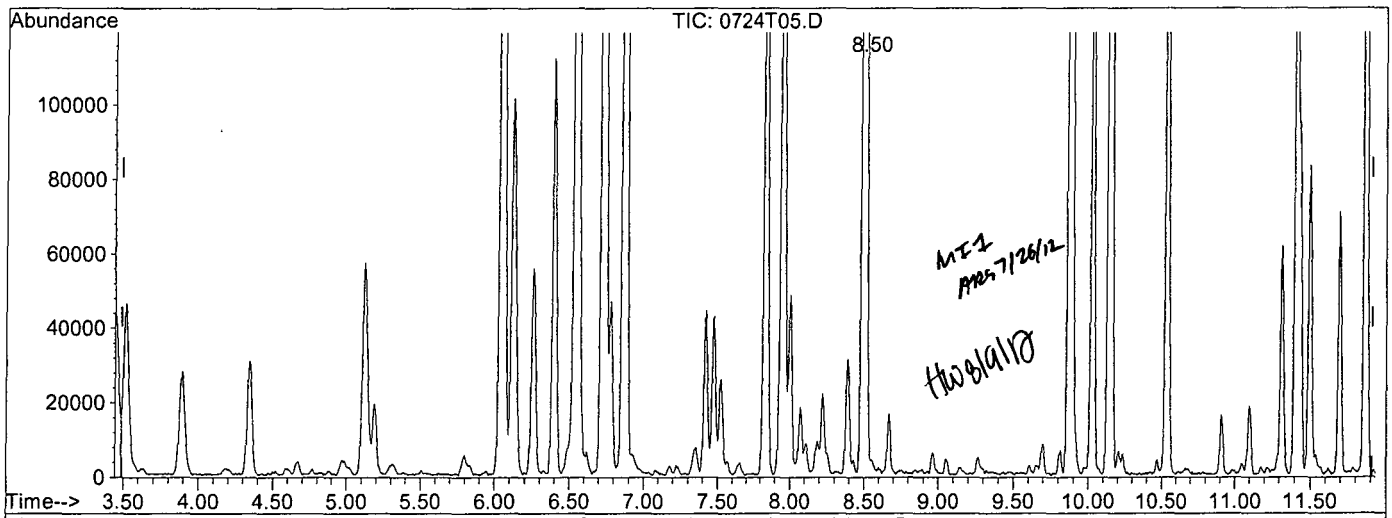
response 9788840

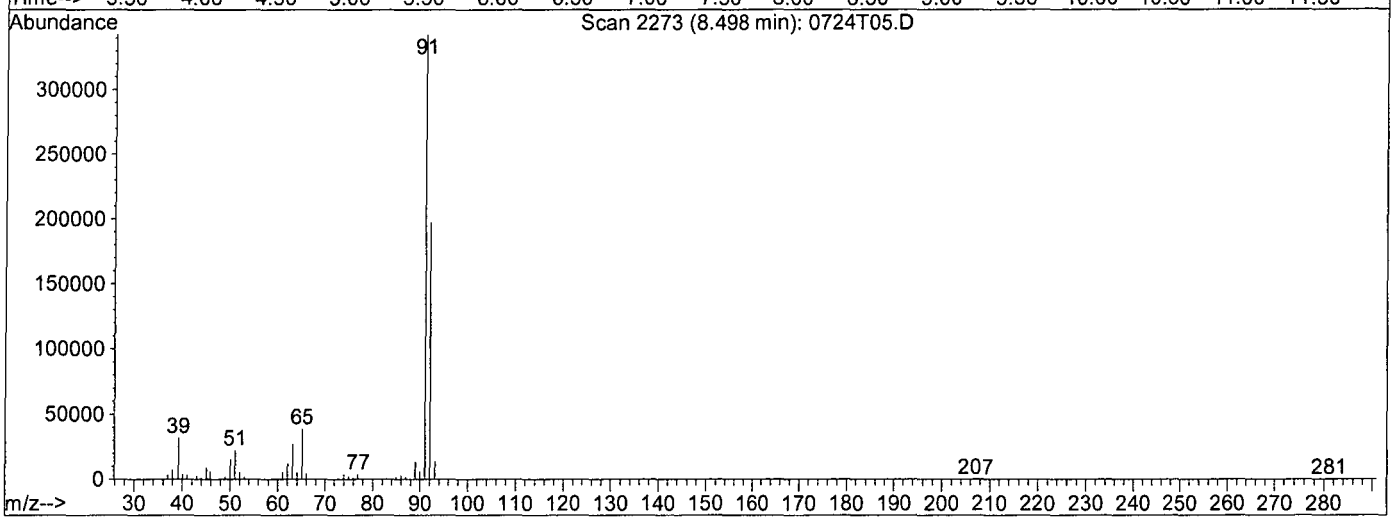
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.73#
0.00	0.00	2.20#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T05.D 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: 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						Qvalue
2) Gasoline	8.50	TIC	25555181m	613.21989	ppb	100

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

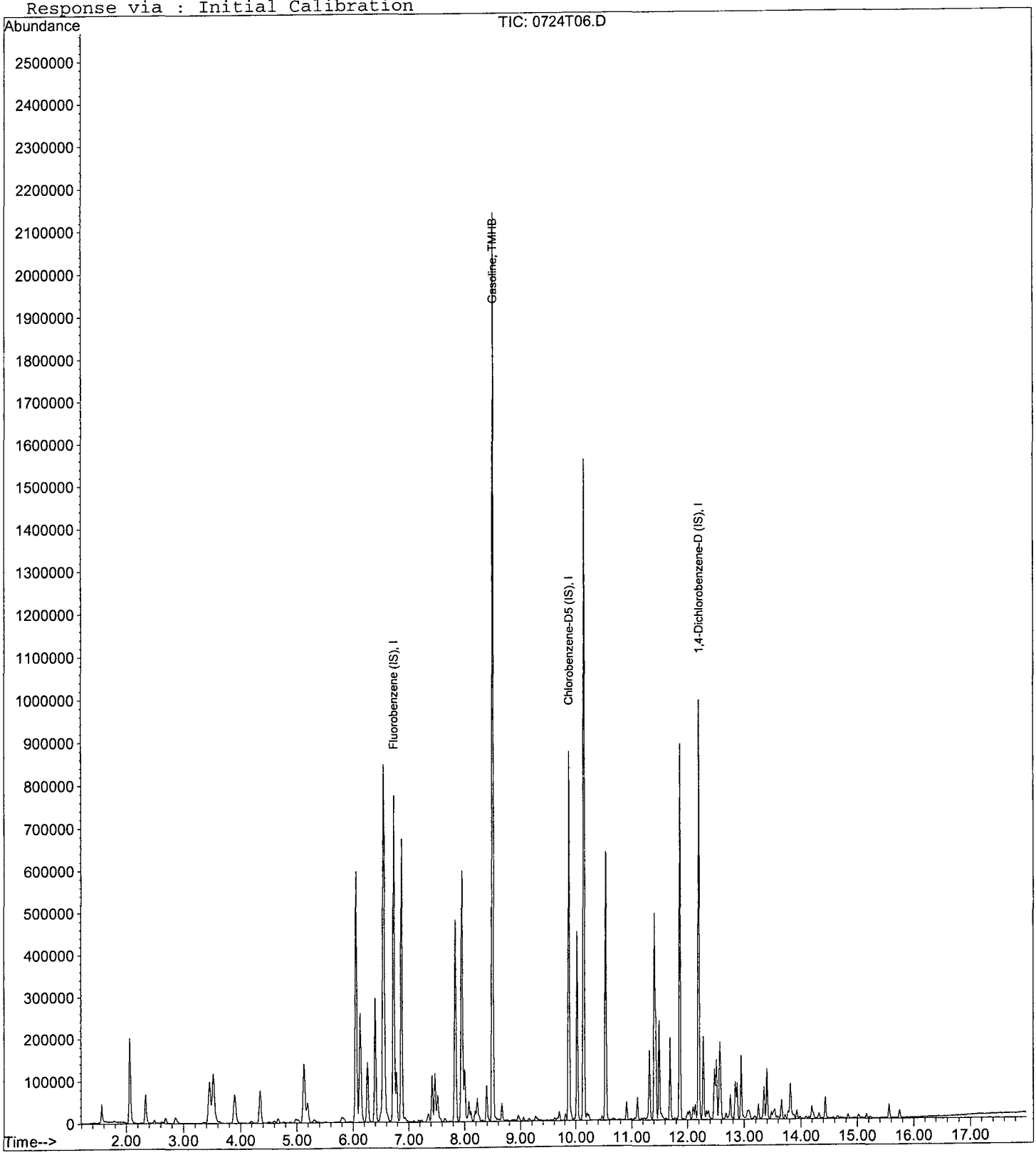
Quantitation Report

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

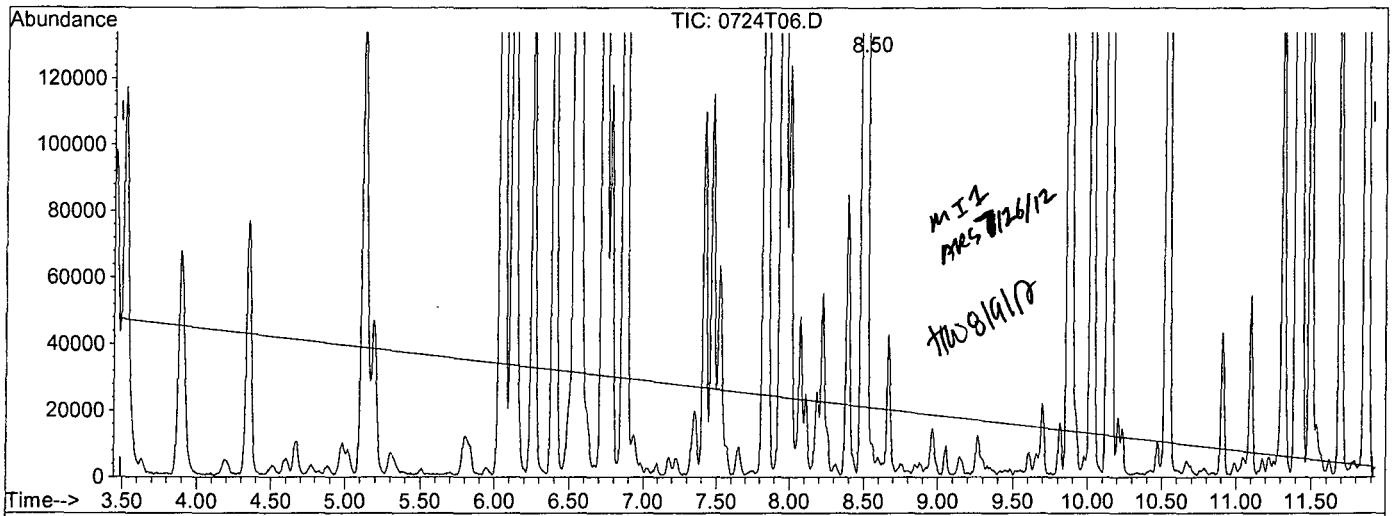
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

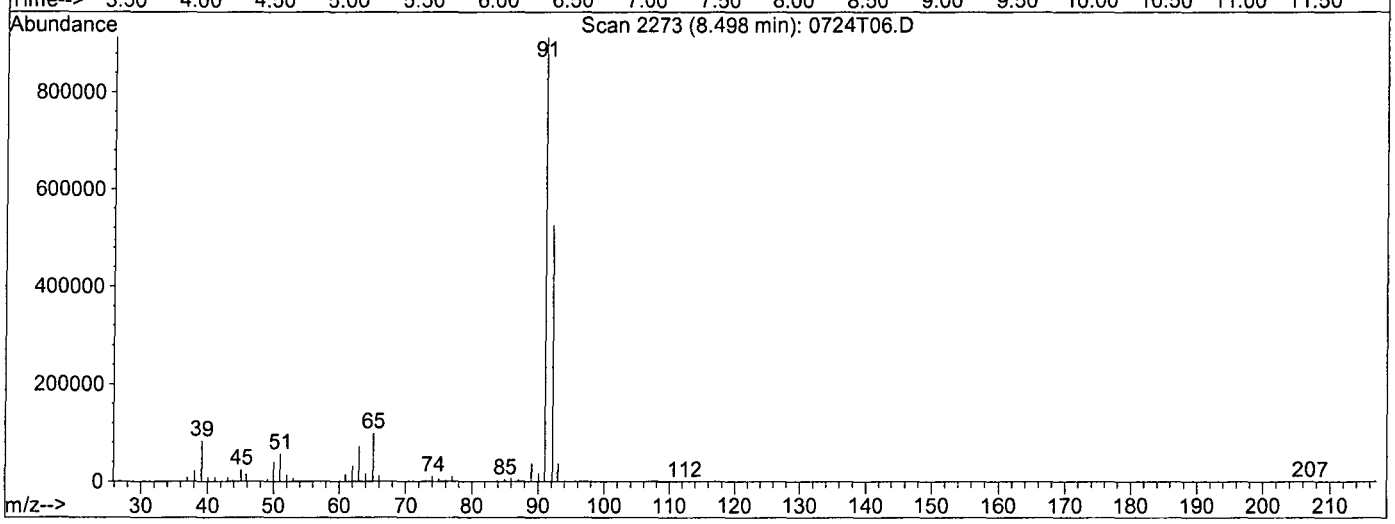


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T06.D 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 8:05 2012 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

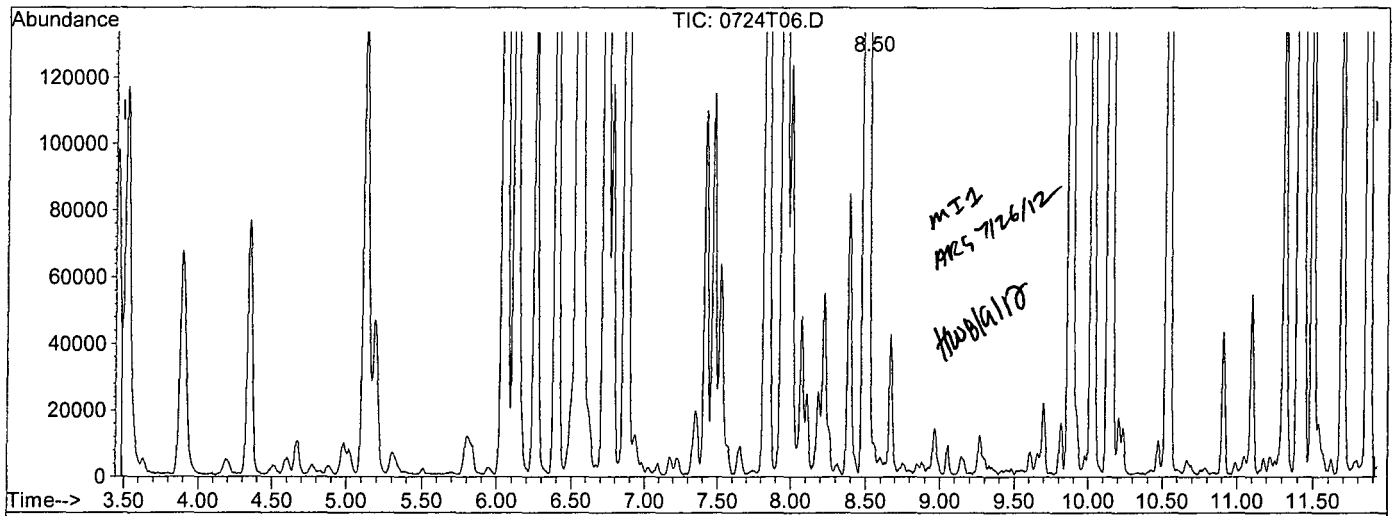
response 22405468

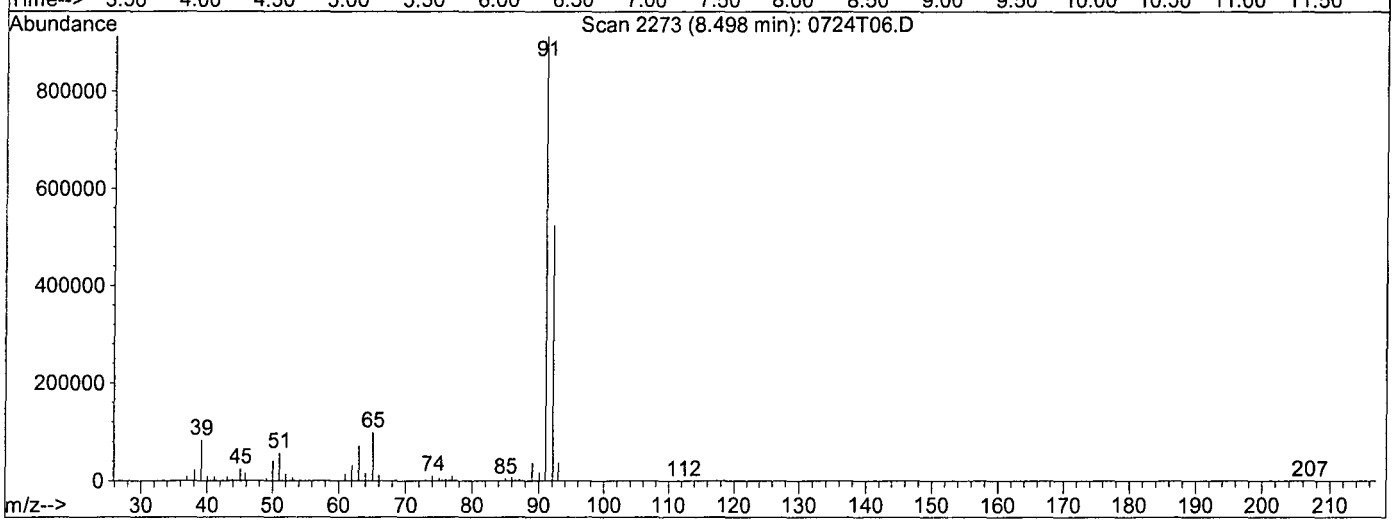
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.43#
0.00	1.80	1.23#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T06.D 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: 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						Qvalue
2) Gasoline	8.50	TIC	32745899m	845.47245	ppb	100

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

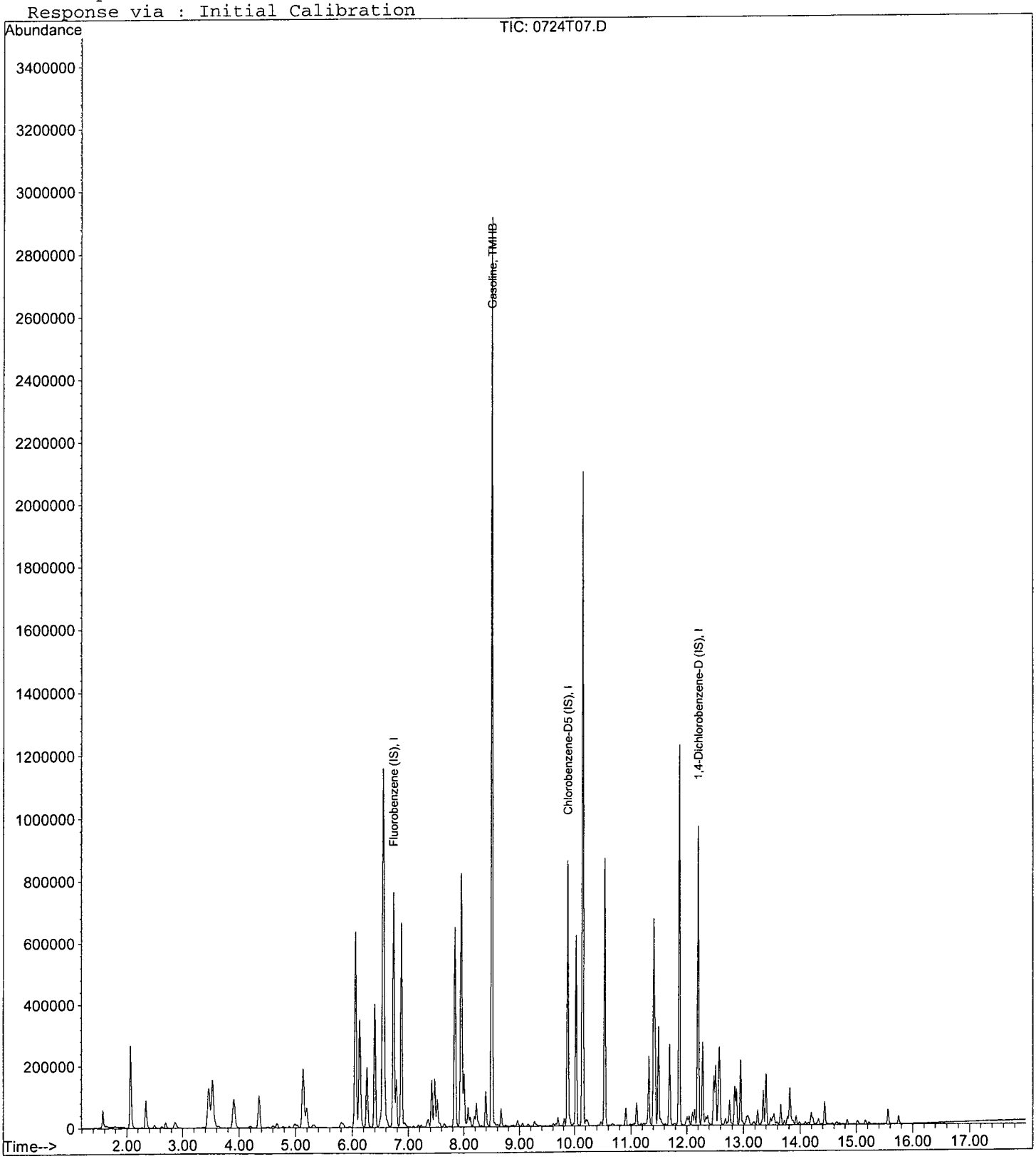
Quantitation Report

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

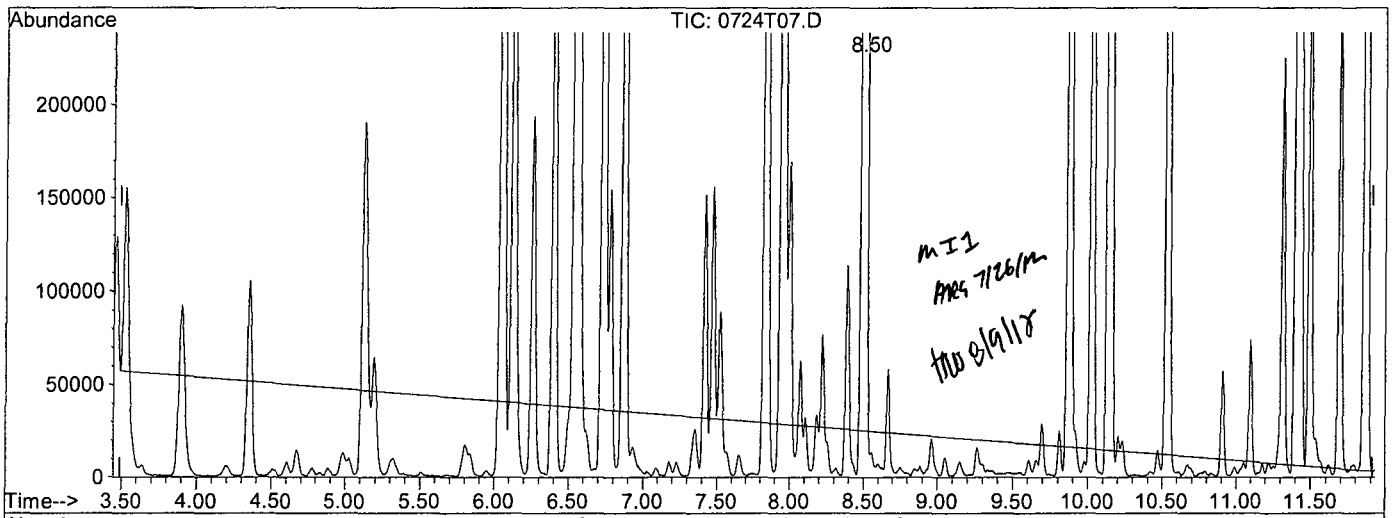
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

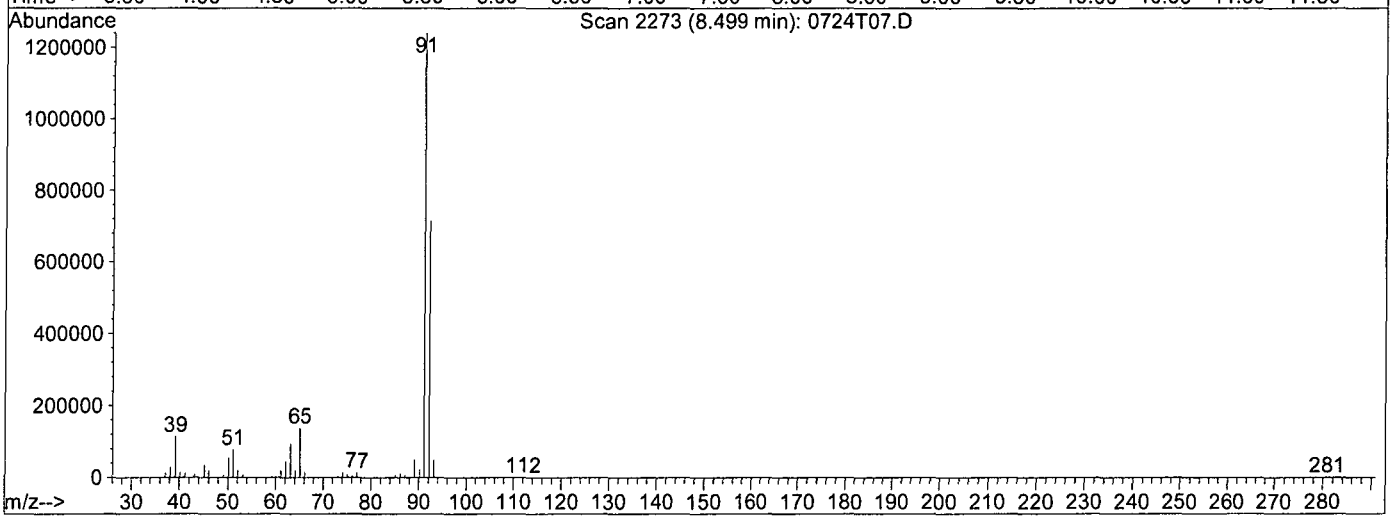


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T07.D 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 8:05 2012 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

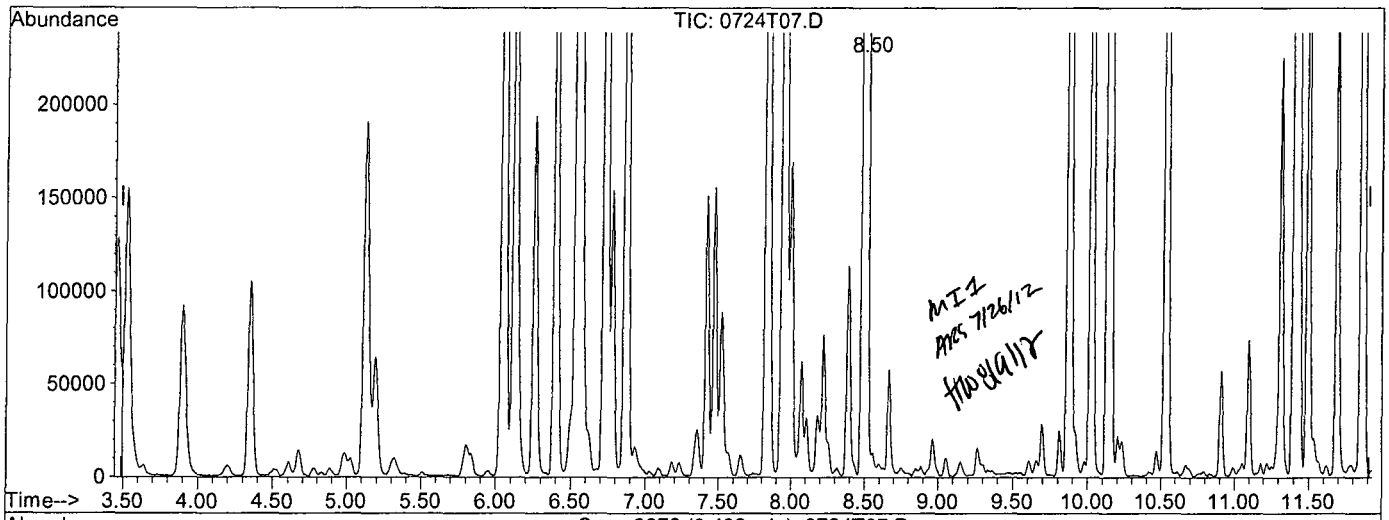
response 29407721

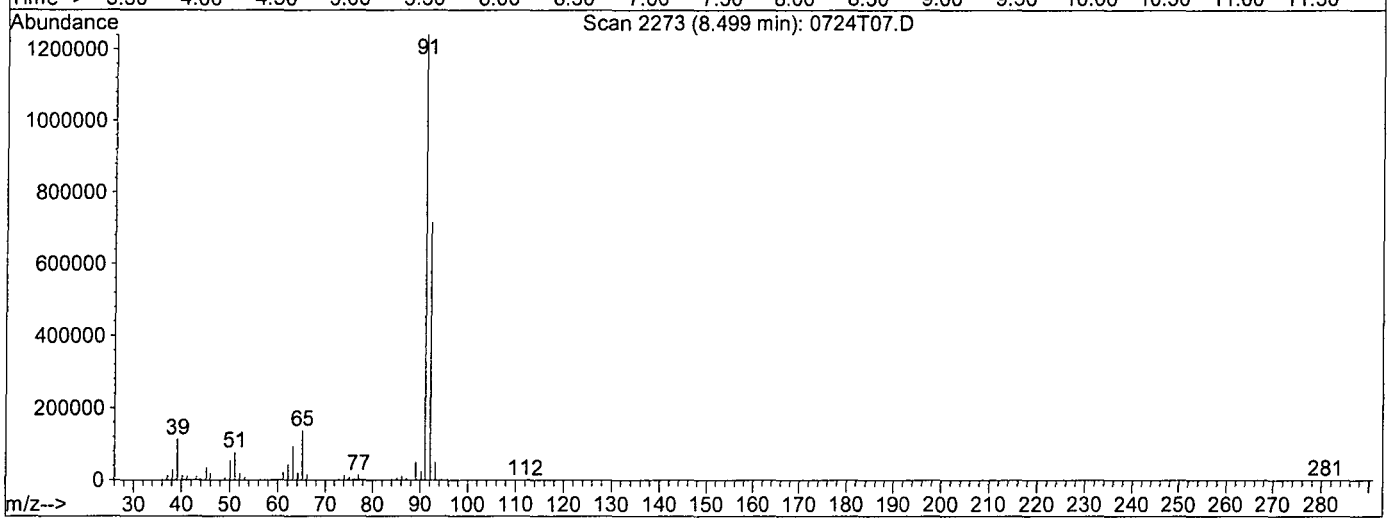
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.32#
0.00	1.80	0.91#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T07.D 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: 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





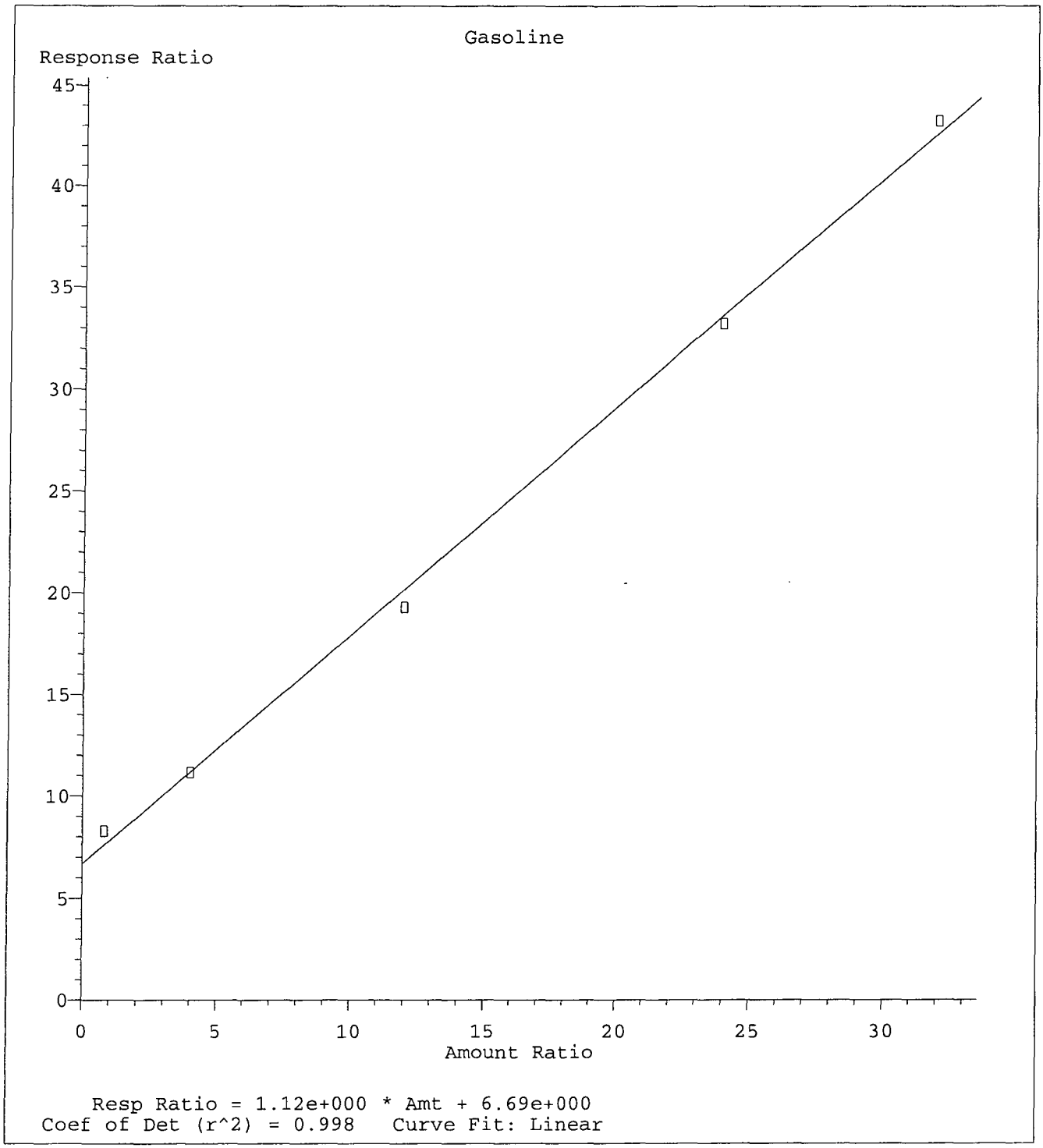
TIC: 0724T07.D

(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	I	Fluorobenzene (IS)	ISTD			I		
2	TMHB	Gasoline	3.495	2.123	39	TMHBL	40	*
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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14								
15								
16								
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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						Qvalue
2) Gasoline	8.50	TIC	19788320m	418.73004	ppb	100

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

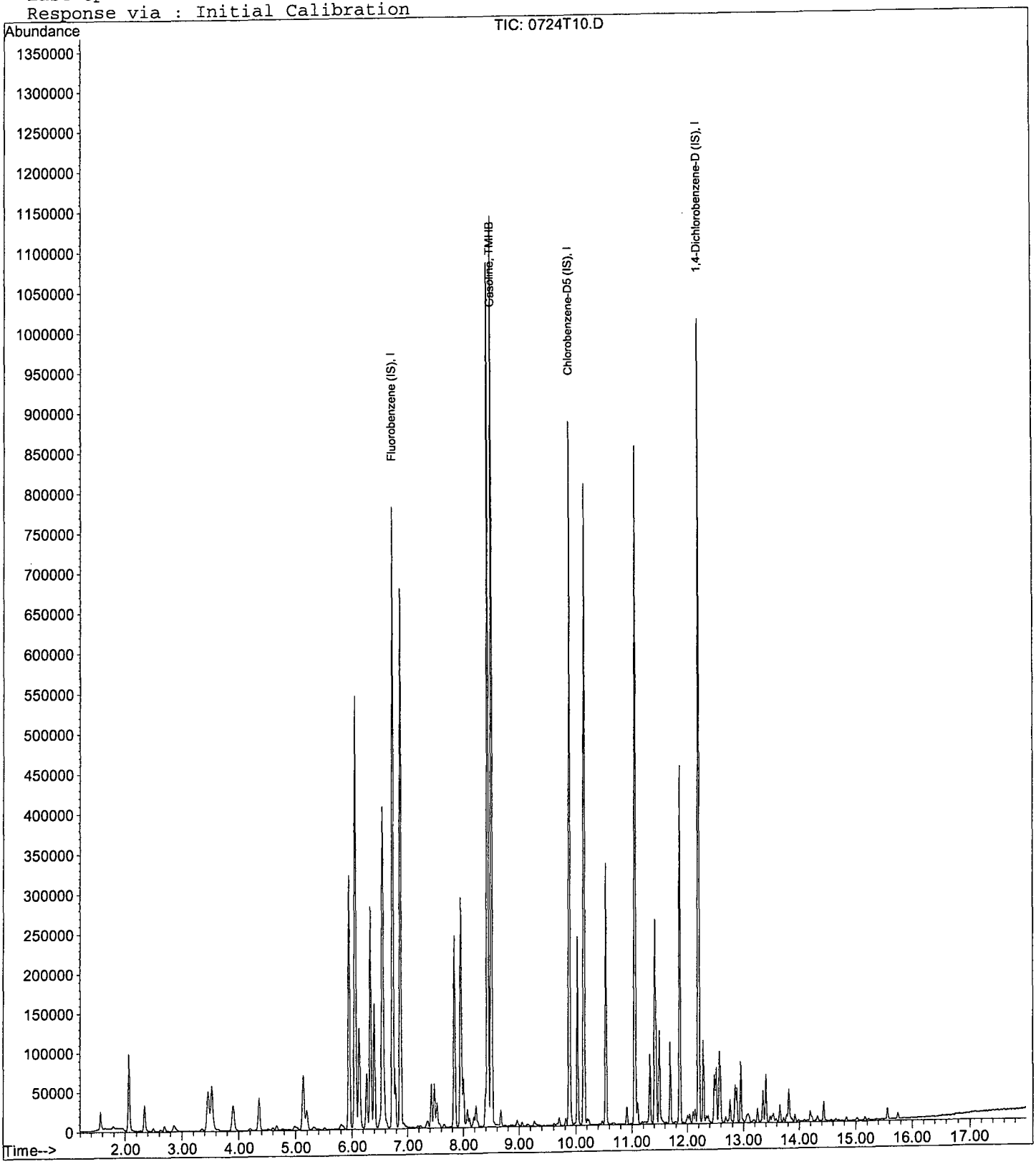
Quantitation Report

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

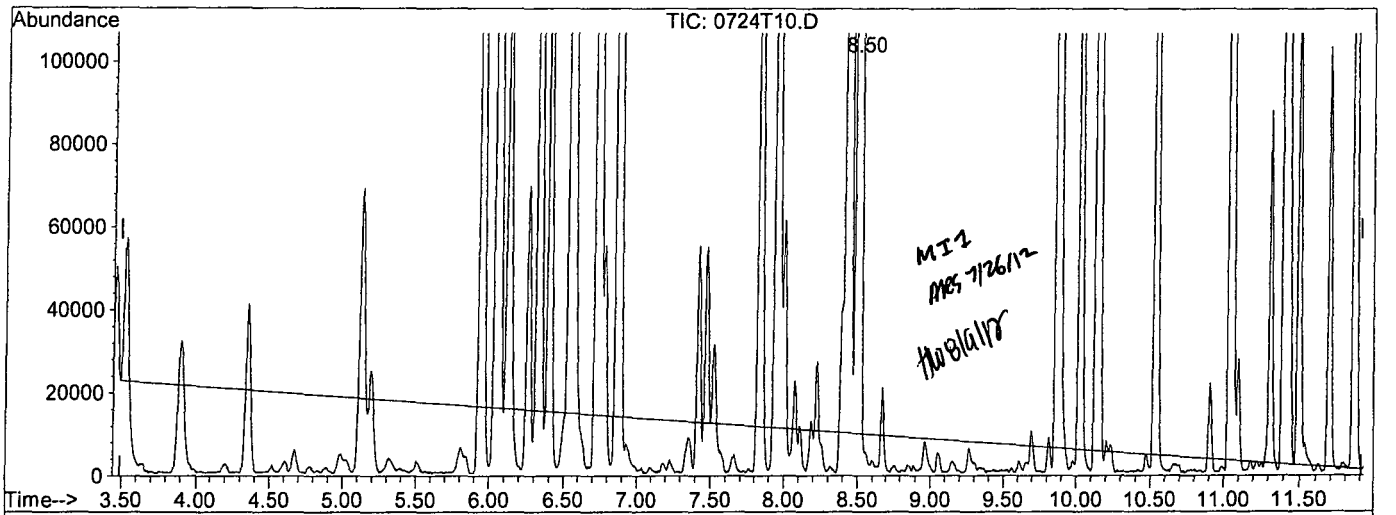
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

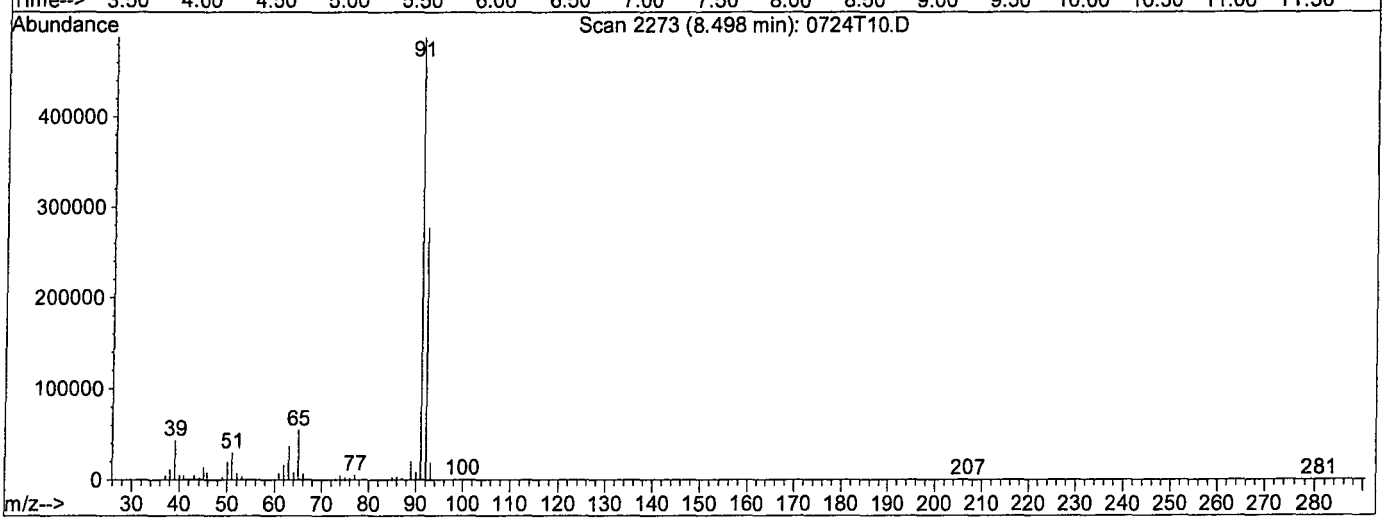


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T10.D 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 14:28 2012 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

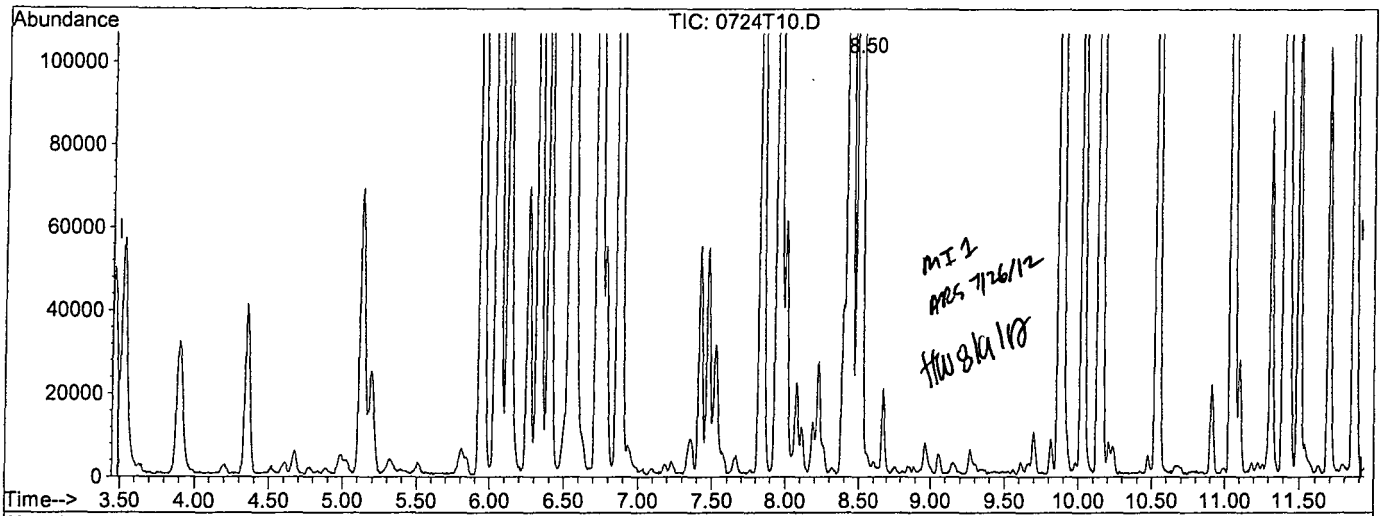
response 17196555

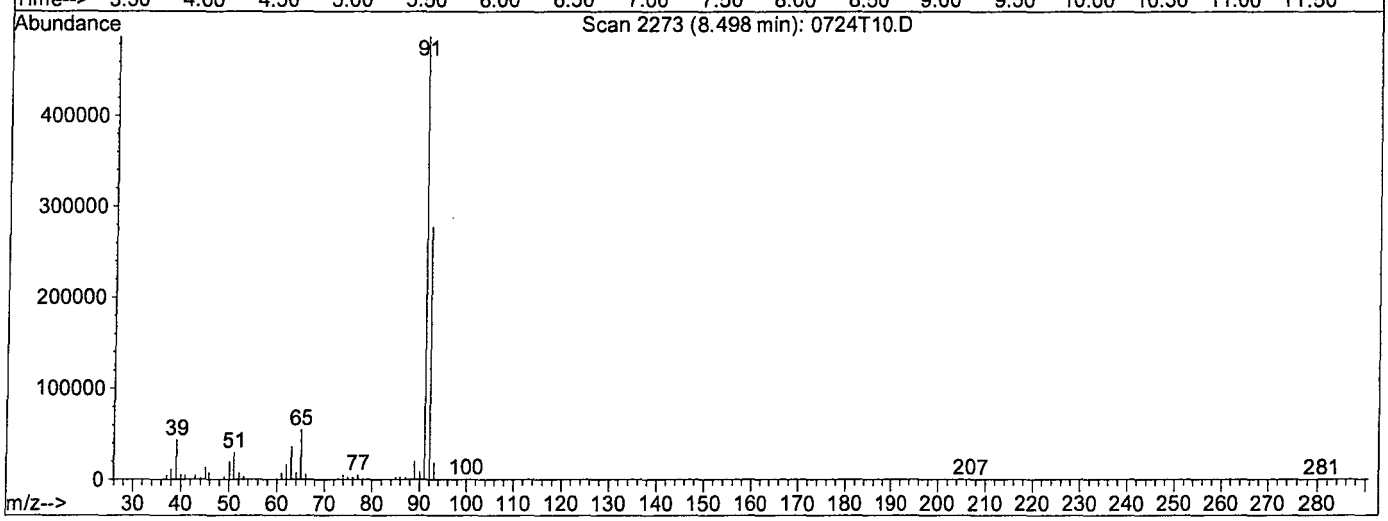
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.56#
0.00	0.00	1.64#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T10.D 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: 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								
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			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						Qvalue
2) Gasoline	8.43	TIC	19450673m	409.50667	ppb	100

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

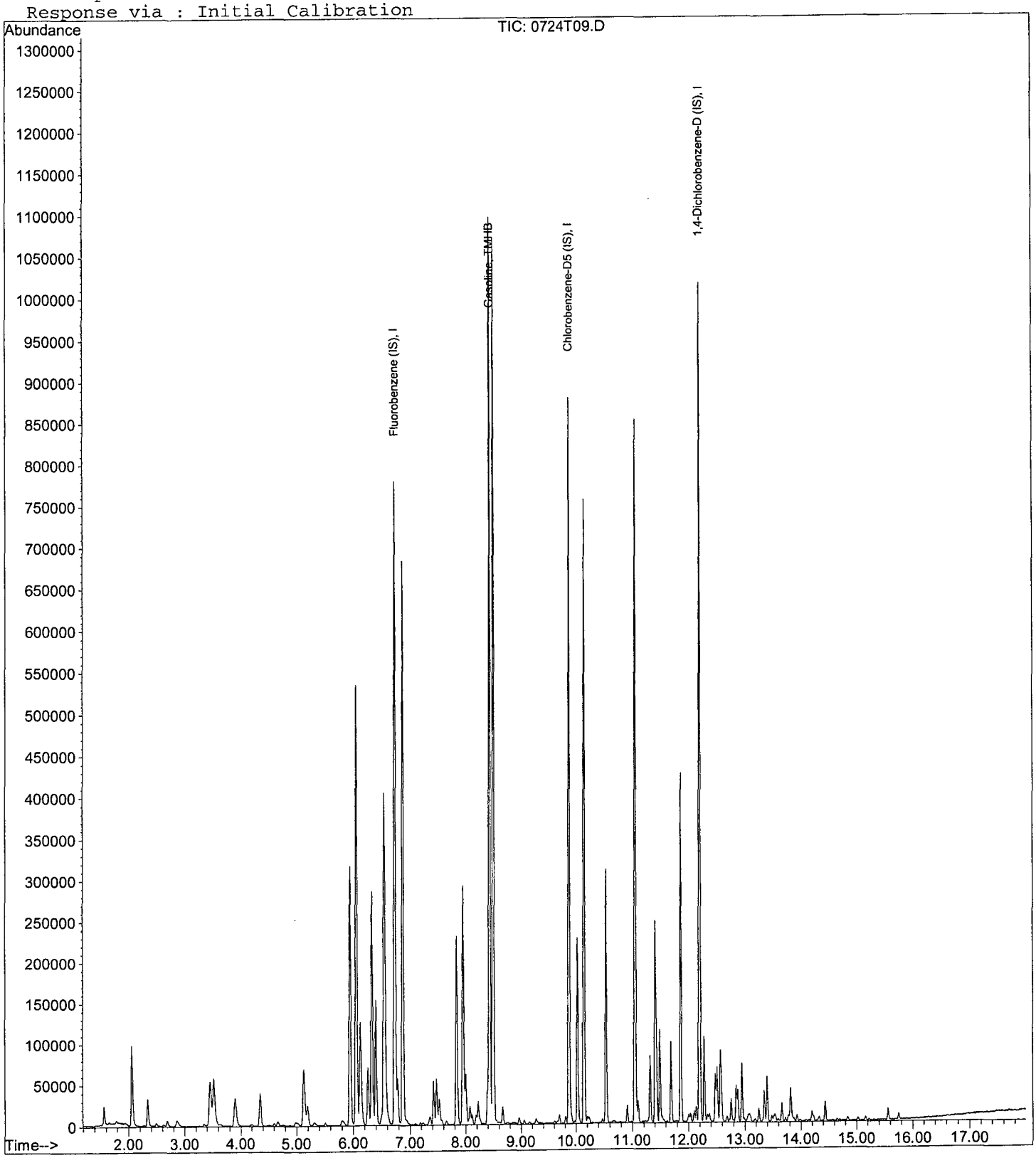
Quantitation Report

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

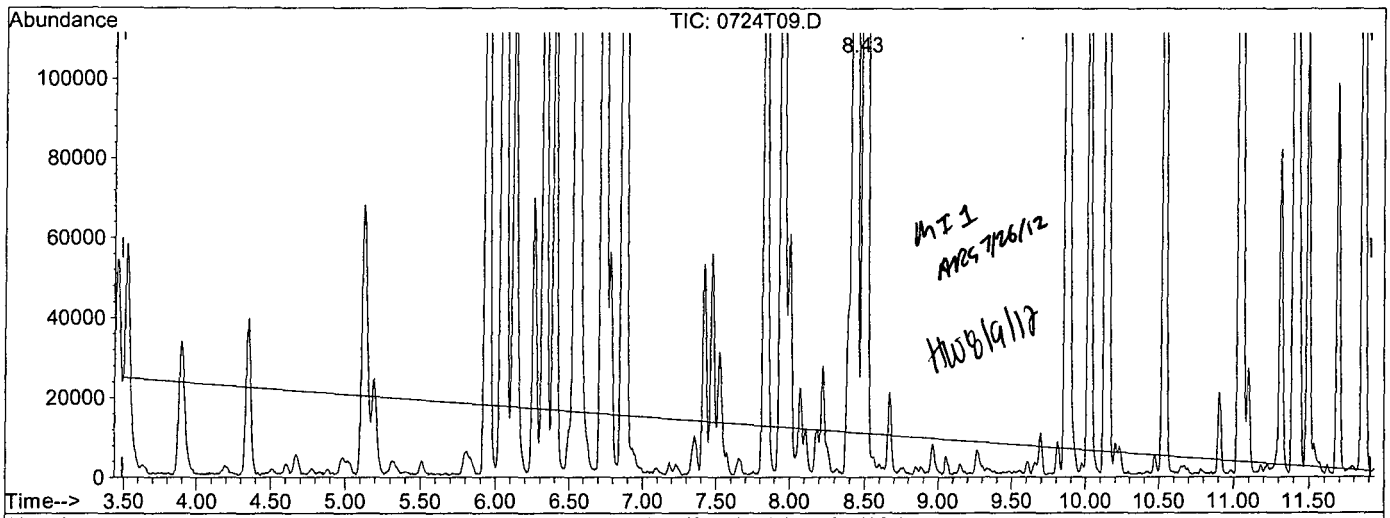
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

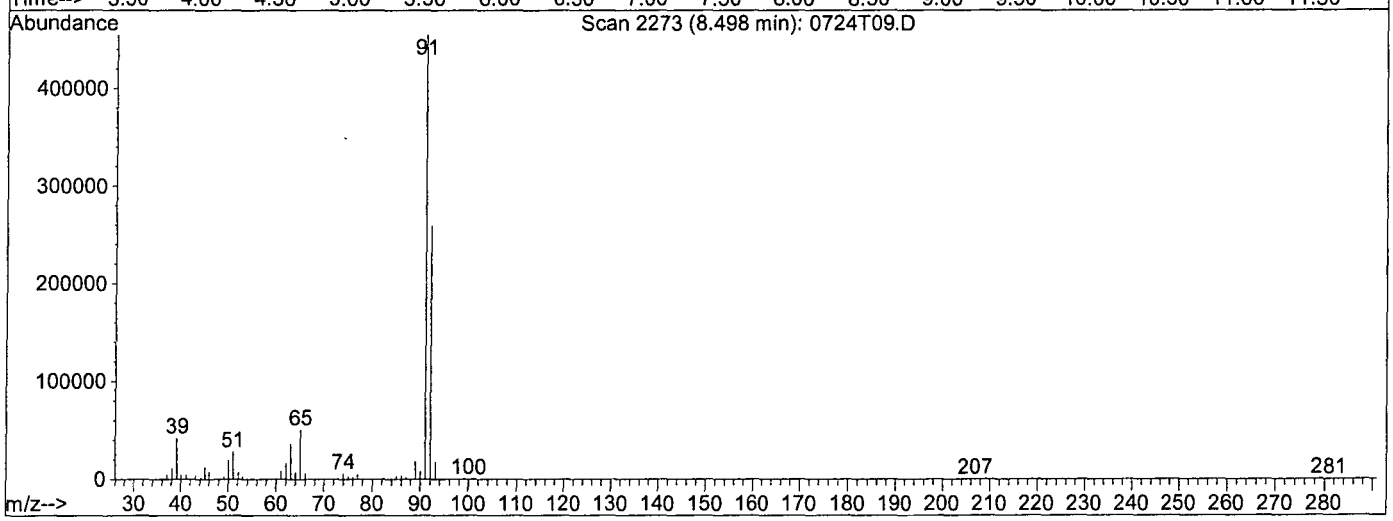


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T09.D 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 14:28 2012 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

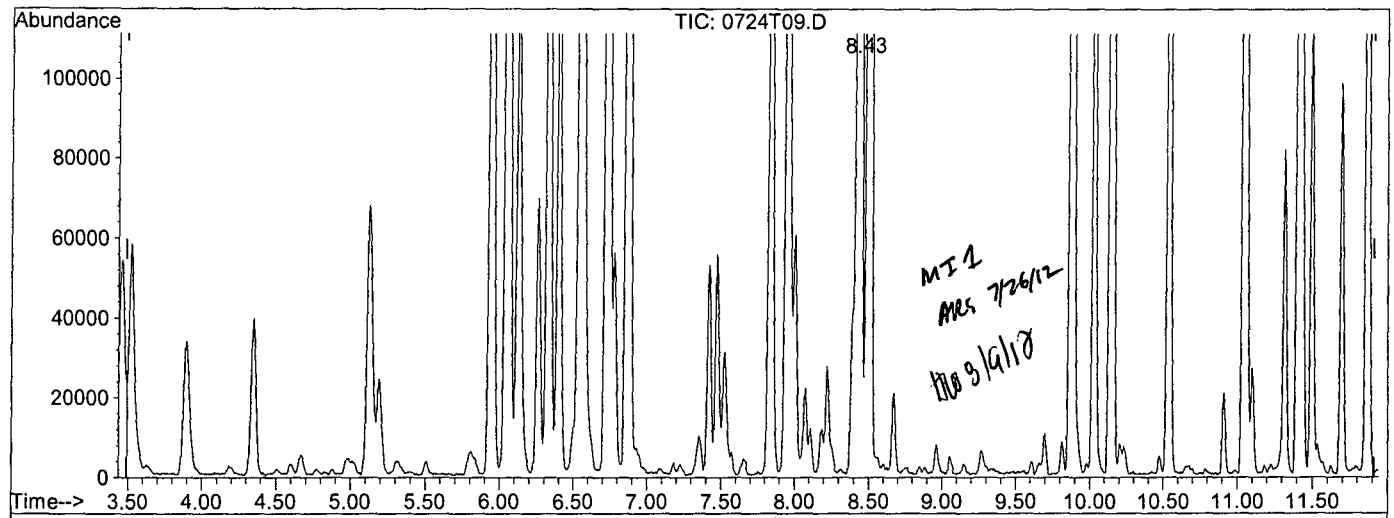
response 16970545

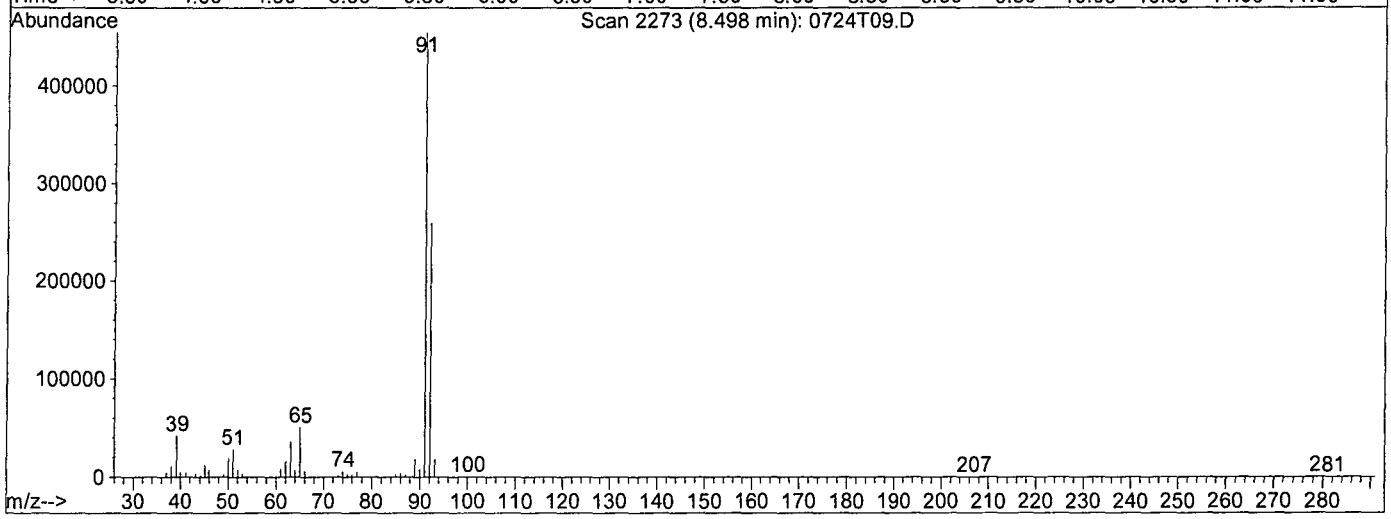
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.57#
0.00	0.00	1.67#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T09.D 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: 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 Avenu
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 Avenu
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 Vial: 38
Acq On : 20 Jul 12 2:18 Operator: DG,RS,HW,ARS,SV
Sample : 120719A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 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						
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

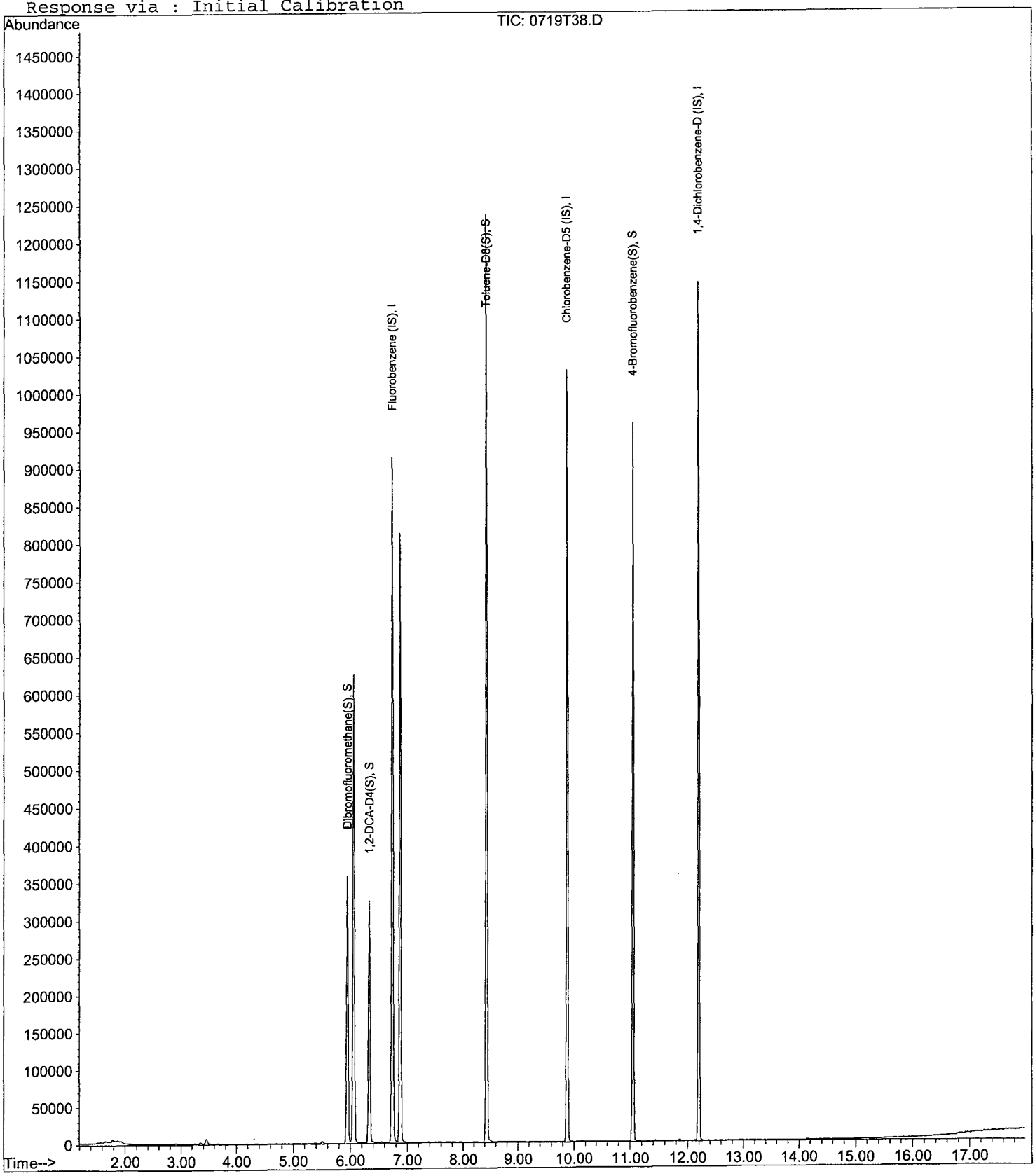
(#) = qualifier out of range (m) = manual integration

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					Qvalue
2) Gasoline	8.43	TIC	9145730m	126.20391 ppb	ND 100

No gasoline pattern detected.
HRS 7/26/12

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

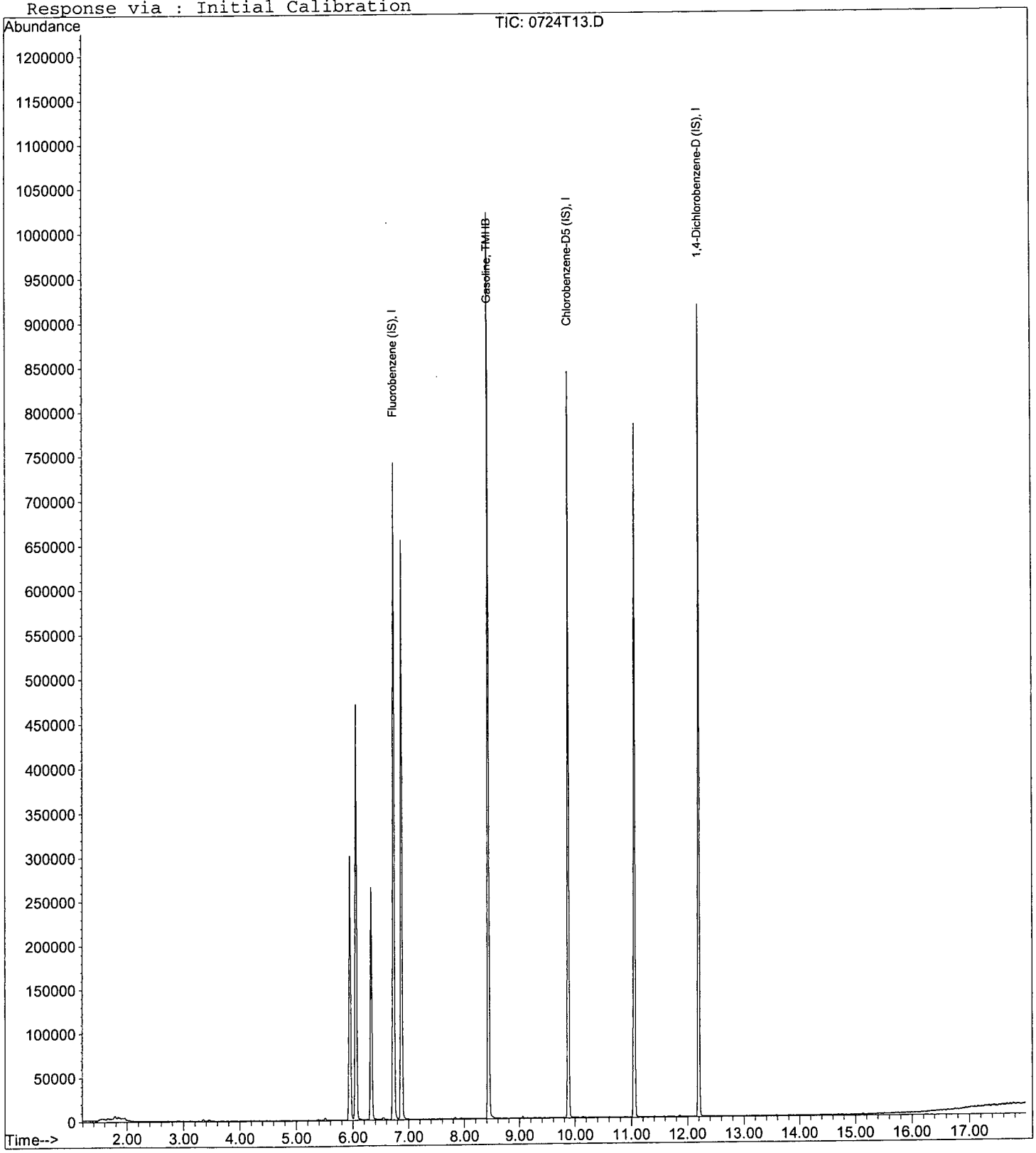
Quantitation Report

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

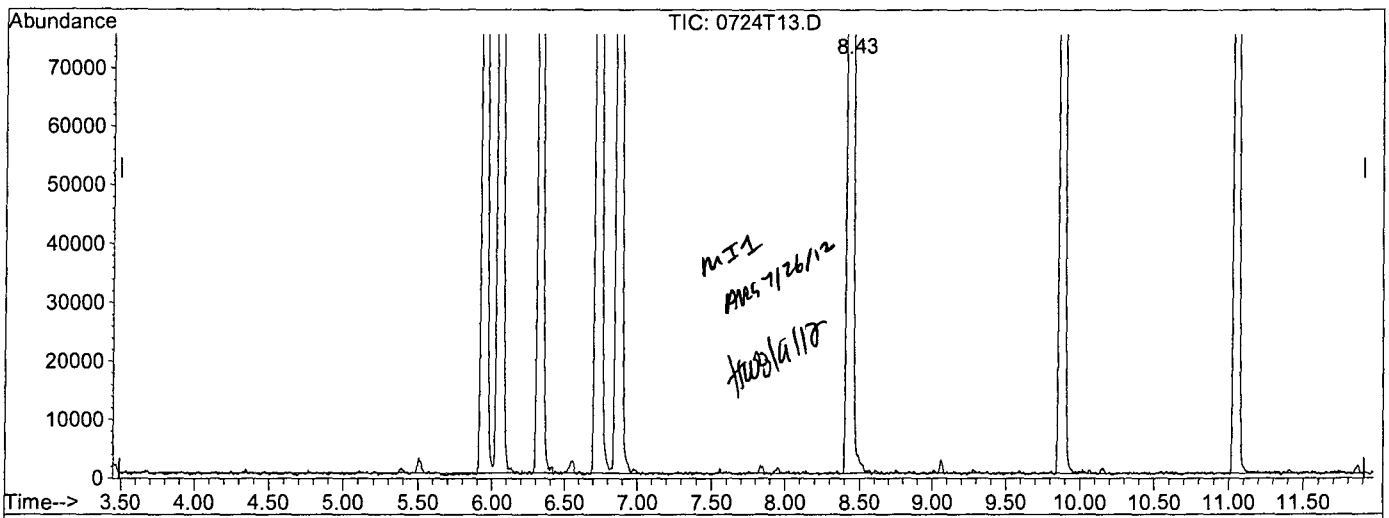
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

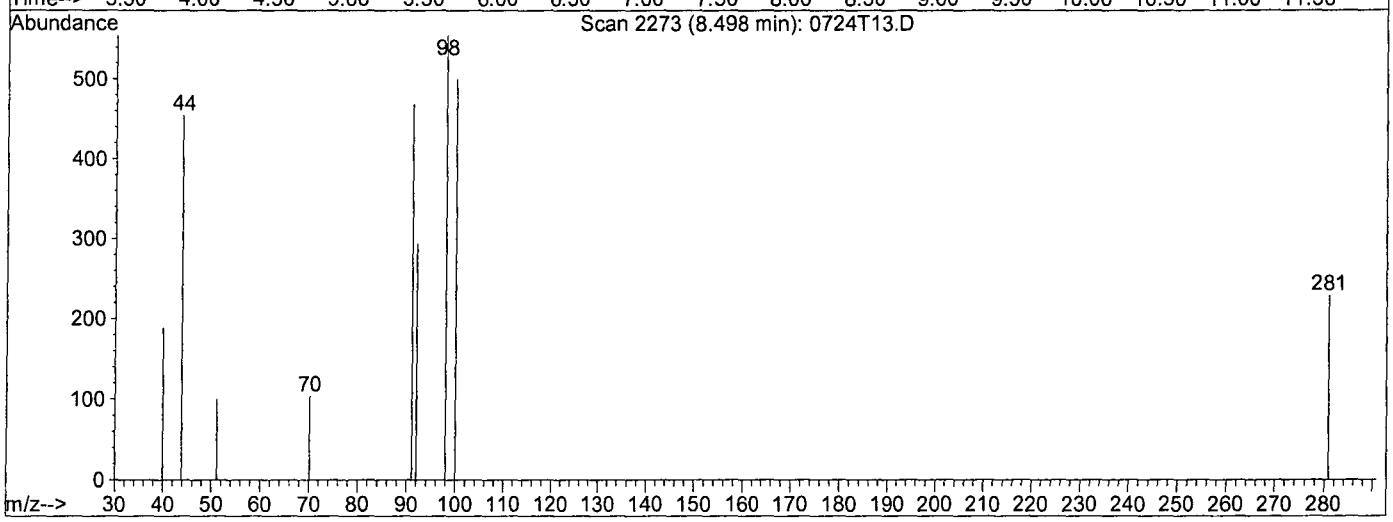


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T13.D 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 14:28 2012 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

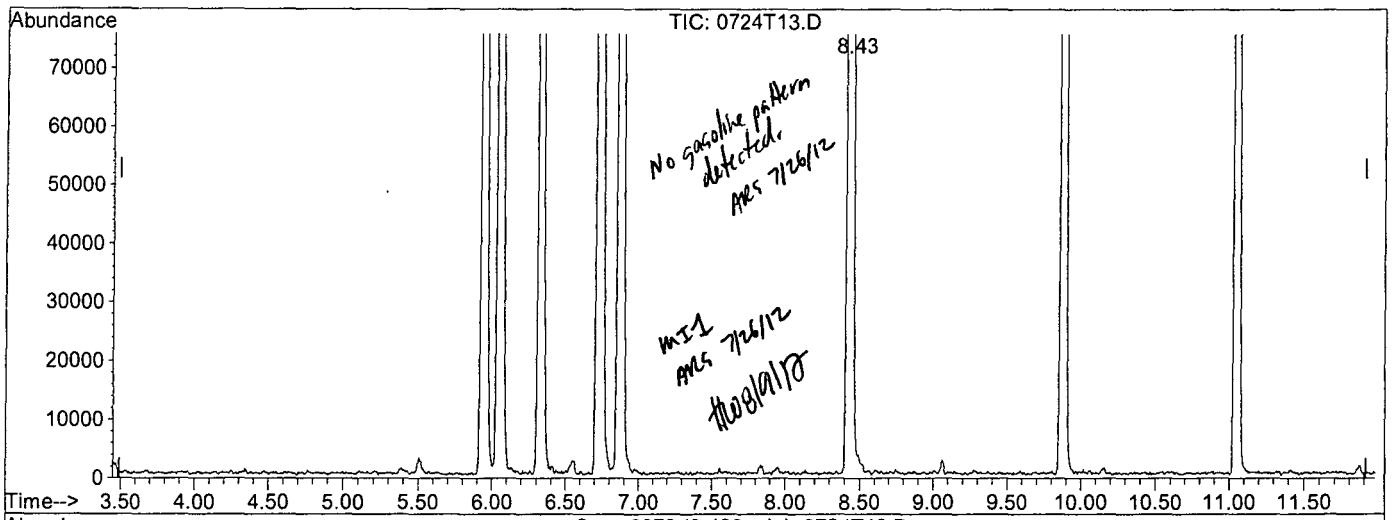
response 7068262

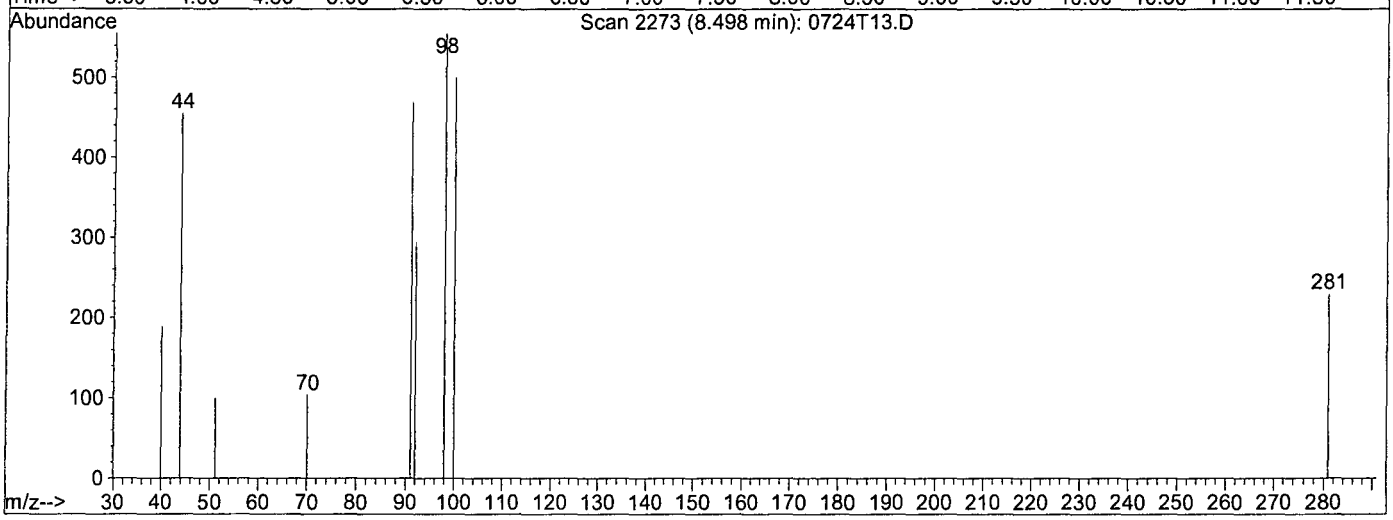
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.24#
0.00	0.00	3.65#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T13.D 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: 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: _____

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

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

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	459584	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	371008	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	216768	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	225058	31.29333 ppb		0.00
Spiked Amount 31.881			Recovery = 98.155%			
36) 1,2-DCA-D4(S)	6.33	65	220138	32.93626 ppb		0.00
Spiked Amount 33.647			Recovery = 97.888%			
56) Toluene-D8(S)	8.43	98	802051	36.56718 ppb		0.00
Spiked Amount 37.345			Recovery = 97.917%			
64) 4-Bromofluorobenzene(S)	11.05	95	313456	30.21914 ppb		0.00
Spiked Amount 29.515			Recovery = 102.384%			
Target Compounds						Qvalue
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: $\frac{(91788)(25)}{(459584)(0.4941)}$ (1) = 10.10522903 ✓ ARS 7/27/12

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

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

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) Bromodichloromethane	7.68	83	89098	9.56942 ppb		98
45) Methyl Cyclohexane	7.36	83	38326	9.57410 ppb		95
46) Dibromomethane	7.49	93	36747	10.03731 ppb		99
47) 2-Chloroethyl vinyl ether	7.99	106	1154	8.86120 ppb	#	100
48) MIBK (methyl isobutyl ket	8.33	43	32328	10.17680 ppb		97
49) 1-Bromo-2-chloroethane	7.99	63	45864	9.79426 ppb		99
50) Cis-1,3-Dichloropropene	8.15	75	86842	9.42535 ppb		98
51) Toluene	8.50	91	246468	10.12718 ppb		98
52) Trans-1,3-Dichloropropene	8.72	75	75443	9.28657 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

ARS 7/27/12

(#) = qualifier out of range (m) = manual integration
0719T31.D TALLW.M Fri Jul 20 10:53:42 2012 Page 2

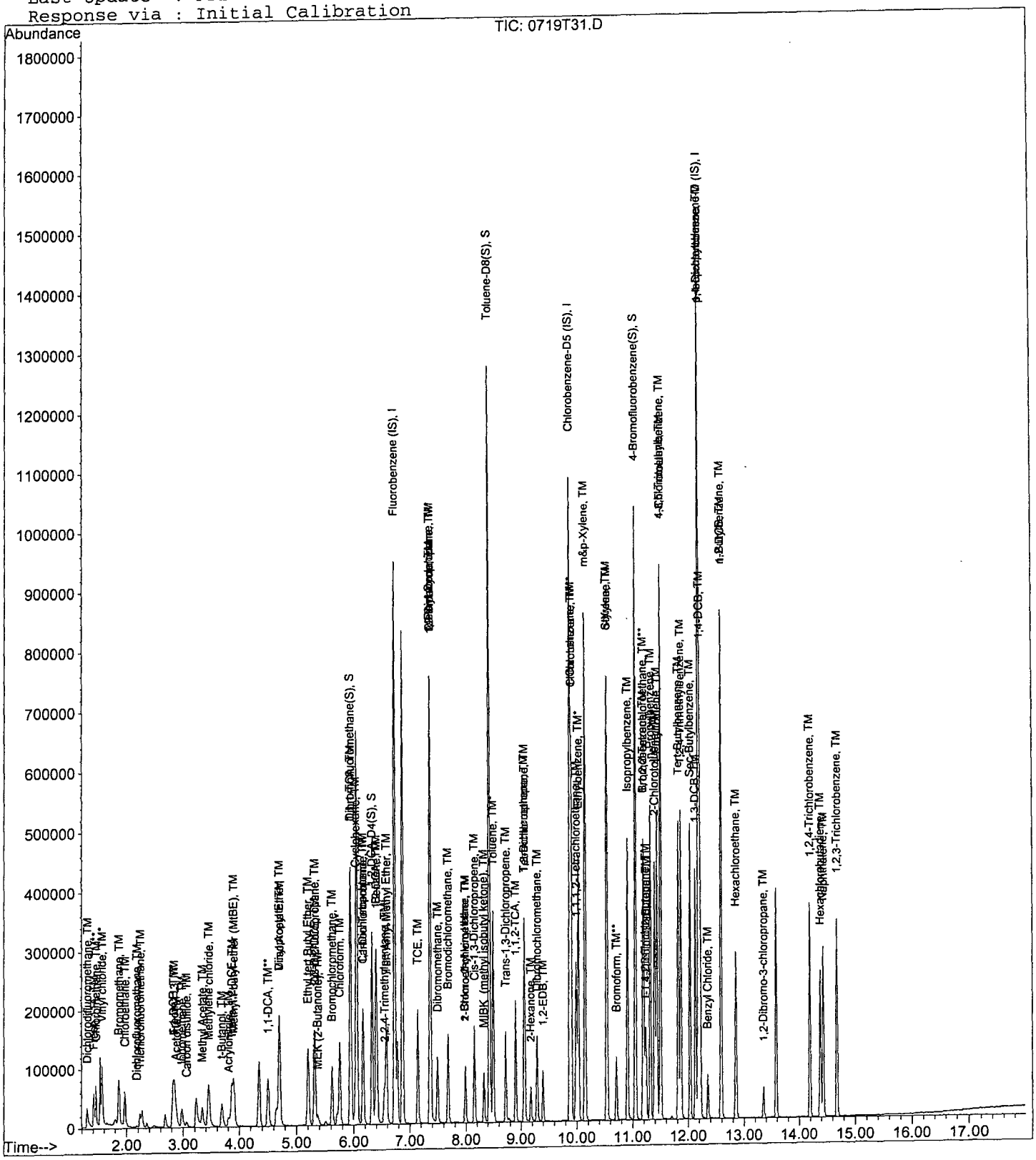
Data File : M:\THOR\DATA\T120719\0719T31.D
Acq On : 19 Jul 12 23:03
Sample : 120719A LCS-1WT (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

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						Qvalue
2) Gasoline	8.50	TIC	19788320m	418.73004	ppb	100

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

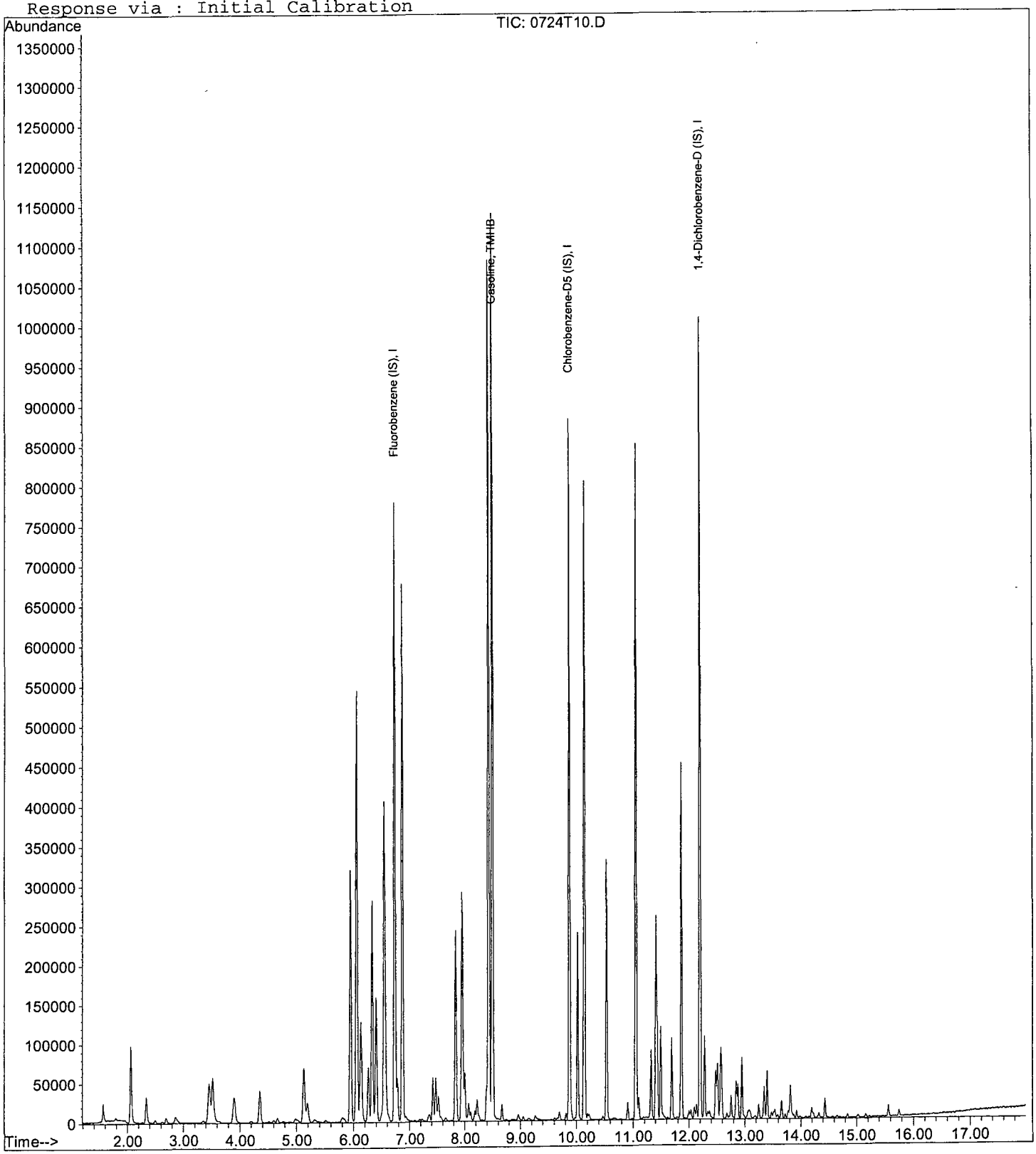
Quantitation Report

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

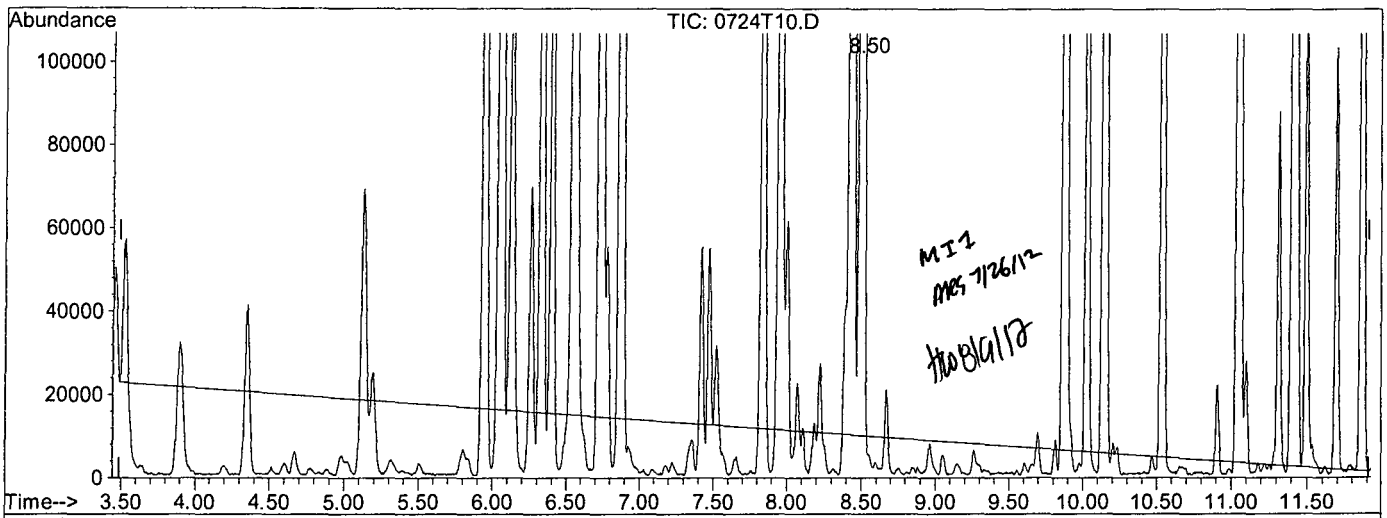
Method : M:\THOR\DATA\T120724\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration

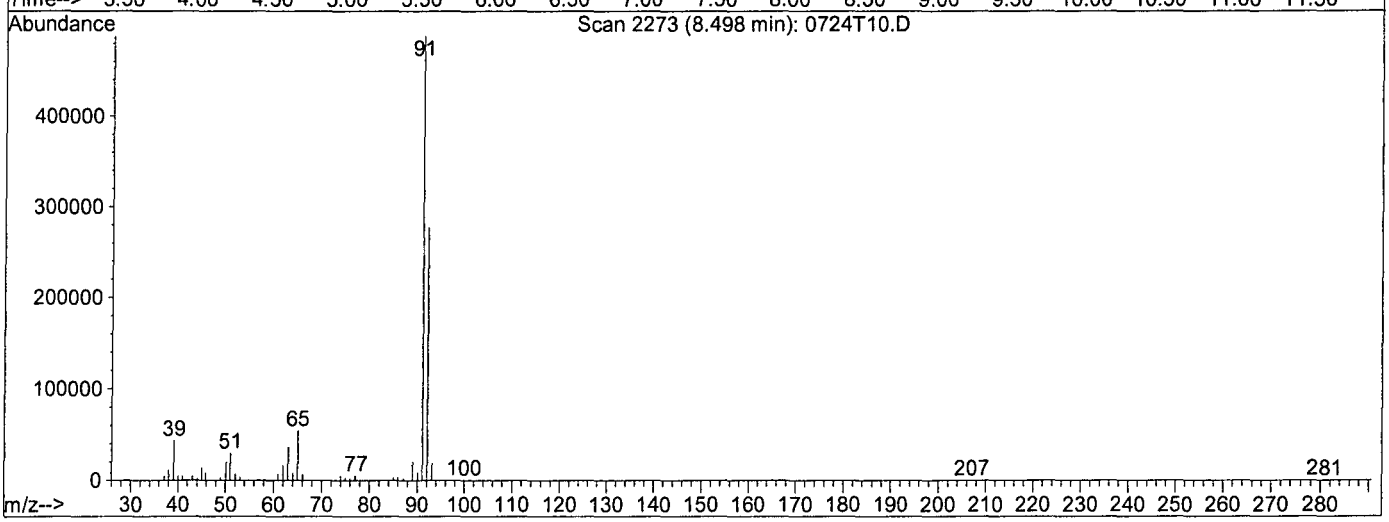


Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T10.D 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 14:28 2012 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

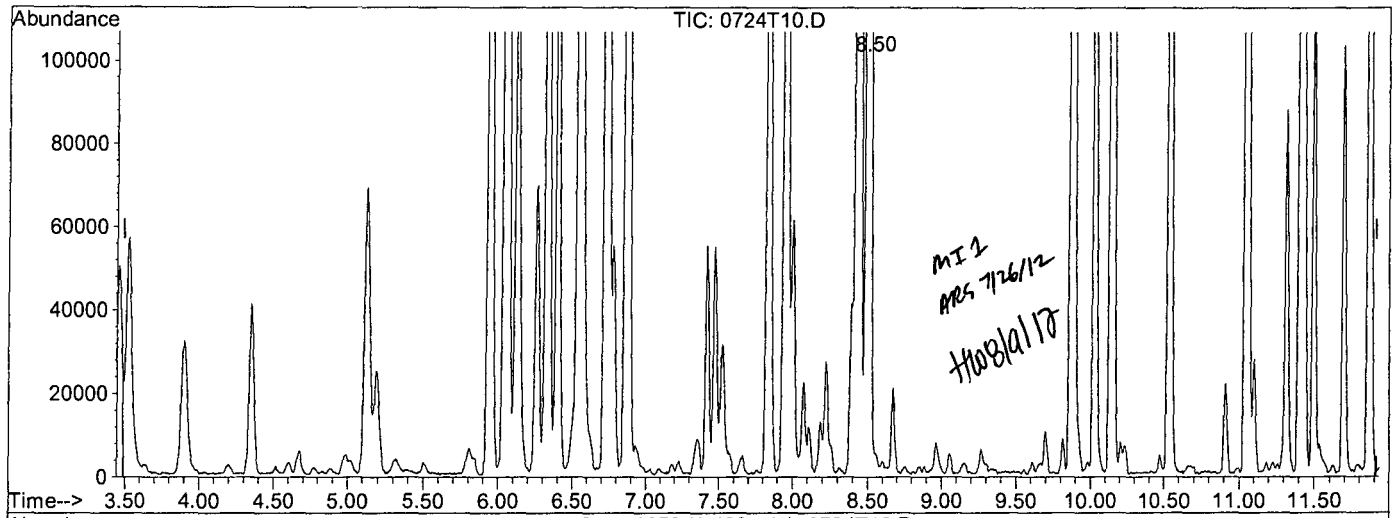
response 17196555

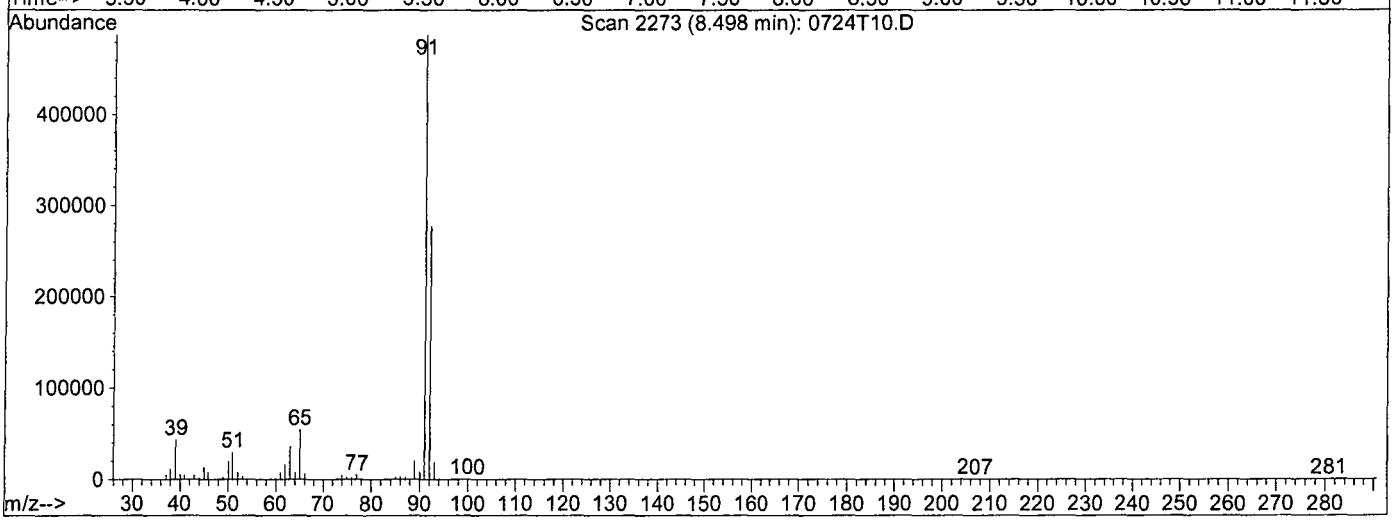
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.56#
0.00	0.00	1.64#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120724\0724T10.D 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: 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

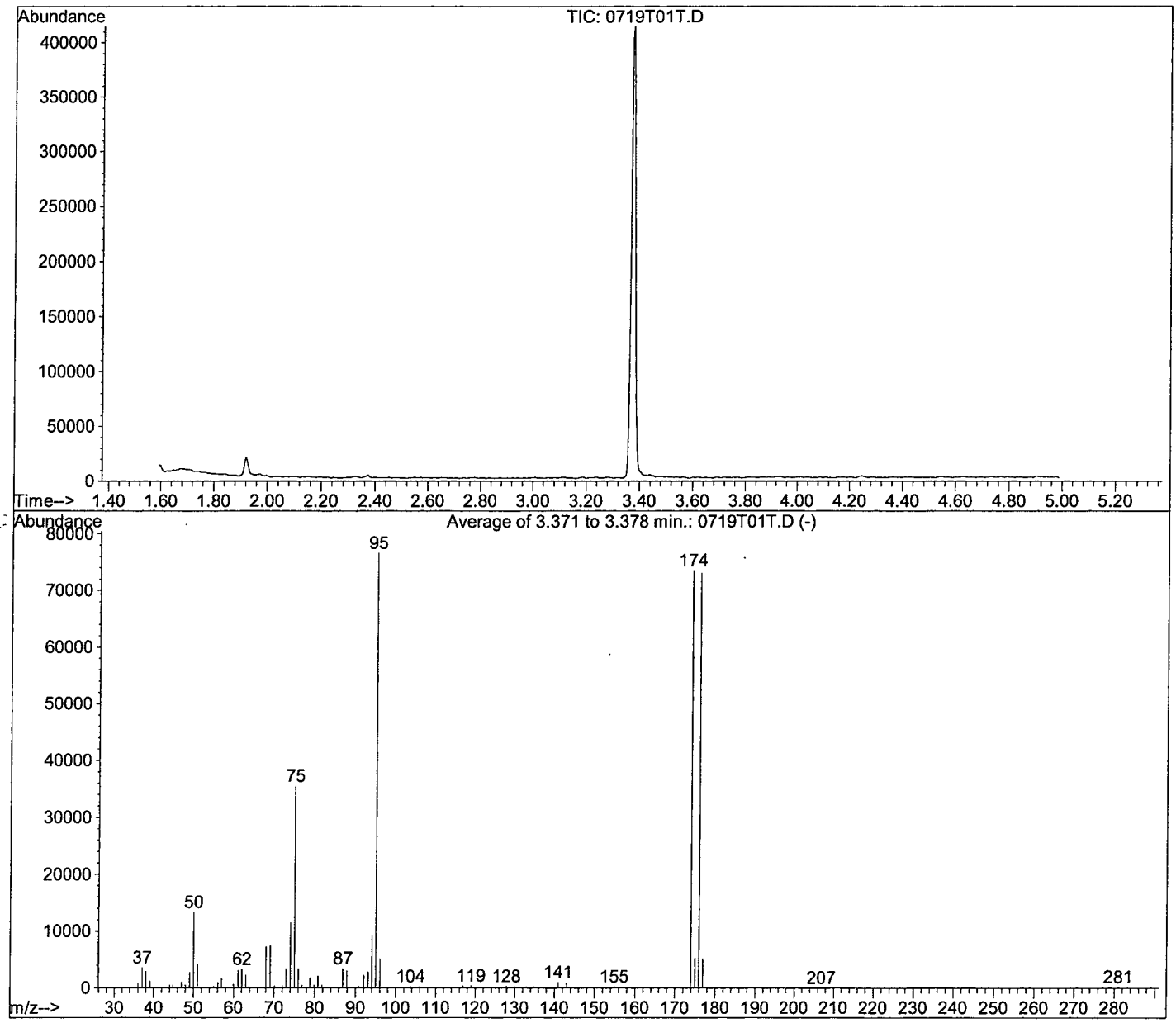
response 19788320

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



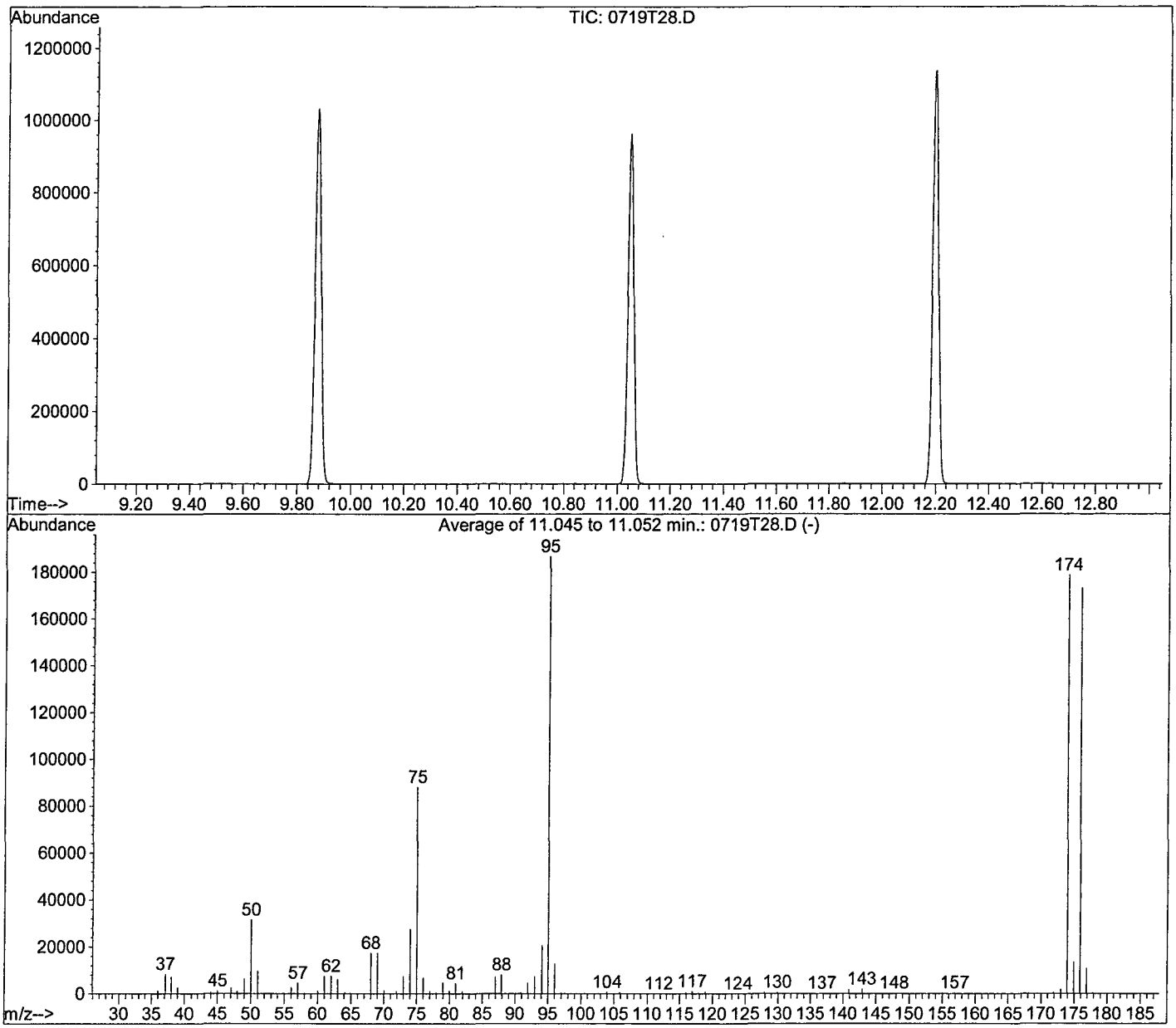
AutoFind: Scans 554, 555, 556; Background Corrected with Scan 544

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

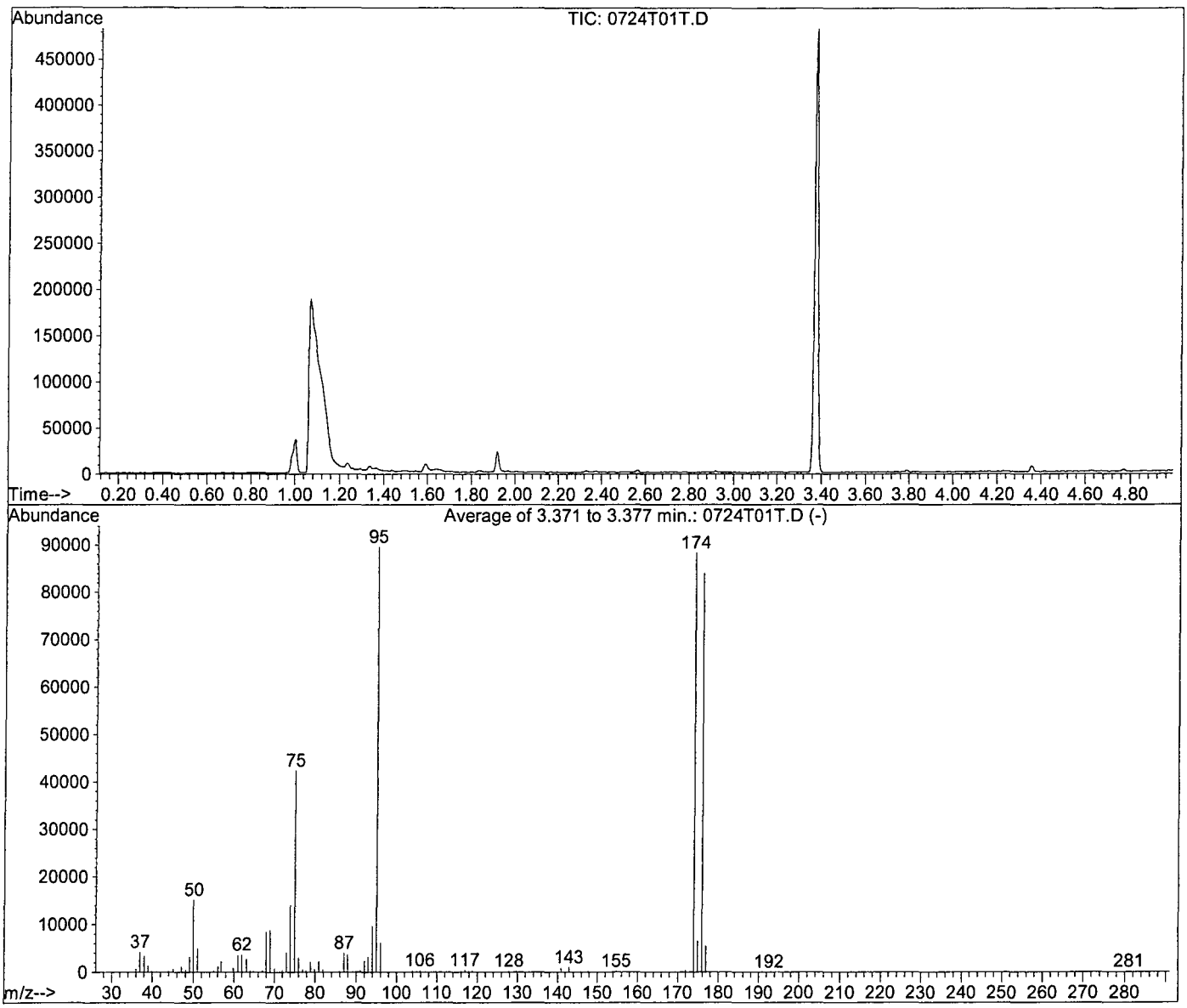
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	31552	PASS
75	95	30	60	47.3	88245	PASS
95	95	100	100	100.0	186709	PASS
96	95	5	9	6.8	12716	PASS
173	174	0.00	2	1.0	1785	PASS
174	95	50	100	95.8	178816	PASS
175	174	5	9	7.5	13428	PASS
176	174	95	101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

GC/MS STANDARD PREPARATION BOOK # _____ PAGE # _____

6/08/12 RS

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

		Expiration Date:	06/09/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12
06-08-12A	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
06-08-12B	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
06-08-12C	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
06-08-12D	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
06-08-12E	50	n/a	n/a	5	5	5	n/a	5	n/a	5
06-08-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	10
06-08-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	20

6/10/12 RS

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

06-11-12A							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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

6/11/12 RS

Volatile Standard Cu	
	Expiratio
Date	Conc.
Code	µg/L
06-11-12I	0.3
06-11-12J	0.5
06-11-12K	1
06-11-12L	2
06-11-12M	5
06-11-12N	10
06-11-12O	20
06-11-12P	40
06-11-12Q	100

6/11/12 RS

D-

Method 8260 Internal Standard Solution, 2,000 mg/L, 1 ml
120302-03
Lot# 166255 Storage ≤ -10 Degrees C Expiry 11/18/12
Solv: P/T Methanol
For D only, not human consump. Made in the USA

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
120132-02
Lot # 169170 Storage ≤ 6 Degrees C Expiry 2/13/14
Solv: P/T Methanol
For BAD only, not human consump. Made in the USA

Fluorobenzene
Lot #: 169170 - 28869
Rec: 5/25/11 MFR exp. 02/13/14

RS

Volatile Standard Cu	
	Expiratio
Date	Conc.
Code	µg/L
06-11-12R	2
06-11-12S	5
06-11-12T	10
06-11-12U	20
06-11-12V	50
06-11-12W	100
06-11-12X	200

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

6/11/12 RS F-

/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

P:	
te	ul
1/12	20
8/12	1980
P:	
te	ul
1/12	20
8/12	1980
P:	
te	ul
1/12	20
8/12	1980

6/11/12 RS

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

Made in the USA. U.S.D. only, not human consump.

Lot# 185763 | Storage 120002-01 = 10 Degrees C | Expiry 2/19/15

Solv: P/T Methanol

Method 8260B Surrogate

Lot #: 185763 - 30467

Rec: 2/20/12 MFR exp 02/19/15

RS

Thor

06-11-12G

50ug/ml 8260 Internal Standard			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120302-03	Internal Standard Mix	2000	166255-29275	06-11-12D	12/13/12	375
O2SI	020132-02	Fluorobenzene Standard	2000	169170-28869	06-11-12E	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14250

06-11-12H

50ug/ml 8260B Surrogate-Thor			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	8260B Surr	Surrogate Standards	2000	178653-30467	06-11-12F	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14625

6/11/12 RS

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

	Expiration Date		06/12/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12
06-11-12I	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
06-11-12J	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
06-11-12K	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
06-11-12L	2	20	40	n/a	n/a	n/a	20	n/a	n/a	20
06-11-12M	5	n/a	n/a	5	5	10	n/a	5	5	n/a
06-11-12N	10	n/a	n/a	10	10	25	n/a	10	10	n/a
06-11-12O	20	n/a	n/a	20	20	40	n/a	20	20	n/a
06-11-12P	40	n/a	n/a	40	40	80	n/a	40	40	n/a
06-11-12Q	100	n/a	n/a	100	100	100	n/a	100	100	n/a

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

6/12/12 RS

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

	Expiration Date		06/12/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12	Exp 06-09-12
06-11-12R	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
06-11-12S	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
06-11-12T	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
06-11-12U	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
06-11-12V	50	n/a	n/a	5	5	5	n/a	5	n/a	5
06-11-12W	100	n/a	n/a	10	10	10	n/a	10	n/a	10
06-11-12X	200	n/a	n/a	20	20	20	n/a	20	n/a	20

250µg/mL TBA	Final Vol
06-02-12AE	w/P&T H2O
Exp 06-09-12	mL
1	5
2	5
3	5
4	5
5	5
6	5
7	5

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

Expiration Date:		07/12/12								
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	07-05-12I	07-05-12M	07-05-12E	07-05-12G	07-05-12L	07-05-12J	07-05-12F	07-05-12H	07-05-12K
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
07-11-12F	2	2	n/a	n/a	n/a	n/a	2	n/a	2	n/a
07-11-12G	5	5	n/a	n/a	n/a	n/a	5	n/a	5	n/a
07-11-12H	10	10	n/a	n/a	n/a	n/a	10	n/a	10	n/a
07-11-12I	20	20	n/a	n/a	n/a	n/a	20	n/a	20	n/a
07-11-12J	50	n/a	n/a	5	5	5	n/a	5	n/a	5
07-11-12K	100	n/a	n/a	10	10	10	n/a	10	n/a	10

250µg/mL TBA	Final Vol
07-05-12N	w/P&T H2O
Exp:07-12-12	mL
1	5
2	5
3	5
4	5
5	5
6	5

CHICO

07-12-12A							
50ug/ml 524 Internal Standard w/ Surrogate			Conc.		Date	Exp.	
			ug/ml	Lot #	Code	Date	uL
02SI	122450-02	524 Fortification Sol	1000	176776-29295	06-07-12A	10/10/12	200
J&T Baker		Purge & Trap MeOH		K14E06-00643	07/09/12	12/22/13	3800

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

	Expiration Date:		07/13/12						
		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
Date	Conc.	07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N	w/P&T H2O
Code	µg/L	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	mL
07-12-12B	0.2	2	2	n/a	n/a	n/a	2	50
07-12-12C	0.5	5	5	n/a	n/a	n/a	5	50
07-12-12D	1	10	10	n/a	n/a	n/a	10	50
07-12-12E	2	20	20	n/a	n/a	n/a	15	50
07-12-12F	5	n/a	n/a	5	5	5	20	50
07-12-12G	10	n/a	n/a	10	10	10	25	50
07-12-12H	20	n/a	n/a	20	20	20	30	50
07-12-12I	40	n/a	n/a	40	40	40	35	50
07-02-12H	100	n/a	n/a	100	100	100	40	50

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

020135-03

Lot #	Storage	Expiry
163173	≤ -10 Degrees	8/24/13

Solv: P/T Methanol

* R&D only, not manufactured or sold in the USA

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

A-

RS

07-16-12B							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12C							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12D							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12E							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980

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7/17/12 RS

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

	Expiration Date:		07/18/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	07-05-12I	07-05-12M	07-05-12E	07-05-12G	07-05-12L	07-05-12J	07-05-12F	07-05-12H	07-05-12K
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	5
07-17-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	10
07-17-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	20

9/18/12 RS

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

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
7	5

9/18/12 RS

A-

Method 8260 Gases, 2,000 mg/L, 2 X 0.6 ml
120016-03
Lot# 180013 Storage ≤ -10 Degrees C Expiry 10/17/14
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Method 8260 Gases
Lot #: 180013 - 29760
Rec: 10/24/11 MFR exp. 10/17/14

RS

9/18/12 RS

B-

Hexachloroethane Solution, 1000 mg/L, 1 ml
020049-02
Lot# 176700 Storage ≤ -10 Degrees C Expiry 7/31/13
Solv: P/T Methanol
R&D only, not human consump. Made in the USA
solutions

Hexachloroethane
Lot #: 176700 - 30724
Rec: 5/9/12 MFR exp. 07/31/13

RS

9/18/12 RS

C-

Benzyl Chloride Solution, 1000 mg/L, 1 ml
020228-02
Lot# 176701 Storage ≤ -10 Degrees C Expiry 7/31/13
Solv: P/T Methanol
R&D only, not human consump. Made in the USA
solutions

Benzyl Chloride
Lot #: 176701 - 31019
Rec: 6/19/12 MFR exp. 07/31/13

RS

9/18/12 RS

D-

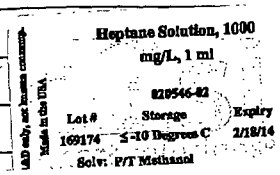
n-Hexane Solution, 1,000 mg/L, 1 ml
020620-02
Lot# 176773 Storage ≤ -10 Degrees C Expiry 7/30/16
Solv: P/T Methanol
R&D only, not human consump. Made in the USA
solutions

n-Hexane Solution
Lot #: 176773 - 31024
Rec: 6/19/12 MFR exp. 07/30/16

RS

9/18/12 RS

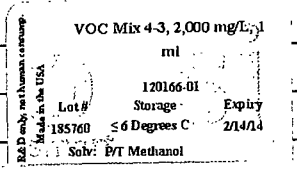
E-



Heptane Solution
Lot #: 169174 - 31039
Rec: 6/19/12 MFR exp. 02/18/14

RS

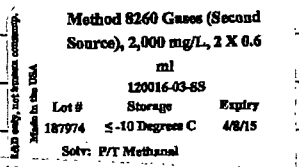
F-



VOC Mix 4-3, 2000mg/L
Lot #: 185760 - 30739
Rec: 5/9/12 MFR exp. 02/14/14

RS

G-



Method 8260 Gases (SS)
Lot #: 187974 - 31061
Rec: 6/19/12 MFR exp. 04/08/15

RS

07-18-12H							
50ug/ml Vol Work Std #7							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	180013-29760	07-18-12A	07/25/12	100
02SI	020049-02	HEXACHLOROETHANE	1000	176700-30724	07-18-12B	08/08/12	200
02SI	020228-02	Benzyl Chloride	1000	176701-31019	07-18-12C	08/08/12	200
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3500
07-18-12I							
50ug/ml Vol Work Std #1							
Exp:07/25/12							
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	176770-29827	06-19-12D	08/08/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1950
07-18-12J							
50ug/ml Vol Work Std #8							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	180114-29786	06-19-12E	08/08/12	100
02SI	120023-03	VOC'S-54 COMP	2000	176392-29207	06-19-12F	08/08/12	100
02SI	020232-02	Vinyl Acetate	2000	189764-30727	06-19-12G	05/13/12	100
02SI	020620-02	n-Hexane	1000	176773-31024	07-18-12D	08/08/12	200
02SI	020546-02	Heptane	1000	169174-31039	07-18-12E	08/08/12	200
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3300
07-18-12K							
50ug/ml Vol Work Std #2							
Exp:07/25/12							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	163375-27145	06-19-12J	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3900

		07-18-12L	Exp:	07/25/12			
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #7		07-18-12H	07/25/12	200	
		50ug/ml Vol Work Std #8		07-18-12J	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1600	
		07-18-12M	Exp:	07/25/12			
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #1		07-18-12I	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1800	
		07-18-12N	Exp:	07/25/12			
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #2		07-18-12K	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1800	
07-18-12O							
50ug/ml 8260 Surrogate			Conc.		Date	Exp:	
Exp:07/25/12			ug/ml	Lot #	Code	Date	uL
O2SI	120002-01	8260B Surr Solution	2000	185763-30471	07-05-12B	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3900
07-18-12P			Exp:	07/25/12			
5.0ug/ml 8260 Surrogate			**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml 8260 Surrogate		07-18-12O	07/25/12	200	
J&T Brand		Purge & Trap MeOH		06/18/12	10/08/12	1800	
07-18-12Q							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:07/25/12			Conc.		Date	Exp:	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
02SI	120166-01	Volatile Mix 4-3	2000	185760-30739	07-18-12F	08/08/12	500
02SI	020229-09	Acrolein	10000	191590-39077	06-19-12L	07/21/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3400

7/18/12 RS

07-18-12R							
50ug/ml VOC Std#5							
Exp:07/25/12					Date	Exp:	
			Conc.		Code	Date	ul
Supplier	ID #	ID	ug/ml	Lot #	07-18-12G	07/25/12	50
O2SI	120016-03-SS	8260 Gases(SS)	2000	187974-31061	06-19-12N	08/08/12	50
O2SI	020145-02-02-S	2-CEVE	2000	181404-30001	07/18/12	10/08/12	1900
J&T Brand		Purge & Trap MeOH		K14E06-00640			
07-18-12S							
50ug/ml VOC Std#6							
Exp:07/25/12					Code	Date	ul
	ID #	ID	ug/ml	Lot #	06-19-12O	08/08/12	50
02SI	120023-03-SS	VOC'S 54 COMP.	2000	176822-29269	06-19-12P	08/08/12	50
O2SI	120296-01	Custom 8260 Solution	2000	185766-60426	05-08-12J	08/12/12	50
02SI	020232-02-SS	Vinyl Acetate(SS)	2000	189765-30729	05-15-12K	08/08/12	100
02SI	020620-02-SS	n-HEXANE	1000	179199-29616	05-15-12L	08/08/12	100
02SI	020049-02-SS	HEXACHLOROETHANE	1000	183795-30438	05-15-12M	08/08/12	100
02SI	020546-02-SS	Heptane(SS)	1000	185762-30448	07/18/12	10/08/12	1550
J&T Brand		Purge & Trap MeOH		K14E06-00640			
07-18-12T							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:07/25/12			Conc.		Date	Exp:	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	163778-29840	06-19-12Q	08/08/12	250
02SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	151591-30979	06-19-12R	07/21/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1700

7/18/12 RS

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

	Expiration Date:		07/18/12					Final Vol.
		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	w/P&T H2O
Date	Conc.	07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N	mL
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	50
07-17-12A	0.2	2	2	n/a	n/a	n/a	2	50
07-17-12B	0.5	5	5	n/a	n/a	n/a	5	50
07-17-12C	1	10	10	n/a	n/a	n/a	10	50
07-17-12D	2	20	20	n/a	n/a	n/a	15	50
07-17-12E	5	n/a	n/a	5	5	5	20	50
07-17-12F	10	n/a	n/a	10	10	10	25	50
07-17-12G	40	n/a	n/a	40	40	40	35	50
07-17-12H	100	n/a	n/a	100	100	100	40	50

7/18/12 RS

07/19/12A							
2000ug/ml Gasoline							
						APPL	
			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Supelco	LB82077	Gasoline	20,000	LB82077-29979	01-26-12A	02/01/14	200
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13	1800
07/19/12B							
2000ug/ml Unleaded Gasoline							
						APPL	
			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Restek	30205	Unleaded Gasoline	50,000	A081012-29980	01-26-12B	02/01/14	80
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13	1920

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

	Expiration Date:		07/20/12							
	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	5µg/mL Vol Std #12
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-19-12C	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
07-19-12D	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
07-19-12E	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
07-19-12F	2	20	40	n/a	n/a	n/a	20	n/a	n/a	20
07-19-12G	5	n/a	n/a	5	5	10	n/a	5	5	n/a
07-19-12H	10	n/a	n/a	10	10	25	n/a	10	10	n/a
07-19-12I	20	n/a	n/a	20	20	40	n/a	20	20	n/a
07-19-12J	40	n/a	n/a	40	40	80	n/a	40	40	n/a
07-19-12K	100	n/a	n/a	100	100	100	n/a	100	100	n/a

250µg/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
		50µg/mL Gasoline	Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/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						
	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-19-12S	2	2	n/a	n/a	n/a	2	n/a	2	n/a
07-19-12T	5	5	n/a	n/a	n/a	5	n/a	5	n/a
07-19-12U	10	10	n/a	n/a	n/a	10	n/a	10	n/a
07-19-12V	20	20	n/a	n/a	n/a	20	n/a	20	n/a
07-19-12W	50	n/a	5	5	5	n/a	5	n/a	5
07-19-12X	100	n/a	10	10	10	n/a	10	n/a	10
07-19-12Y	200	n/a	20	20	20	n/a	20	n/a	20

250µg/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						
	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-23-12A	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
07-23-12B	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
07-23-12C	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
07-23-12D	5	n/a	n/a	5	5	10	n/a	5	5	n/a
07-23-12E	10	n/a	n/a	10	10	25	n/a	10	10	n/a
07-23-12F	20	n/a	n/a	20	20	40	n/a	20	20	n/a
07-23-12G	40	n/a	n/a	40	40	80	n/a	40	40	n/a
07-23-12H	100	n/a	n/a	100	100	100	n/a	100	100	n/a
07-23-12I	200	n/a	n/a	200	200	125	n/a	200	200	n/a

250µg/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

Neo 524

07-24-12A

7/24/12 RS

10ug/ml Neo-524 Internal Standard w/ Surrogate

			Conc.		Date	Exp
			ug/ml	Lot #	Code	Date
02SI	122450-02	524 Fortification Sol	1000	176776-29295	06-07-12A	09/10/12
J.T.Baker		Purge & Trap MeOH		K08E01-00645	07/20/12	12/12/12

7/30/12 RS

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

	Expiration Date:		07/25/12						
		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
Date	Conc	07-18-12L	07-18-12N	07-18-12H	07-18-12J	07-18-12K	07-18-12Q	w/P&T H2O
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	mL
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	15	50
07-24-12F	5	n/a	n/a	5	5	5	20	50
07-24-12G	10	n/a	n/a	10	10	10	25	50
07-24-12H	40	n/a	n/a	40	40	40	35	50

7/24/12 RS

7/30/12 RS

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

	Expiration Date:		07/25/12								
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1B	5µg/mL Vol Std #2	50µg/mL Vol Std #1
Date	Conc	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-24-12I	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
07-24-12J	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
07-24-12K	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
07-24-12L	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
07-24-12M	50	n/a	n/a	5	5	5	n/a	5	n/a	5
07-24-12N	100	n/a	n/a	10	10	10	n/a	10	n/a	10
07-24-12O	200	n/a	n/a	20	20	20	n/a	20	n/a	20

7/24/12 RS

250µg/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

7/30/12 RS

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

	Expiration Date:	50µg/mL Gasoline	07/25/12 Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/L	Exp.01-03-13	mL
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:	50µg/mL Gasoline	07/26/12 Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/L	Exp.01-03-13	mL
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#	Storage	Expiry
181120	≤ -10 Degrees C	11/6/13

Solv: P/T Methanol

R&D only, not human consump. Made in the USA

Custom VOC Mix 16-4

Lot #: 181120 - 30032

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

7/30/12 RS

Injection Log

Directory: M:\THOR\DATA\T120719

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0719T01T.D	1	5ng- BFB STD 07-16-12B	2ul	07/19/2012 09:15
2	5	0719T05.D	1	0.3ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:01
3	6	0719T06.D	1	0.5ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:29
4	7	0719T07.D	1	1.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:57
5	8	0719T08.D	1	2.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:25
6	9	0719T09.D	1	5.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:53
7	10	0719T10.D	1	10ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:20
8	11	0719T11.D	1	20ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:48
9	12	0719T12.D	1	40ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:16
10	13	0719T13.D	1	100ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:44
11	28	0719T28.D	1	5ng- BFB Std 07-16-12B	2uL	07/19/2012 21:40
12	31	0719T31.D	1	120719A LCS-1WT (SS)	10ml w/5ul of IS&S: 06-7	07/19/2012 23:03
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**

Sample ID: AY65044

Client ID: ES080

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68248

Sample ID: ES079

APPL ID: AY65043

Sample Collection Date: 07/17/12

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

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

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.21 J	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
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
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	

NT NBS 07/23/12

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
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

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.
ARF No: 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

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

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

ARF No.: 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)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C				C	
	11:16		11:30		13:03		14:09				12:03		
Lead (Pb)	.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)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	11:16		15:10						12:03		
Lead (Pb)	.50	U	.50	U					.50	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	Environet, Inc.
ARF No.:	68248	SDG:	68248
ICP ID Number:	Optimus	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)	C	Serial Dilution Result (S)	C	%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	

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. Contract: Environet, Inc.

ARF No.: 68248 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
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
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	

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
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\005CALS.D\005CALS.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\006CALS.D\006CALS.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\007CALS.D\007CALS.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\008CALS.D\008CALS.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

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G20k00.B\011_CCB.D\011_CCB.D#
Date Acquired: Jul 20 2012 11:16 am
Operator: NBS
Sample Name: ICB 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	129.00	0.12	
11 B	0.40 ug/l	44.58	15.00	
23 Na	-5.25 ug/l	6.03	77.10	
24 Mg	0.00 ug/l	3261.40	7.50	
27 Al	0.20 ug/l	157.08	3.96	
39 K	0.48 ug/l	135.59	19.20	
44 Ca	-2.16 ug/l	87.92	90.00	
47 Ti	-0.06 ug/l	35.96	0.78	
51 V	0.01 ug/l	19.87	0.21	
52 Cr	0.00 ug/l	406.05	0.12	
55 Mn	-0.02 ug/l	43.41	0.18	
56 Fe	0.23 ug/l	7.13	40.80	
59 Co	0.00 ug/l	282.21	0.09	
60 Ni	0.01 ug/l	346.30	0.48	
63 Cu	0.01 ug/l	40.99	0.39	
65 Cu	0.01 ug/l	211.00	0.39	
66 Zn	0.03 ug/l	136.20	6.90	
75 As	0.01 ug/l	49.23	0.27	
78 Se	0.01 ug/l	287.08	0.30	
78 Se	0.17 ug/l	33.49	0.30	
88 Sr	0.01 ug/l	51.47	0.03	
88 Sr	0.01 ug/l	15.21	0.03	
95 Mo	0.04 ug/l	21.58	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	47.97	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.00 ug/l	74.27	0.06	
118 Sn	0.04 ug/l	11.21	#######	
118 Sn	0.03 ug/l	34.53	#######	
118 Sn	0.02 ug/l	21.66	0.30	
121 Sb	0.03 ug/l	11.60	0.03	Fail
137 Ba	0.01 ug/l	116.78	0.12	
205 Tl	0.01 ug/l	15.37	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	0.00 ug/l	186.48	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-37797.43	9.71	-29895.57	126.4	70 - 120	IS Fail
45 Sc	2964903.00	0.41	2830107.80	104.8	70 - 120	
45 Sc	393056.03	1.36	373389.06	105.3	70 - 120	
45 Sc	8044231.50	0.75	7835315.00	102.7	70 - 120	
72 Ge	770790.31	0.77	735211.94	104.8	70 - 120	
72 Ge	267440.63	0.25	261572.13	102.2	70 - 120	
72 Ge	1768565.40	0.65	1727774.30	102.4	70 - 120	
115 In	5440735.00	0.88	5361365.50	101.5	70 - 120	
115 In	2828303.00	0.65	2785210.00	101.5	70 - 120	
115 In	11077833.00	1.50	10908714.00	101.6	70 - 120	
159 Tb	14747504.00	1.02	14663948.00	100.6	70 - 120	
165 Ho	14279663.00	0.19	14116038.00	101.2	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 Fail
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

Printed: 07/23/12 8:24:24 AM
Metals SC-Blank-REG MDLs

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**

Sample ID: AY65044

Client ID: ES080

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
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 NT
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 NT
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	

> NDS 7/23/12

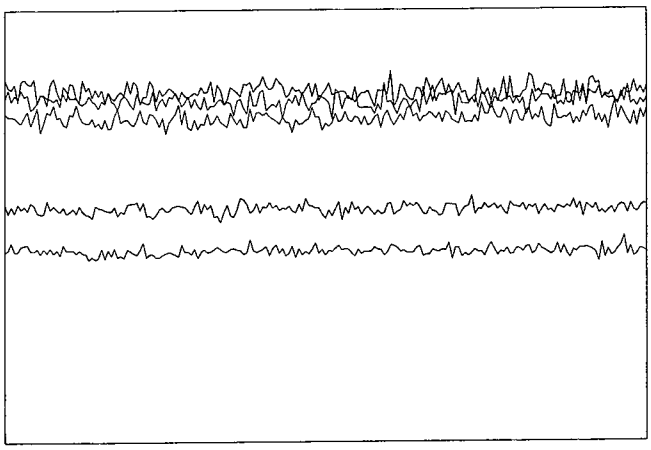
ISTD Ref File : C:\ICPCHEM\1\DATA\12G20k00.B\004CALB.D\004CALB.D#

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

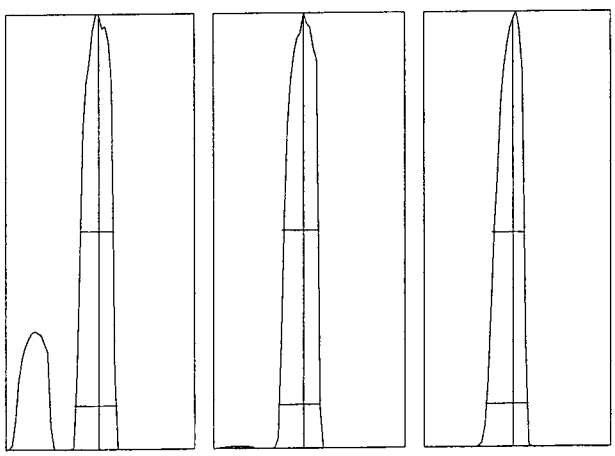
Tune Report

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

Generated : Jul 20, 2012 09:45:58
Printed : Jul 20, 2012 09:46:00

Tune Report

Tune File : NG_HMI.u
Comment : 120720

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	128
RF Matching	:	1.7 V	Extract 2	:	-140 V	AMU Offset	:	129
Smpl Depth	:	8 mm	Omega Bias-ce	:	-24 V	Axis Gain	:	0.9999
Torch-H	:	0.2 mm	Omega Lens-ce	:	-0.4 V	Axis Offset	:	-0.05
Torch-V	:	-0.2 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.5 L/min	QP Focus	:	5 V			
Makeup Gas	:	0.5 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1720 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1350 V
S/C Temp	:	2 degC	OctP Bias	:	-6 V			

===Reaction Cell===								
Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

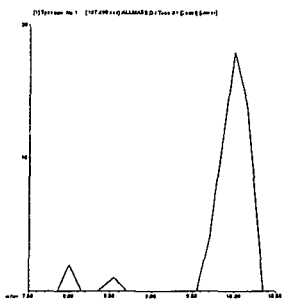
Generated : Jul 20, 2012 09:45:58
Printed : Jul 20, 2012 09:46:02

200.8 QC Tune Report

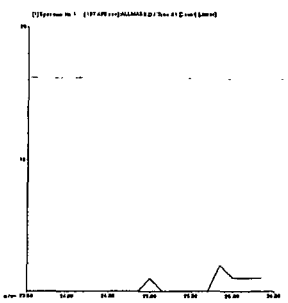
Data File: C:\ICPCHEM\1\DATA\12G20k00.B\001TUNE.D
Date Acquired: Jul 20 2012 10:07 am
Acq. Method: TN200_8.M
Operator: NBS
Sample Name: 100ppb Tune sol
Misc Info:
Vial Number: 1303
Current Method: C:\ICPCHEM\1\METHODS\TN200_8.M

RSD (%)

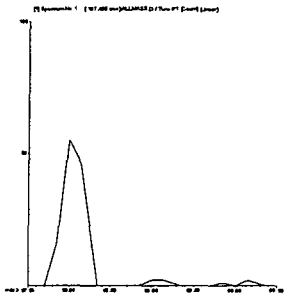
Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
9 Be	881336	876428	880775	880066	884445	884964	**0.35**	5.00	
24 Mg	2705169	2672077	2695643	2721240	2710985	2725898	**0.92**	5.00	
59 Co	4714078	4698461	4751401	4707923	4707726	4704877	**0.66**	5.00	
115 In	23506640	23537396	23487156	23544216	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:



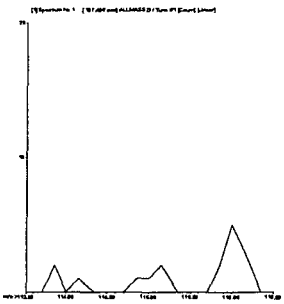
59 Co

Mass Calib.

Actual:	58.95		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



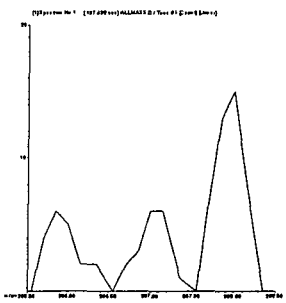
115 In

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

Metals Standards Log Book # 35 Page # 055

SQM 7/16/12
6020 / 6020A
(A)

ICP-MS STANDARDS 6020/6020A/3015/3051A
Today's Date: 07/16/12
Expires: 07/23/12
Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL DI Water
Lot #L08023
20mL HCL / 2000mL DI Water
Lot #51305
Expires: 07/23/12

Internal Standard Mix: Prep 07/12/2012

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 07/17/12

Standard 3 07/23/12

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 07/17/12

Intermediate-Sb 07/23/12
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL
ICV-Sb 07/23/12
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL

SQM 7/16/12

Standard 2 07/23/12

Amount	STD	
500 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

Standard 1 07/23/12

Amount	STD	
50 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

ICP-MS ICV 07/23/12

Amount	STD		
50 uL	QCS ICV A	CPI	11C184-30611
50 uL	QCS ICV B	CPI	11C184-30612

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/16/12

ICSA Prep: 07/23/12

1 mL	ICSA	CPI	12E134

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/16/12

ICSAB Prep: 07/23/12

1mL	ICSA	CPI	12E134
0.025mL	INT	O2SI	1032370-30265

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/16/12

ICP-LDR 07/23/12

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 07/16/12

RJS 7/16/12

Hg WORKING STANDARD

1ml X 10ug/ml Hg STOCK STD. (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
1ml X 10ug/ml Hg STOCK ICV (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
Final concentration is 50 ug/L. Expires.....7/16/12.....

SQM 7/17/12
6020 / 6020A
(A)

ICP-MS STANDARDS 6020/6020A/3015/3051A
Today's Date: 07/17/12
Expires: 07/24/12
Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL DI Water
Lot #L08023
20mL HCL / 2000mL DI Water
Lot #51305
Expires: 07/24/12

Internal Standard Mix: Prep 07/12/2012 (RJS 07/18/12)

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 07/17/12

Standard 3 07/24/12

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 07/17/12

Intermediate-Sb 07/24/12
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL
ICV-Sb 07/24/12
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL

SQM 7/17/12

Standard 2 07/24/12

Amount	STD	
500 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

Standard 1 07/24/12

Amount	STD	
50 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

ICP-MS ICV 07/24/12

Amount	STD		
50 uL	QCS ICV A	CPI	11C184-30611
50 uL	QCS ICV B	CPI	11C184-30612

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

ICSA Prep: 07/24/12

1 mL	ICSA	CPI	12E134

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/17/12

ICSAB Prep: 07/24/12

1mL	ICSA	CPI	12E134
0.025mL	INT	O2Si	1032370-30265

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/17/12

ICP-LDR 07/24/12

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 07/17/12

SQM 7/17/12

Internal Standard Concentration

Amt	STD	Element	Vendor	Lot#	Final Conc. In Std	Expires
500uL	1000 ug/mL	Li	CPI	10L079-27839	5000 ug/L	06/10/12
500uL	1000 ug/mL	In	CPI	10J155-28574	5000 ug/L	09/25/12
500uL	1000 ug/mL	Ho	CPI	10A107-28576	5000 ug/L	09/25/12
500uL	1000 ug/mL	Tb	CPI	11B054-28575	5000 ug/L	09/25/12
500uL	1000 ug/mL	Sc	o2si	1024073-28527	5000 ug/L	08/18/12
500uL	1000 ug/mL	Ge	Environmental Express	1116011-29381	5000 ug/L	02/08/13

Prep:	07/17/12	NBS	Prep in -	1%HNO3/1.0%HCL:	Lot #L08023/51305	in 100mL
Expires:	08/16/12					

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Metals Standards Log Book # 35 Page # 058

RJS 7/20/12

Hg WORKING STANDARD

1ml X 10ug/ml Hg STOCK STD. (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
1ml X 10ug/ml Hg STOCK ICV (07/13/12RJS)/200ml,1% HNO3 Lot#L02030
Final concentration is 50 ug/L. Expires.....7/20/12.....

RJS 7/20/12

NBS 07/20/12

6010/6020A

(A)

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.

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

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

Data Validatable Report

August 10, 2012

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

Attn: Max Solmssen

Title: Report of Data: Case 68258

Project: LTM Red Hill/1022-024

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

Dear Mr. Solmssen:

Three water samples were received July 19, 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: 413

Data Validation Package
for
LTM Red Hill / 1022-024
SDG 68258

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Sample Data 376

Calibration Data 381

Raw Data 401

SAMPLE RECEIPT INFORMATION

Sample receipt information

ARF: 68258

Project: Red Hill/1022-024

Sample Receipt Information:

The samples were received on July 19, 2012, at 4.0°C. The samples were assigned Analytical Request Form (ARF) number 68258. The sample numbers and requested analyses were compared to the chain of custody and email communications. The analyses requested was provided by the client. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ES081	AY65112	WATER	07/18/12	07/19/12
ES082	AY65113	WATER	07/18/12	07/19/12
ES085-TRIP BLANK	AY65114	WATER	07/18/12	07/19/12

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 0719T34.D, which recovered gasoline above the 120% upper control limit at 132%.

Blanks:

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

Spikes:

Lab control spikes (LCS) were used for quality assurance. An second source standard was used for the LCS. Gasoline recovered above the 125% upper control limit at 130%. 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 ES084 (APPL SDG 68268) was selected by the laboratory for QC analysis. The results are reported in APPL report #68268.

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 68258

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** # **36496**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **2 WEEKS**

Received by: **TBV**
Date Received: **07/19/12** Time: **11:50**
Delivered by: **FED EX**
Shuttle Custody Seals (Y/N): **N** Time Zone: **-10**
Chest Temp(s): **4.0°C**
Color: **VOA,J-PURBLK,R-ORYEL**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Cynthia Clark**
QC Report Type: **DVP4/ADRDOD/HI**
Due Date: **08/02/12**

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
EDD ADR A1/A3 (ADR 8.3a unchecked) to OSDas@ VDupra@ & MSolmssen@environetinc.com
metals 6020: report Lead with 0.5ug/L RL
TPH-Diesel only; VOCs: include gasoline by 8260B
No analysis was requested on COCs

Sample Distribution:
GC: 2-$SIMHC12W, 2-$TPETD2
Extractions: 2-_SEP004S, 2-_SEP011
VOA: 3-$86RHBF
Metals: 2-$602D(Pb)
Other: 2-_M3015

Charges:

Invoice To:
same

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ES081	AY65112W	07/18/12 09:30	$602D(Pb), $86RHBF, $SIMHC12W, $TPETD2 -- Unpreserved VOA
2.	ES082	AY65113W	07/18/12 11:00	$602D(Pb), $86RHBF, $SIMHC12W, $TPETD2 -- Unpreserved VOA
3.	ES085-TRIP BLANK	AY65114W	07/18/12 07:00	$86RHBF -- Unpreserved VOA

APPL Sample Receipt Form

ARF# **68258**

Sample	Container Type	Count	pH
AY65112	[6] PL 500mL - HNO3	1	1.7
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA
AY65113	[6] PL 500mL - HNO3	1	1.7
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA
AY65114	[15] VOAs - NP	3	NA

Sample	Container Type	Count	pH

68258 4.0°C

CHAIN OF CUSTODY RECORD

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

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

C.O.C. 36496

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

Project Name/Number	Sampler (Print)
Red Hill / 1022-024	Max Solmssen
Purchase Order Number	Sampler (Signature)
	Max R Solmssen

Date Shipped: 7/18/12
Carrier: FEDEX
Waybill No.: 876412433254
Comments: * Lead sample was field-filtered.

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		Analysis Requested/Method Number: TPH-GRO (8260B)	VOCs (8260B)	TPH-DRO (8015B)	PAHs (8270C SIM)	lead* (6020)							
ES081	Red Hill	7/18/12	9:30	HI	8	X															
ES082	↓	↓	11:00	↓	8	↓															
ES085 - trip blank	N/A	↓	7:00	↓	3	↓															

Shuttle Temperature:

Turnaround Requested: Check one
☑ Standard 2-3wk ☐ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☑ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
MS	7/18/12	2:00 pm					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					7/19/12	1150	Will [signature]

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

COOLER RECEIPT FORM

1) Project: Red Hill / 1022-024 Date Received: 7/14/12

2) Coolers: Number of Coolers: 1

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: FedEx

8) Shipping slip numbers: 1) 876412433254 2) _____ 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 wrap, 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) 4.0°C 2) _____ 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?

EJ 7/14/12 37) YES NO ~~NA~~ Unpreserved VOA Vials received? _____

? 7/14/12 38) YES NO ~~NA~~ Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF? _____

Lab notified if pH was not adequate: _____

Deficiencies: No analysis marked on COC

Signature of personnel receiving samples: Will Flaich Second reviewer: _____

Signature of project manager notified: Renée Date and Time of notification: 7-19-12

Name of client notified: _____ Date and Time of notification: _____

Information given to client: _____

_____ by whom (Initials): _____

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons

APPL, INC.

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

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

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 5:34:34 PM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 Date Analyzed: 07/24/12

Matrix: WATER 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	
AY65112	ES081	50-110	62.0		40-110	63.7	
AY65113	ES082	50-110	55.2		40-110	59.0	

Comments: Batch: #SIMHC-120723A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 Date Analyzed: 07/24/12

Matrix: WATER 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				
AY65112	ES081	50-135	56.9				
AY65113	ES082	50-135	59.6				

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: _____

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

Printed: 07/27/12 5:34:43 PM
APPL Standard LCS

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 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
AY65112	ES081	0724L008	07/24/12 2100
AY65113	ES082	0724L009	07/24/12 2126

Comments: Batch: #SIMHC-120723A

Printed: 07/27/12 5:34:45 PM
Form 4, Blank Summary

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 68258
Matrix: Water
ID: SVTUNE 2-28-12

SDG No: 68258
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	ES081	AY65112W07 1/1030	0724L008.D	07/24/12 21:00
4	ES082	AY65113W06 1/1050	0724L009.D	07/24/12 21:26
5				
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.: 68258

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 #	AREA #	RT #
	12 HOUR STD	2713	6.09	1189	8.10	2090	9.82
	UPPER LIMIT	5426	6.59	2378	8.60	4180	10.32
	LOWER LIMIT	1357	5.59	595	7.60	1045	9.32
	SAMPLE NO.						
01	120723A BLK 1/1000	2273	6.07	1022	8.08	2049	9.82
02	120723A LCS-1 1/1000	2043	6.07	992	8.08	1998	9.82
03	AY65112W07 1/1030	2379	6.08	1160	8.08	2250	9.82
04	AY65113W06 1/1050	2502	6.07	1438	8.07	2203	9.81
05							
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.: 68258

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	AY65112W07 1/1030	2823	12.91	2347	14.52		
04	AY65113W06 1/1050	2920	12.90	2435	14.52		
05							
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

APPL, INC.

EPA 8270D SIM

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES081
Sample Collection Date: 07/18/12

ARF: 68258
APPL ID: AY65112
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)	62.0	50-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	63.7	40-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	56.9	50-135			%	07/23/12	07/24/12

Quant Method: SIMB.M
Run #: 0724L008
Instrument: Linus
Sequence: L120613
Dilution Factor: 1
Initials: LF

Printed: 07/27/12 5:34:48 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0724L008.D Vial: 8
Acq On : 24 Jul 12 21:00 Operator: LF
Sample : AY65112W07 1/1030 Inst : Linus
Misc : Multiplr: 0.97

Quant Time: Jul 27 7:53 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	2379	2.50000	ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1160	2.50000	ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2250	2.50000	ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2823	2.50000	ppb	0.01
22) Perylene-D12(IS)	14.52	264	2347	2.50000	ppb	-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	567	1.23739	ppb	-0.01
Spiked Amount 1.942			Recovery = 63.706%			
7) Surrogate Recovery (FBP)	7.32	172	1346	1.20336	ppb	-0.05
Spiked Amount 1.942			Recovery = 61.955%			
18) Surrogate Recovery (TPH)	11.69	244	1607	1.10473	ppb	-0.05
Spiked Amount 1.942			Recovery = 56.908%			

Target Compounds Qvalue

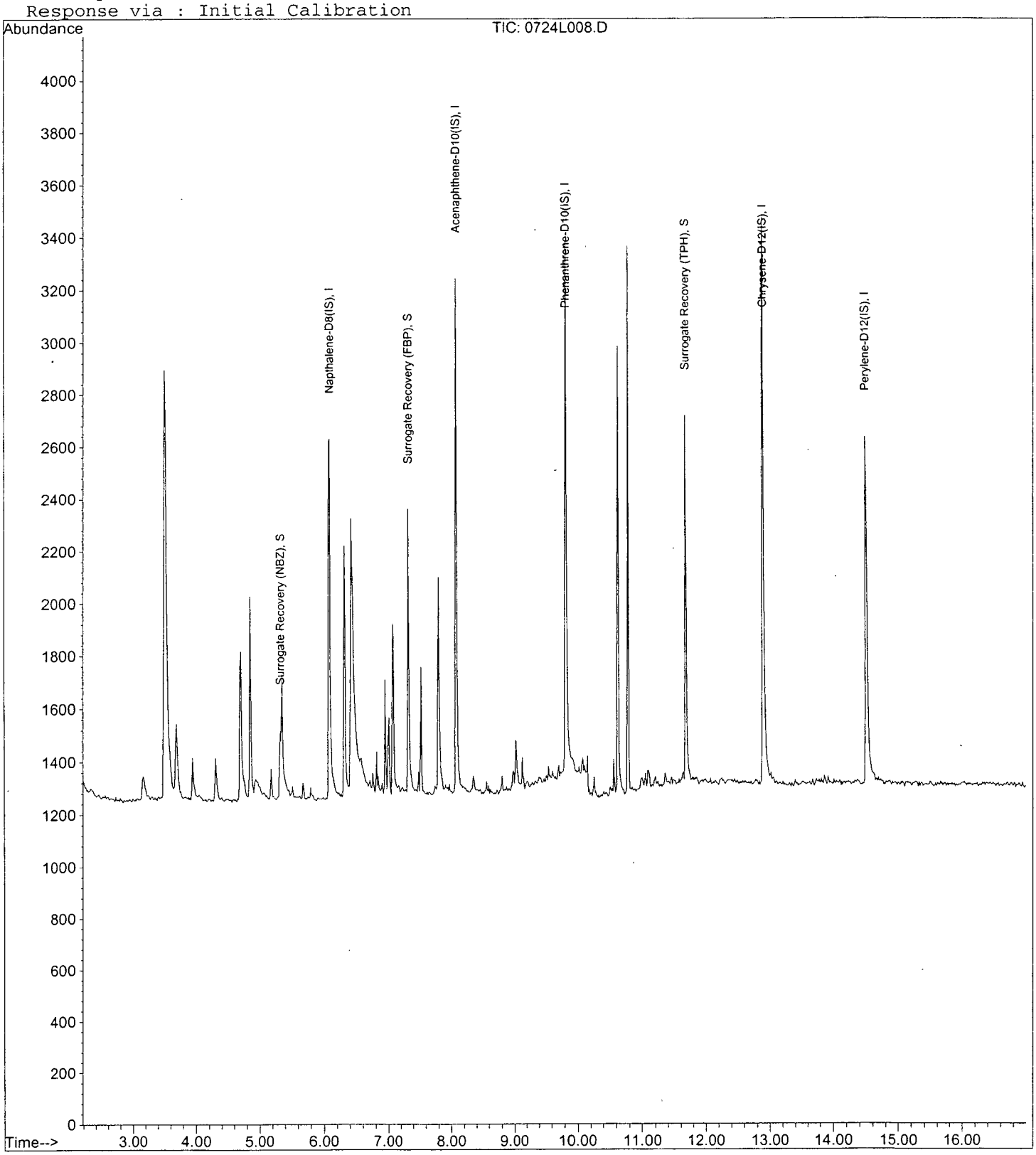
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0724L008.D Vial: 8
Acq On : 24 Jul 12 21:00 Operator: LF
Sample : AY65112W07 1/1030 Inst : Linus
Misc : Multiplr: 0.97

Quant Time: Jul 27 7:53 2012 Quant Results File: SIMB.RES

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



EPA 8270D SIM

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill / 1022-024
Sample ID: ES082
Sample Collection Date: 07/18/12

ARF: 68258
APPL ID: AY65113
QCG: #SIMHC-120723A-169459

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	4.7	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	2-METHYLNAPHTHALENE	0.88	0.2	0.12	0.06	ug/L	07/23/12	07/24/12
8270D-SIM	ACENAPHTHENE	0.23	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	17	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)	55.2	50-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	59.0	40-110			%	07/23/12	07/24/12
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	59.6	50-135			%	07/23/12	07/24/12

Quant Method: SIMB.M
Run #: 0724L009
Instrument: Linus
Sequence: L120613
Dilution Factor: 1
Initials: LF

Printed: 07/27/12 5:34:48 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0724L009.D Vial: 9
Acq On : 24 Jul 12 21:26 Operator: LF
Sample : AY65113W06 1/1050 Inst : Linus
Misc : Multiplr: 0.95

Quant Time: Jul 27 7:53 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	2502	2.50000 ppb	-0.05
6) Acenaphthene-D10(IS)	8.07	164	1438	2.50000 ppb	-0.06
12) Phenanthrene-D10(IS)	9.81	188	2203	2.50000 ppb	-0.05
16) Chrysene-D12(IS)	12.90	240	2920	2.50000 ppb	0.00
22) Perylene-D12(IS)	14.52	264	2435	2.50000 ppb	-0.01
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.31	82	552	1.12362 ppb	-0.02
Spiked Amount 1.905			Recovery	= 59.010%	
7) Surrogate Recovery (FBP)	7.31	172	1485	1.05057 ppb	-0.06
Spiked Amount 1.905			Recovery	= 55.178%	
18) Surrogate Recovery (TPH)	11.69	244	1741	1.13505 ppb	-0.05
Spiked Amount 1.905			Recovery	= 59.588%	
Target Compounds					Qvalue
3) Naphthalene	6.09	128	29195	17.25489 ppb	97
4) 2-Methylnaphthalene	6.88	142	963	0.87824 ppb	97
5) 1-Methylnaphthalene	6.99	142	5221	4.73282 ppb	89
10) Acenaphthene	8.11	154	258	0.22536 ppb	83

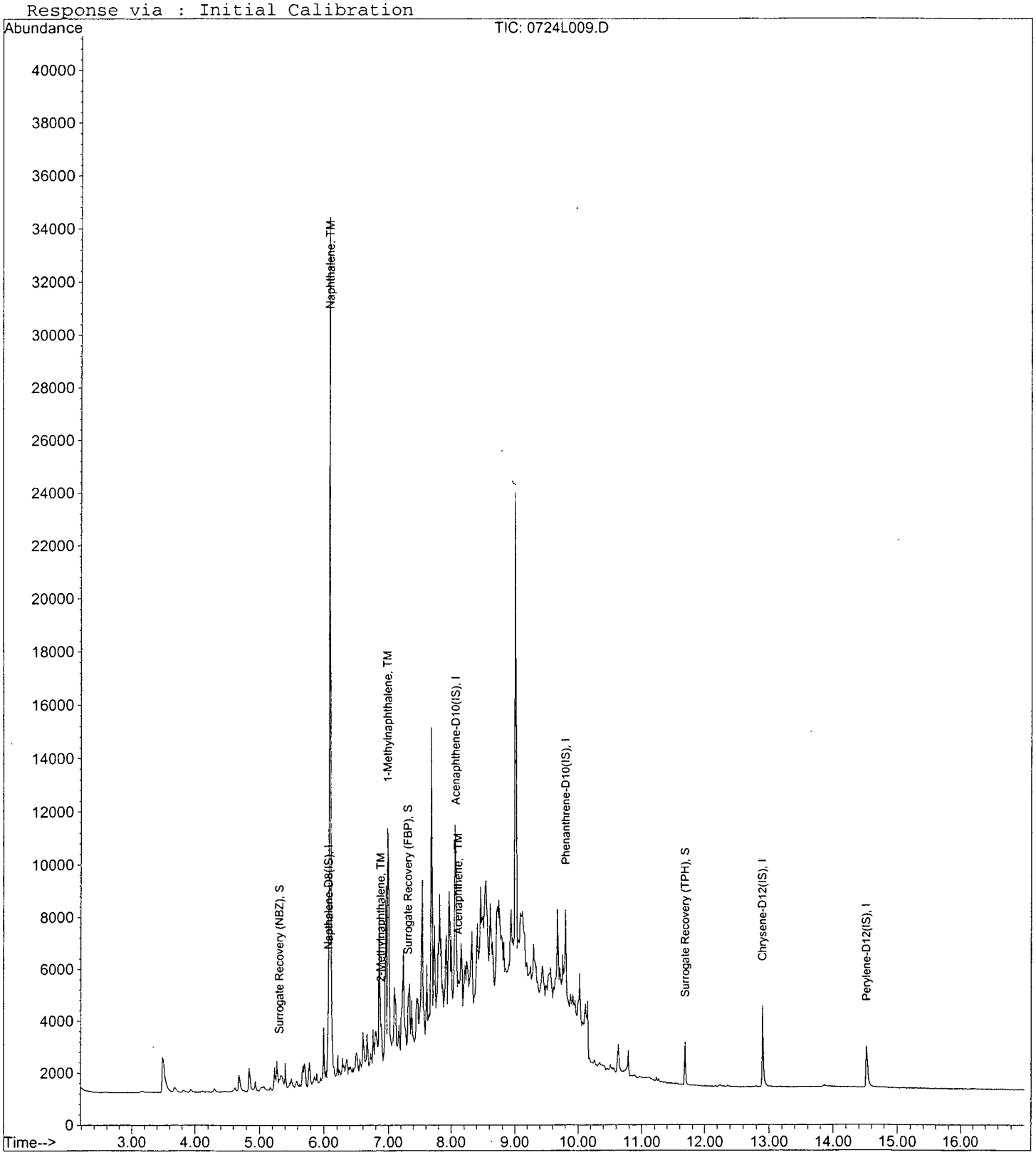
(#) = qualifier out of range (m) = manual integration

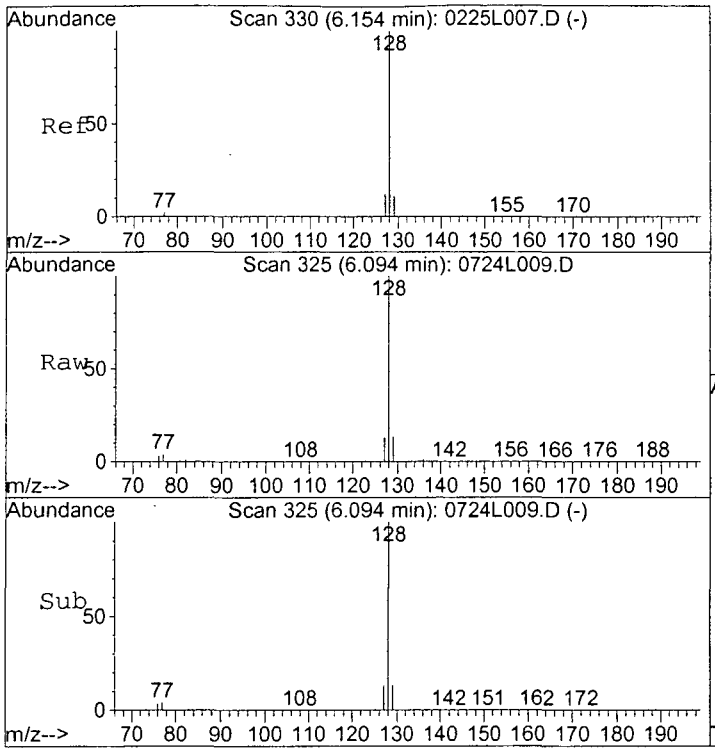
Quantitation Report

Data File : M:\LINUS\DATA\L120613\0724L009.D Vial: 9
Acq On : 24 Jul 12 21:26 Operator: LF
Sample : AY65113W06 1/1050 Inst : Linus
Misc : Multiplr: 0.95

Quant Time: Jul 27 7:53 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

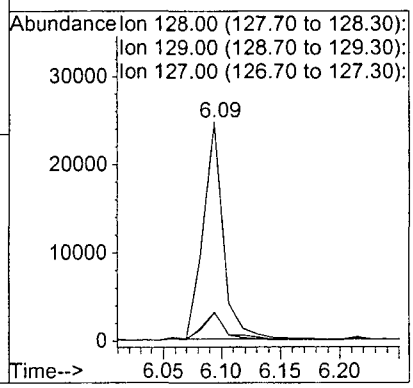


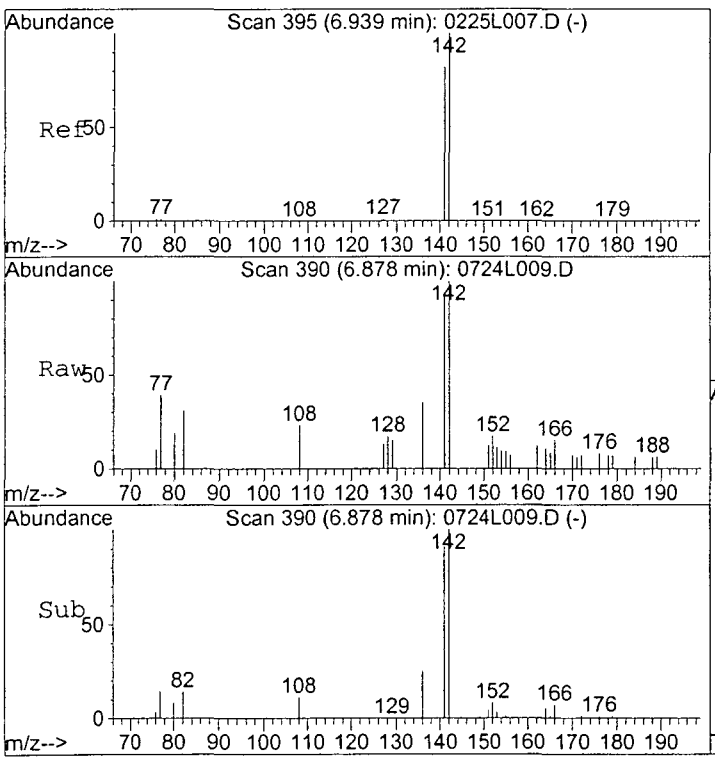


#3
Naphthalene
Concen: 17.25489 ppb
RT: 6.09 min Scan# 325
Delta R.T. -0.05 min
Lab File: 0724L009.D
Acq: 24 Jul 12 21:26

Tgt Ion:128 Resp: 29195

Ion	Ratio	Lower	Upper
128	100		
129	12.5	7.8	14.4
127	12.9	8.6	16.0

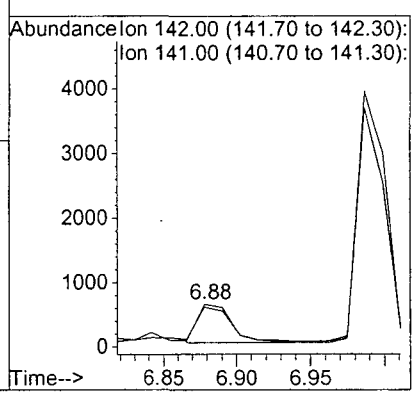


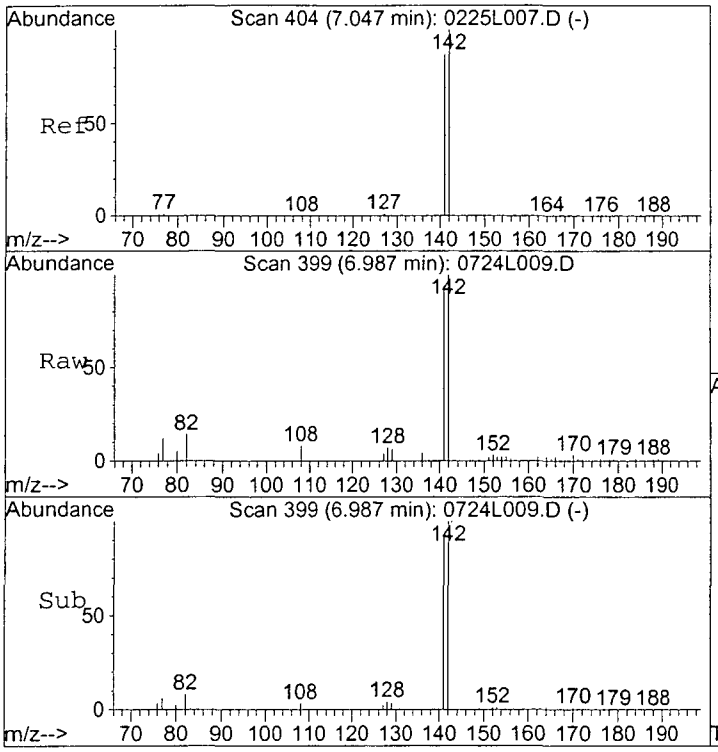


#4
2-Methylnaphthalene
Concen: 0.87824 ppb
RT: 6.88 min Scan# 390
Delta R.T. -0.05 min
Lab File: 0724L009.D
Acq: 24 Jul 12 21:26

Tgt Ion:142 Resp: 963

Ion	Ratio	Lower	Upper
142	100		
141	87.0	62.7	116.5

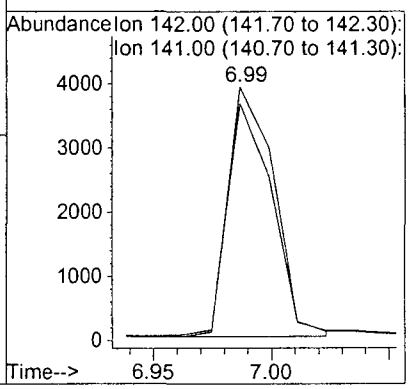


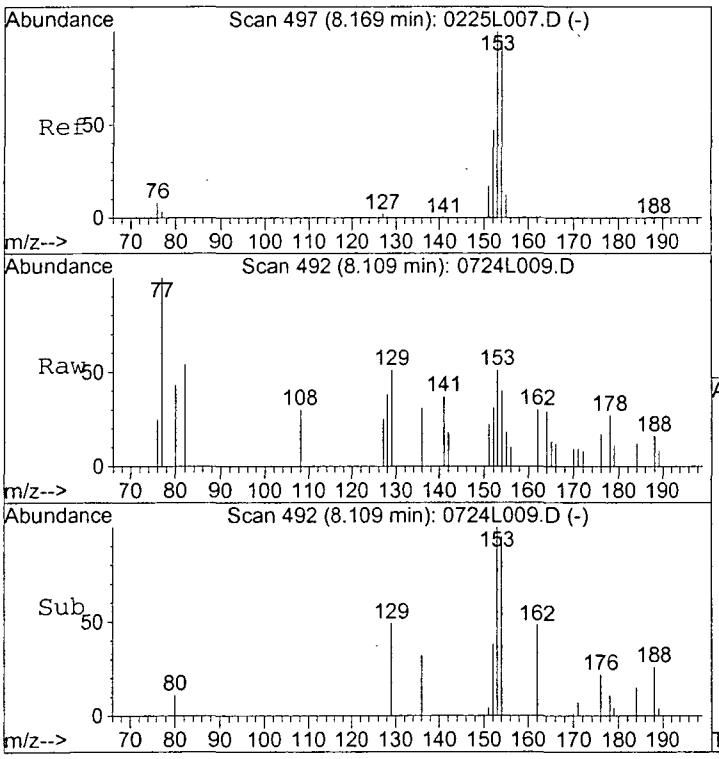


#5
1-Methylnaphthalene
Concen: 4.73282 ppb
RT: 6.99 min Scan# 399
Delta R.T. -0.06 min
Lab File: 0724L009.D
Acq: 24 Jul 12 21:26

Tgt Ion:142 Resp: 5221

Ion	Ratio	Lower	Upper
142	100		
141	92.7	57.8	107.3

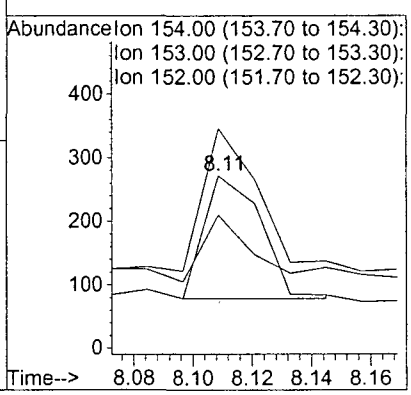




#10
Acenaphthene
Concen: 0.22536 ppb
RT: 8.11 min Scan# 492
Delta R.T. -0.06 min
Lab File: 0724L009.D
Acq: 24 Jul 12 21:26

Tgt Ion:154 Resp: 258

Ion	Ratio	Lower	Upper
154	100		
153	116.1	68.8	127.8
152	54.4	31.5	58.5



EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Calibration Data

APPL, INC.

EPA 8270C SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 66258
Case No: Initial Cal. Date: 06/13/12
Matrix: 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	Napthalene-D8(IS)														
2	S	Surrogate Recovery (NBZ)	0.4582	0.4160	0.5318	0.4779	0.4460	0.4748	0.4769	0.4584			0.47	7.1	S	
3	TM	Naphthalene	1.842	1.750	1.792	1.659	1.423	1.727	1.409	1.279			1.6	13	TM	
4	TM	2-Methylnaphthalene	1.241	1.076	1.116	1.120	0.9307	1.112	0.9262	0.8257			1.0	13	TM	
5	TM	1-Methylnaphthalene	1.126	1.172	1.203	1.088	0.8644	1.036	0.8585				1.0	13	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	2.582	2.805	2.664	2.529	2.150	2.143	1.969	1.882			2.3	15	S	
8	TM	1,1'-Biphenyl	2.787	2.890	2.770	2.823	2.494	2.718	2.250	2.042			2.6	12	TM	
9	TM	Acenaphthylene	3.955	4.033	3.713	3.520	3.060	3.526	2.830	2.701			3.4	15	TM	
10	*TM	Acenaphthene	2.090	2.180	2.070	2.027	1.756	1.959	1.627	1.454			1.9	13	*TM	
11	TM	Fluorene	2.398	2.371	2.439	2.352	2.050	2.300	1.873	1.659			2.2	13	TM	
12	I	Phenanthrene-D10(IS)														
13	TM	Phenanthrene	2.047	1.950	2.033	1.897	1.652	1.874	1.503	1.377			1.8	14	TM	
14	TM	Anthracene	2.130	1.841	1.997	1.890	1.692	1.793	1.496	1.348			1.8	14	TM	
15	*TM	Fluoranthene	3.076	2.754	2.876	2.744	2.354	2.691	2.122	2.002			2.6	15	*TM	
16	I	Chrysene-D12(IS)														
17	TM	Pyrene	2.479	2.491	2.445	2.361	2.151	2.307	1.879	1.969			2.3	10	TM	
18	S	Surrogate Recovery (TPH)	1.440	1.456	1.389	1.283	1.203	1.197	0.9916	1.046			1.3	14	S	
19	TM	Benz (a) anthracene	2.260	2.204	2.209	2.058	1.786	1.987	1.662	1.724			2.0	12	TM	
20	TM	Chrysene	2.088	2.135	2.151	2.031	1.970	1.967	1.407	1.602			1.9	14	TM	
21	TM	Indeno (1,2,3-cd) pyrene	2.365	2.214	2.159	2.037	1.899	2.069	1.653	1.810			2.0	11	TM	
22	I	Perylene-D12(IS)														
23	TM	Benzo (b) fluoranthene	2.382	2.407	2.462	2.408	1.885	2.105	2.227	1.721			2.2	12	TM	
24	TM	Benzo (k) fluoranthene	2.745	2.558	2.205	2.115	2.223	2.494	1.828	1.795			2.2	15	TM	
25	*TM	Benzo (a) pyrene	2.358	2.547	2.297	2.164	1.908	2.189	1.901	1.547			2.1	15	*TM	
26	TM	Dibenz (a,h) anthracene	2.206	2.196	2.054	1.889	1.755	1.968	1.762	1.529			1.9	12	TM	
27	TM	Benzo (g,h,i) perylene	2.288	2.284	2.189	1.980	1.781	2.022	1.834	1.643			2.0	12	TM	
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L003.D Vial: 3
Acq On : 13 Jun 12 13:51 Operator: LF
Sample : 0.1ug/ml PAH 06-13-12 Inst : Linus
Misc : 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) Napthalene-D8(IS)	6.09	136	2619	2.50000 ppb		-0.02
6) Acenaphthene-D10(IS)	8.10	164	1220	2.50000 ppb		-0.04
12) Phenanthrene-D10(IS)	9.83	188	2113	2.50000 ppb		-0.02
16) Chrysene-D12(IS)	12.91	240	2622	2.50000 ppb		-0.01
22) Perylene-D12(IS)	14.52	264	2131	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.35	82	48	0.18668 ppb		0.01
Spiked Amount 2.000			Recovery = 9.350%			
7) Surrogate Recovery (FBP)	7.34	172	126	0.16296 ppb		-0.04
Spiked Amount 2.000			Recovery = 8.150%			
18) Surrogate Recovery (TPH)	11.70	244	151	0.18456 ppb		-0.03
Spiked Amount 2.000			Recovery = 9.250%			
Target Compounds						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

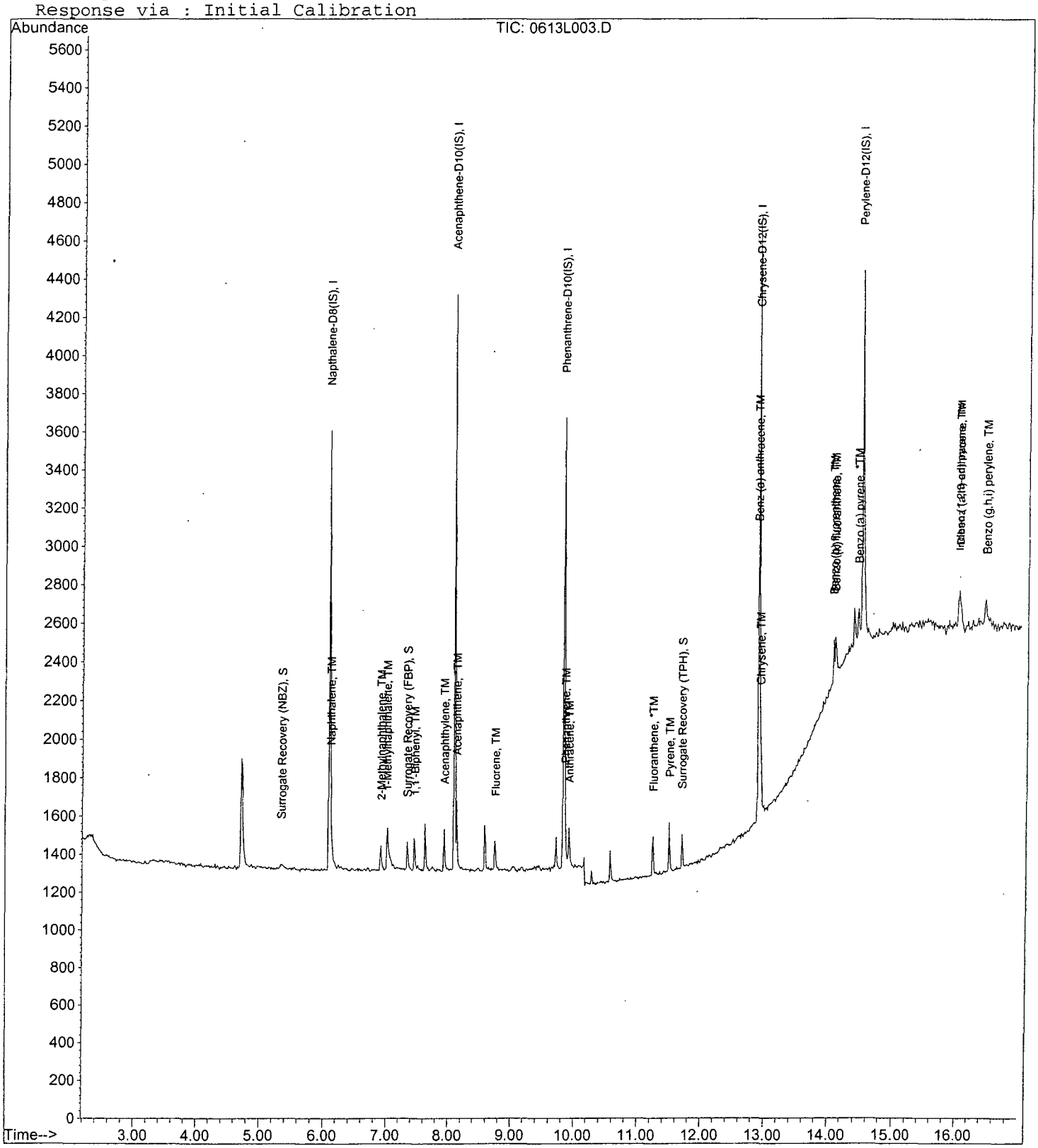
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L003.D 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

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



Quantitation Report (QT Reviewed)

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

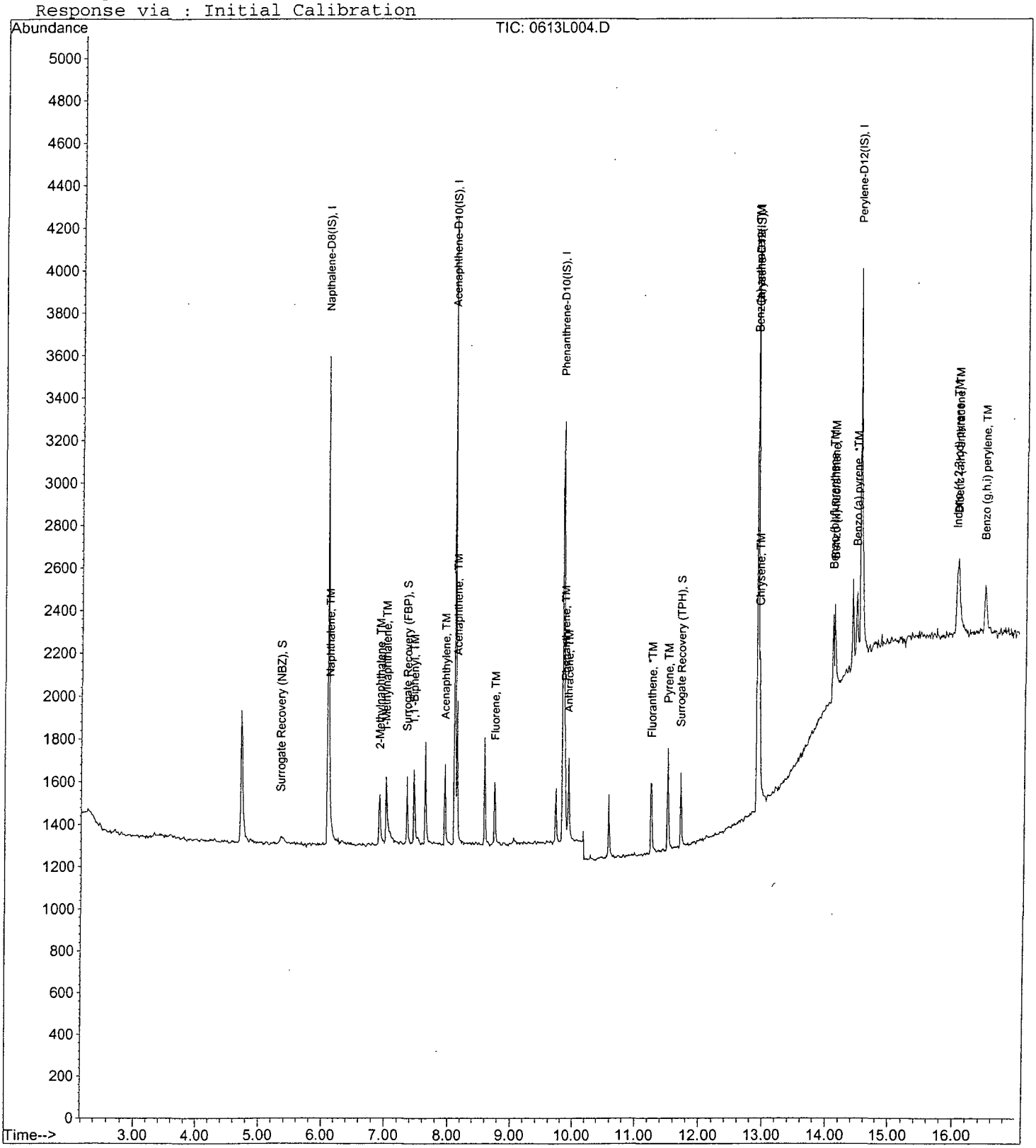
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L004.D Vial: 4
Acq On : 13 Jun 12 14:16 Operator: LF
Sample : 0.2ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L005.D Vial: 5
Acq On : 13 Jun 12 14:41 Operator: LF
Sample : 0.5ug/ml PAH Inst : Linus
Misc : 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						
2) Surrogate Recovery (NBZ)	5.33	82	274	0.60835 ppb		0.00
Spiked Amount 2.000			Recovery = 30.400%			
7) Surrogate Recovery (FBP)	7.34	172	650	0.49453 ppb		-0.04
Spiked Amount 2.000			Recovery = 24.750%			
18) Surrogate Recovery (TPH)	11.70	244	714	0.47952 ppb		-0.03
Spiked Amount 2.000			Recovery = 24.000%			
Target Compounds						Qvalue
3) Naphthalene	6.12	128	923	0.49869 ppb		100
4) 2-Methylnaphthalene	6.90	142	575	0.48172 ppb		100
5) 1-Methylnaphthalene	7.01	142	620	0.52369 ppb		94
8) 1,1'-Biphenyl	7.44	154	676	0.48807 ppb	#	94
9) Acenaphthylene	7.94	152	906	0.46486 ppb		99
10) Acenaphthene	8.13	154	505	0.48464 ppb		91
11) Fluorene	8.74	166	595	0.51139 ppb		99
13) Phenanthrene	9.86	178	847	0.50863 ppb		98
14) Anthracene	9.92	178	832	0.50291 ppb		96
15) Fluoranthene	11.23	202	1198	0.49327 ppb	#	86
17) Pyrene	11.50	202	1257	0.49186 ppb	#	89
19) Benz (a) anthracene	12.90	228	1136	0.49495 ppb		98
20) Chrysene	12.94	228	1106	0.50938 ppb	#	93
21) Indeno (1,2,3-cd) pyrene	16.00	276	1110	0.47150 ppb	#	92
23) Benzo (b) fluoranthene	14.08	252	1093	0.51930 ppb	#	90
24) Benzo (k) fluoranthene	14.11	252	979	0.42017 ppb	#	95
25) Benzo (a) pyrene	14.45	252	1020	0.47286 ppb	#	95
26) Dibenz (a,h) anthracene	16.03	278	912	0.47138 ppb	#	95
27) Benzo (g,h,i) perylene	16.44	276	972	0.41115 ppb		93

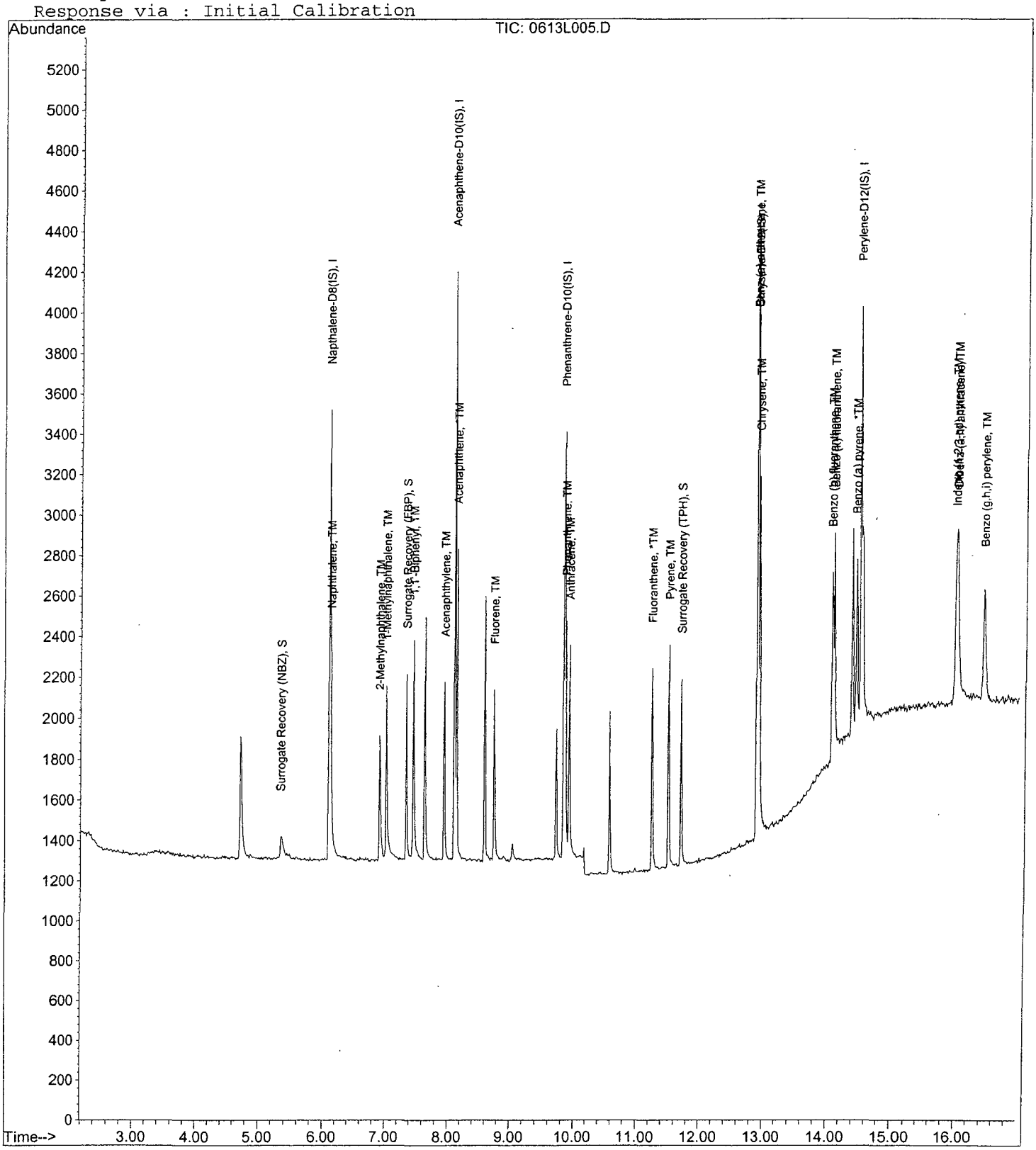
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L006.D Vial: 6
Acq On : 13 Jun 12 15:07 Operator: LF
Sample : 1.0ug/ml PAH Inst : Linus
Misc : 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						
2) Surrogate Recovery (NBZ)	5.33	82	501	1.01960 ppb		0.00
Spiked Amount 2.000			Recovery = 51.000%			
7) Surrogate Recovery (FBP)	7.34	172	1215	0.94245 ppb		-0.04
Spiked Amount 2.000			Recovery = 47.100%			
18) Surrogate Recovery (TPH)	11.70	244	1327	0.89865 ppb		-0.03
Spiked Amount 2.000			Recovery = 44.950%			
Target Compounds						Qvalue
3) Naphthalene	6.12	128	1739	0.92424 ppb		99
4) 2-Methylnaphthalene	6.90	142	1174	0.97858 ppb		98
5) 1-Methylnaphthalene	7.01	142	1141	0.93248 ppb		94
8) 1,1'-Biphenyl	7.45	154	1356	1.00249 ppb	#	91
9) Acenaphthylene	7.94	152	1691	0.90251 ppb		99
10) Acenaphthene	8.13	154	974	0.95935 ppb		89
11) Fluorene	8.74	166	1130	0.97914 ppb		98
13) Phenanthrene	9.86	178	1612	0.94390 ppb		99
14) Anthracene	9.92	178	1606	0.95018 ppb		98
15) Fluoranthene	11.23	202	2331	0.94550 ppb	#	88
17) Pyrene	11.50	202	2441	0.95516 ppb	#	88
19) 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

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

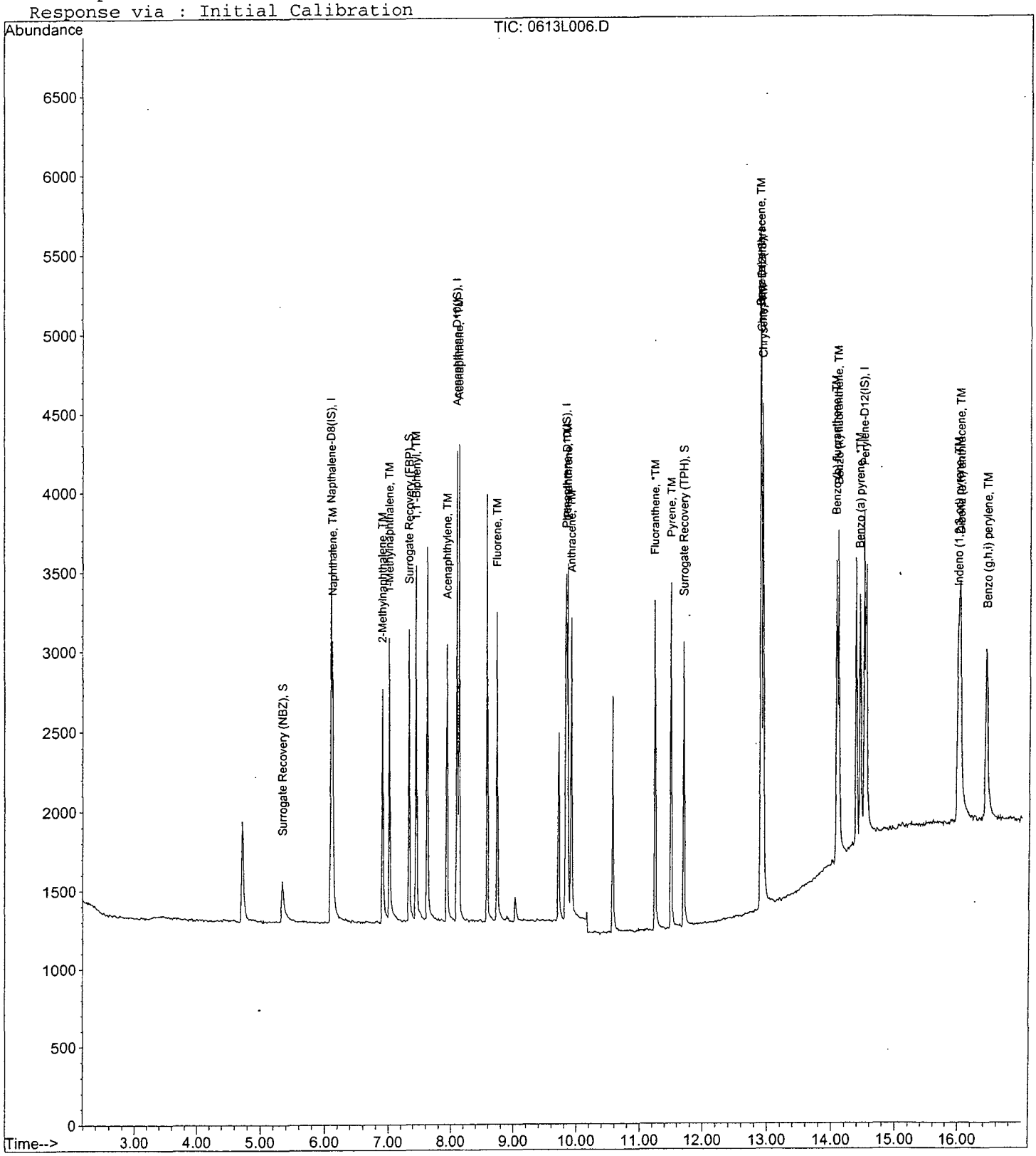
Quantitation Report

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

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

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L007.D Vial: 7
Acq On : 13 Jun 12 15:33 Operator: LF
Sample : 5.0ug/ml PAH Inst : Linus
Misc : 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) Napthalene-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						Qvalue
3) Naphthalene	6.12	128	7720	4.04041 ppb		100
4) 2-Methylnaphthalene	6.90	142	5050	4.08854 ppb		95
5) 1-Methylnaphthalene	7.01	142	4690	3.76651 ppb		93
8) 1,1'-Biphenyl	7.45	154	5931	4.42630 ppb	#	89
9) Acenaphthylene	7.93	152	7276	4.02049 ppb		97
10) Acenaphthene	8.13	154	4176	4.19734 ppb		93
11) Fluorene	8.74	166	4875	4.28917 ppb		98
13) Phenanthrene	9.86	178	6907	4.16861 ppb		99
14) Anthracene	9.92	178	7071	4.30520 ppb		98
15) Fluoranthene	11.23	202	9839	4.11183 ppb		95
17) Pyrene	11.49	202	10454	4.40089 ppb	#	90
19) Benz (a) anthracene	12.90	228	8681	4.09173 ppb		96
20) Chrysene	12.94	228	9575	4.68837 ppb	#	96
21) Indeno (1,2,3-cd) pyrene	15.99	276	9227	4.32779 ppb	#	88
23) Benzo (b) fluoranthene	14.08	252	8043	3.92370 ppb	#	84
24) Benzo (k) fluoranthene	14.12	252	9483	4.64656 ppb	#	92
25) Benzo (a) pyrene	14.45	252	8141	4.09554 ppb		98
26) Dibenz (a,h) anthracene	16.02	278	7487	4.22884 ppb	#	91
27) Benzo (g,h,i) perylene	16.43	276	7598	3.75225 ppb		96

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

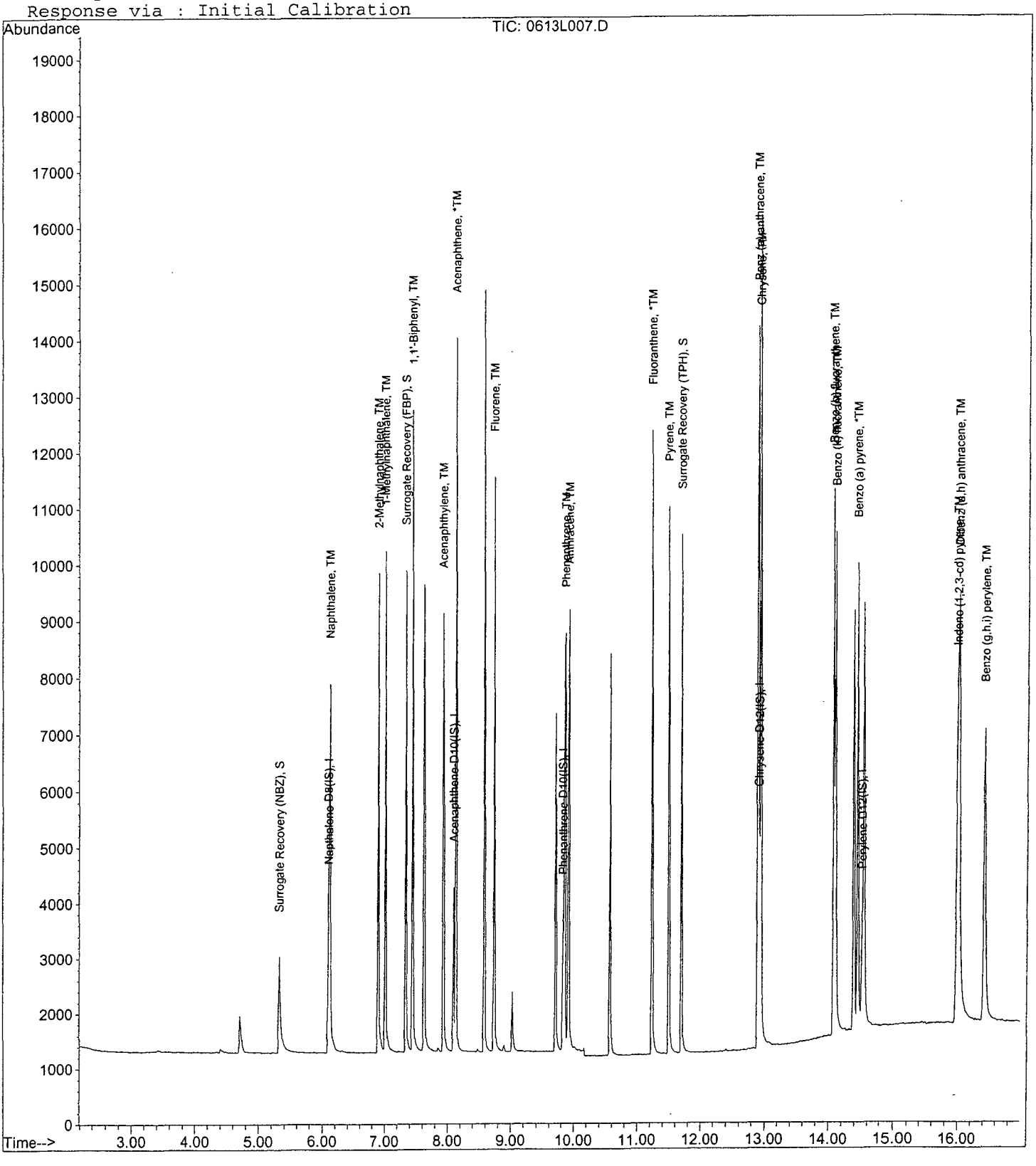
Quantitation Report

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

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

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L008.D Vial: 8
Acq On : 13 Jun 12 15:59 Operator: LF
Sample : 10ug/ml PAH Inst : Linus
Misc : 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						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

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

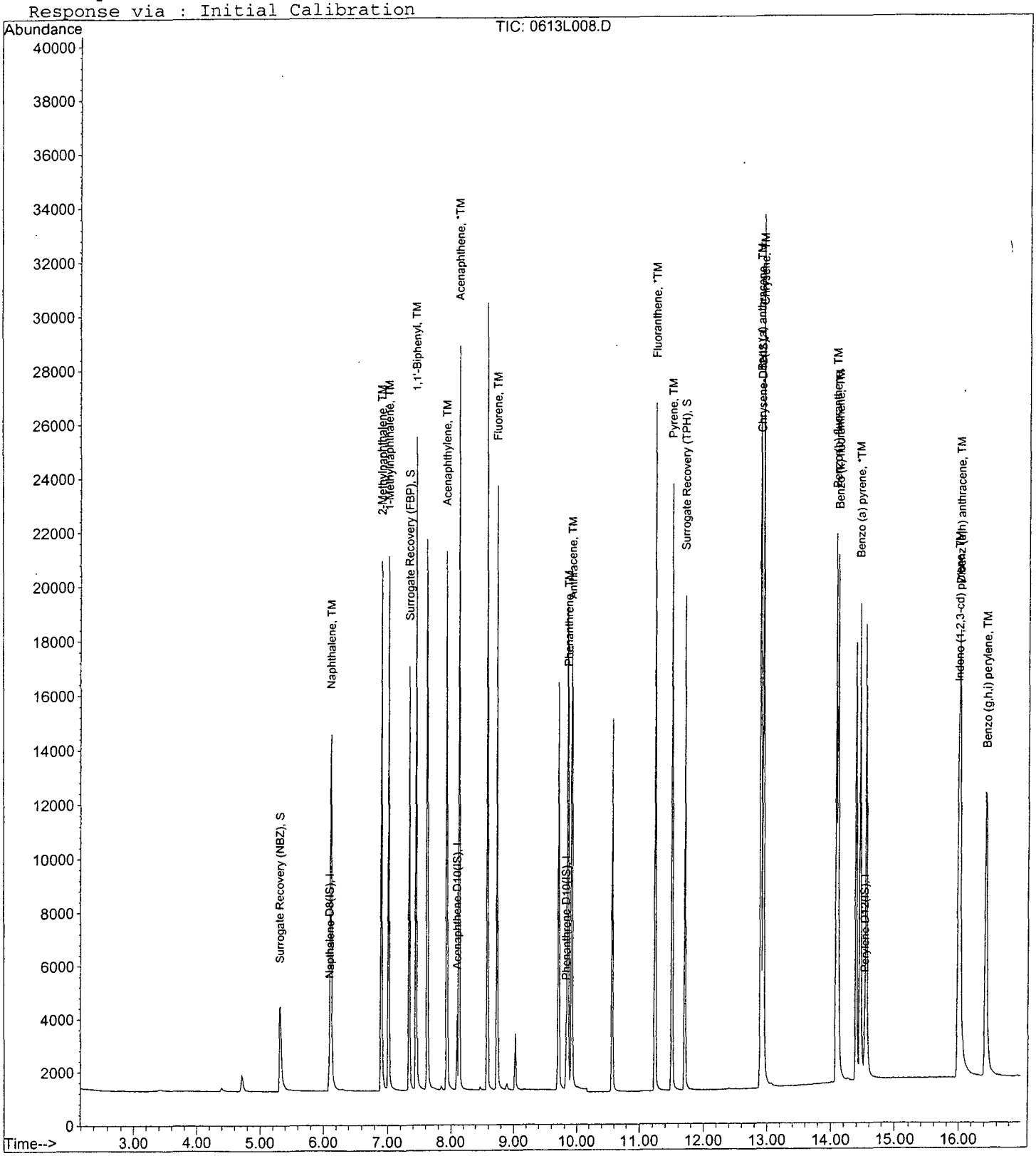
Quantitation Report

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

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

Quant Time: Jun 13 17:35 2012 Quant Results File: SIMB.RES

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



Quantitation Report (QT Reviewed)

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

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

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

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

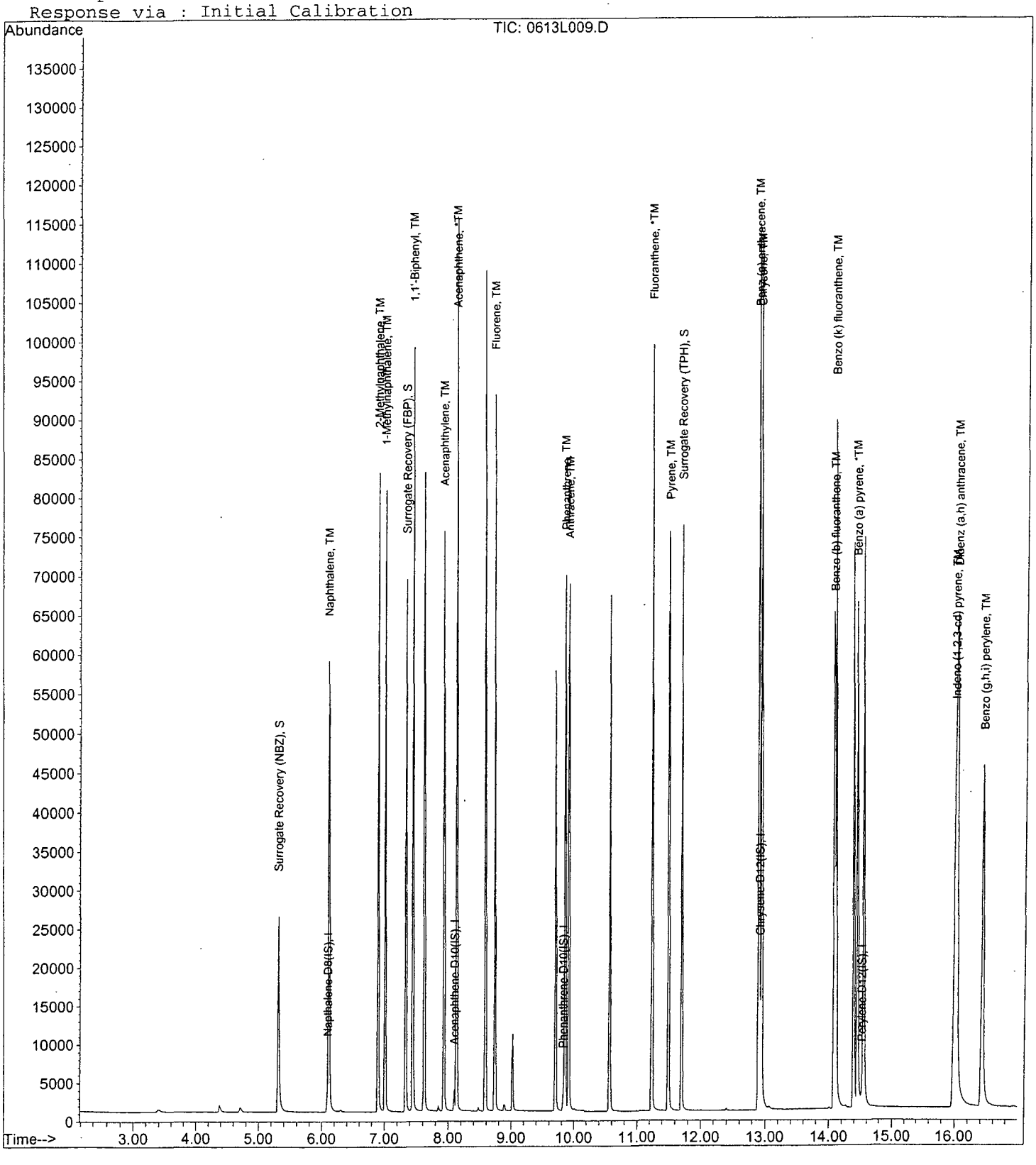
Quantitation Report

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

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

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

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



Quantitation Report (QT Reviewed)

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

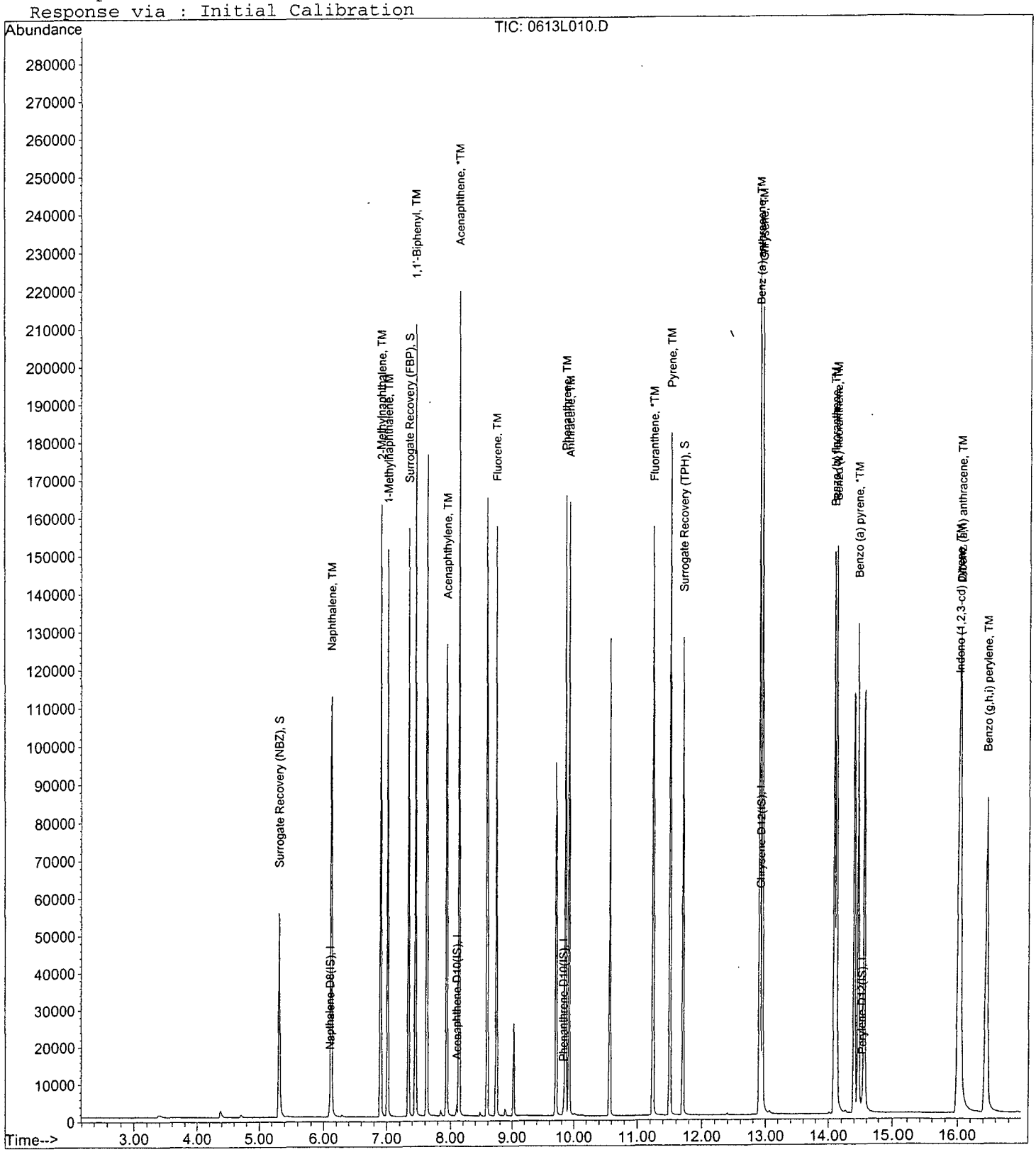
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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



Form 7

Second Source Calibration

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

SDG No: 68258
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	
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.8		

Quantitation Report (QT Reviewed)

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

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

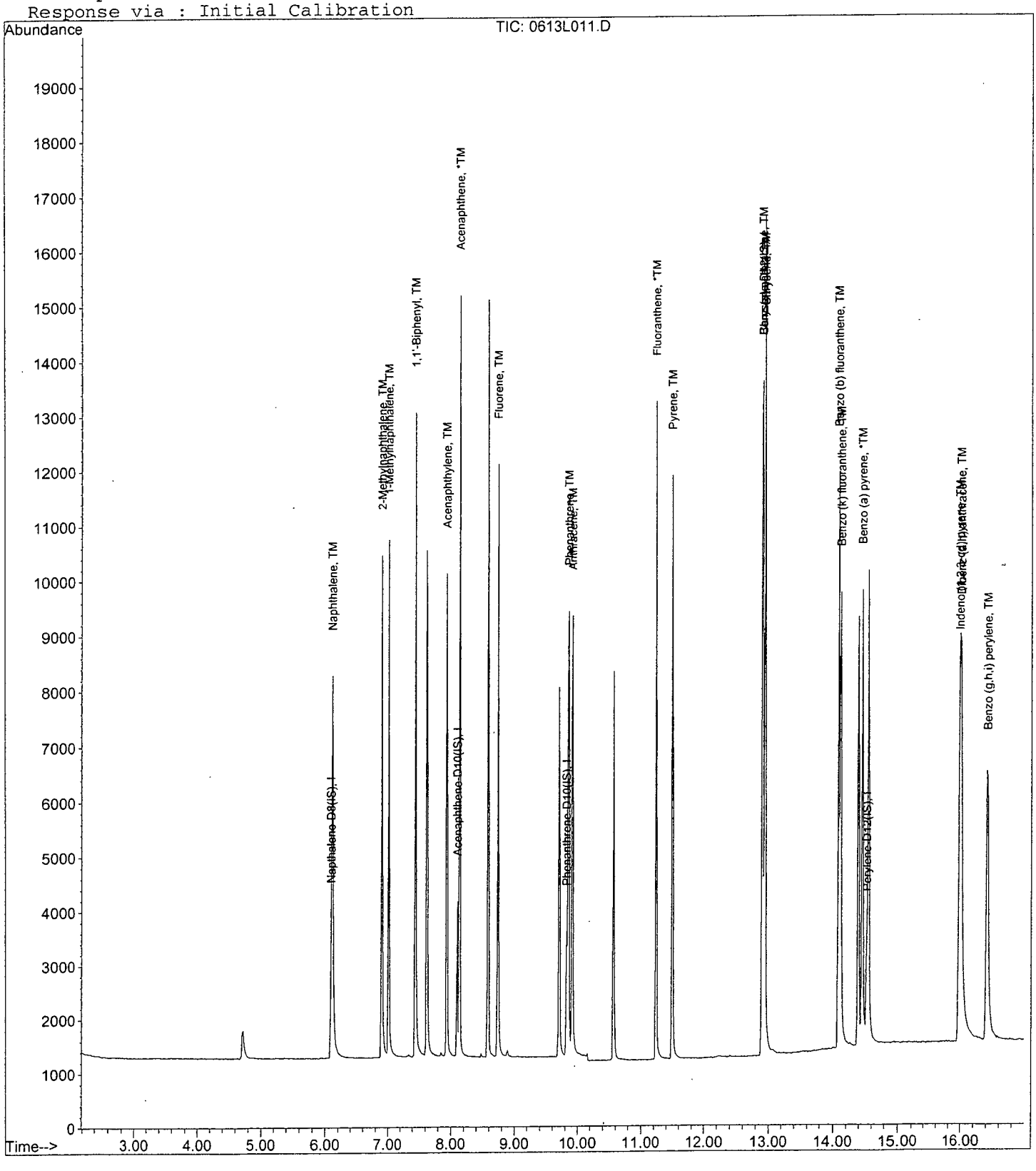
Quantitation Report

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



Form 7

Continuing Calibration

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

SDG No: 69258
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							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		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						Qvalue
3) Naphthalene	6.09	128	9664	5.07785 ppb		99
4) 2-Methylnaphthalene	6.89	142	6037	4.89471 ppb		90
5) 1-Methylnaphthalene	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

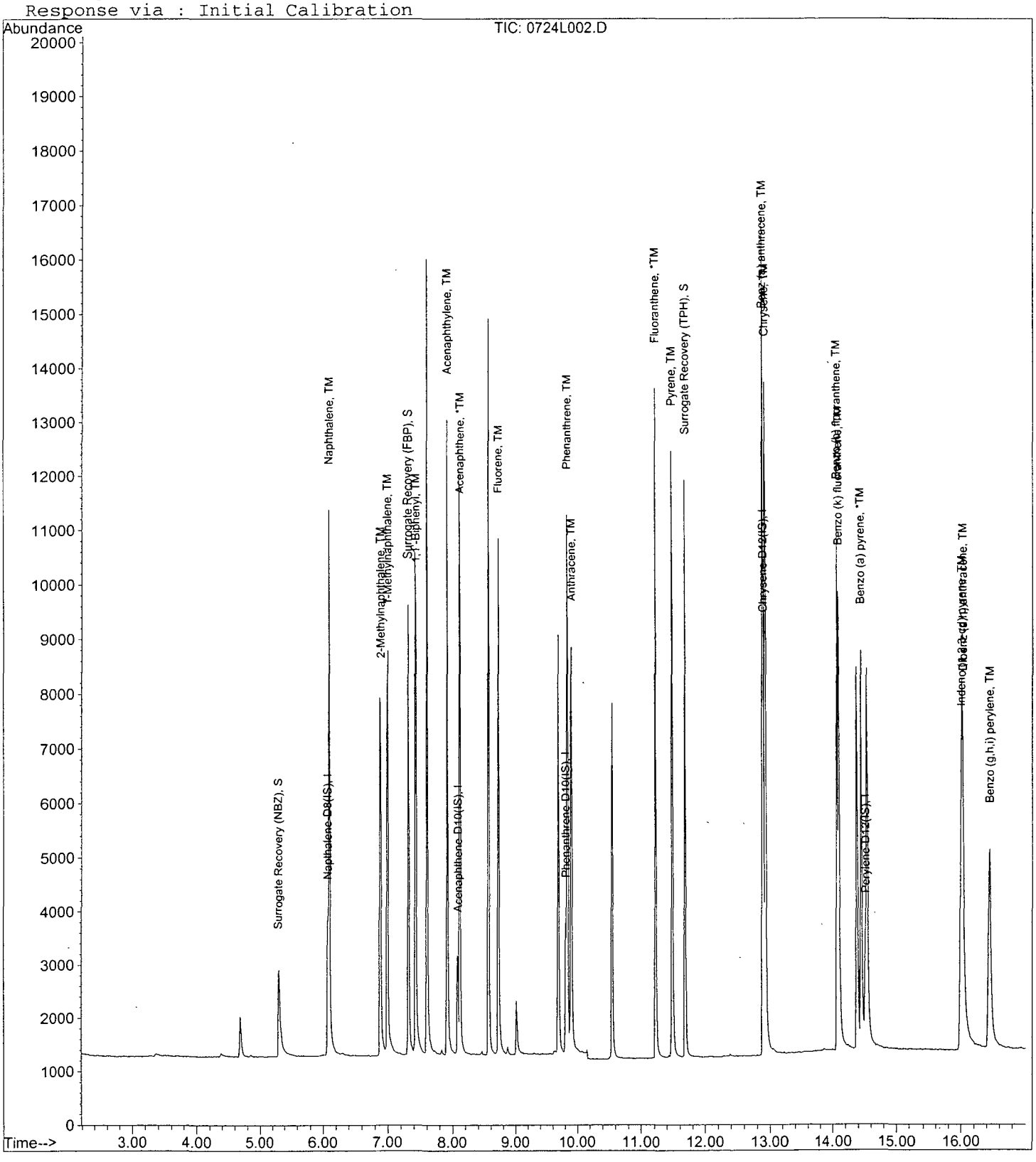
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

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

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 5:34:51 PM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

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

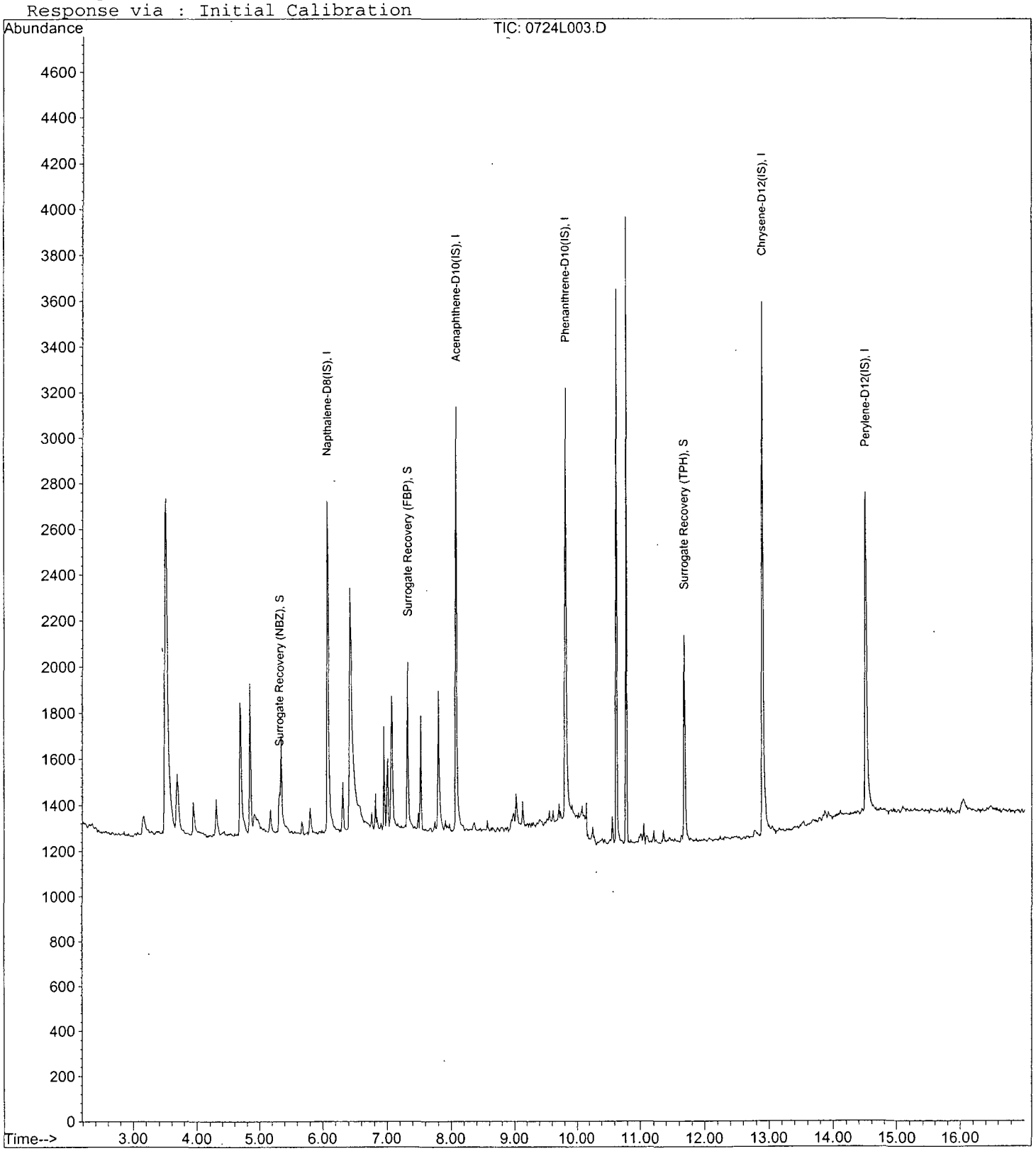
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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: _____

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

Printed: 07/27/12 5:34:53 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0724L004.D Vial: 4
Acq On : 24 Jul 12 19:16 Operator: LF
Sample : 120723A LCS-1 1/1000 Inst : Linus
Misc : 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) Napthalene-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

$\frac{2835 \times 2.5}{2043 \times 1.00} = 2.15$ VF 8/10/12

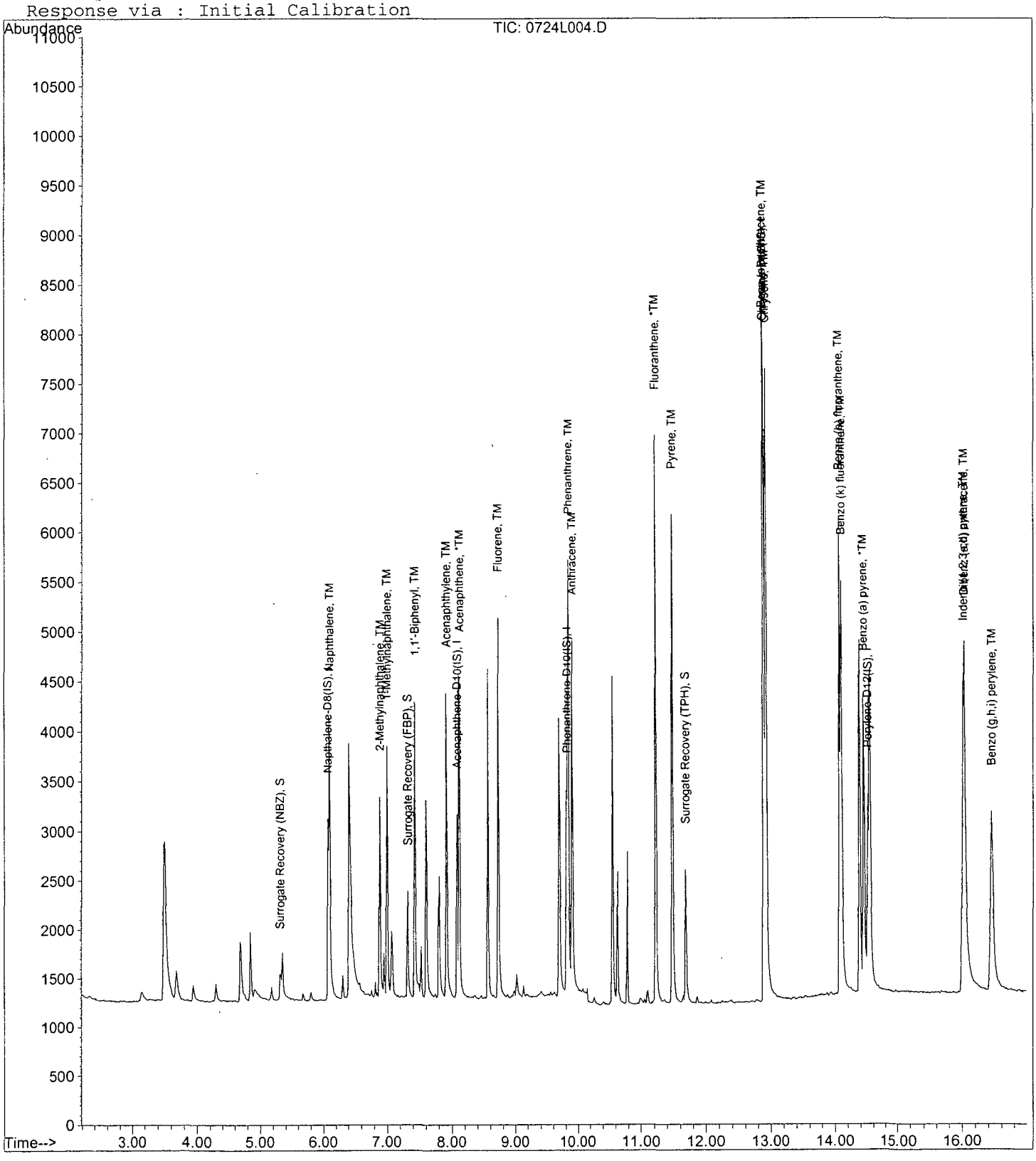
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0724L004.D Vial: 4
Acq On : 24 Jul 12 19:16 Operator: LF
Sample : 120723A LCS-1 1/1000 Inst : Linus
Misc : Multiplr: 1.00

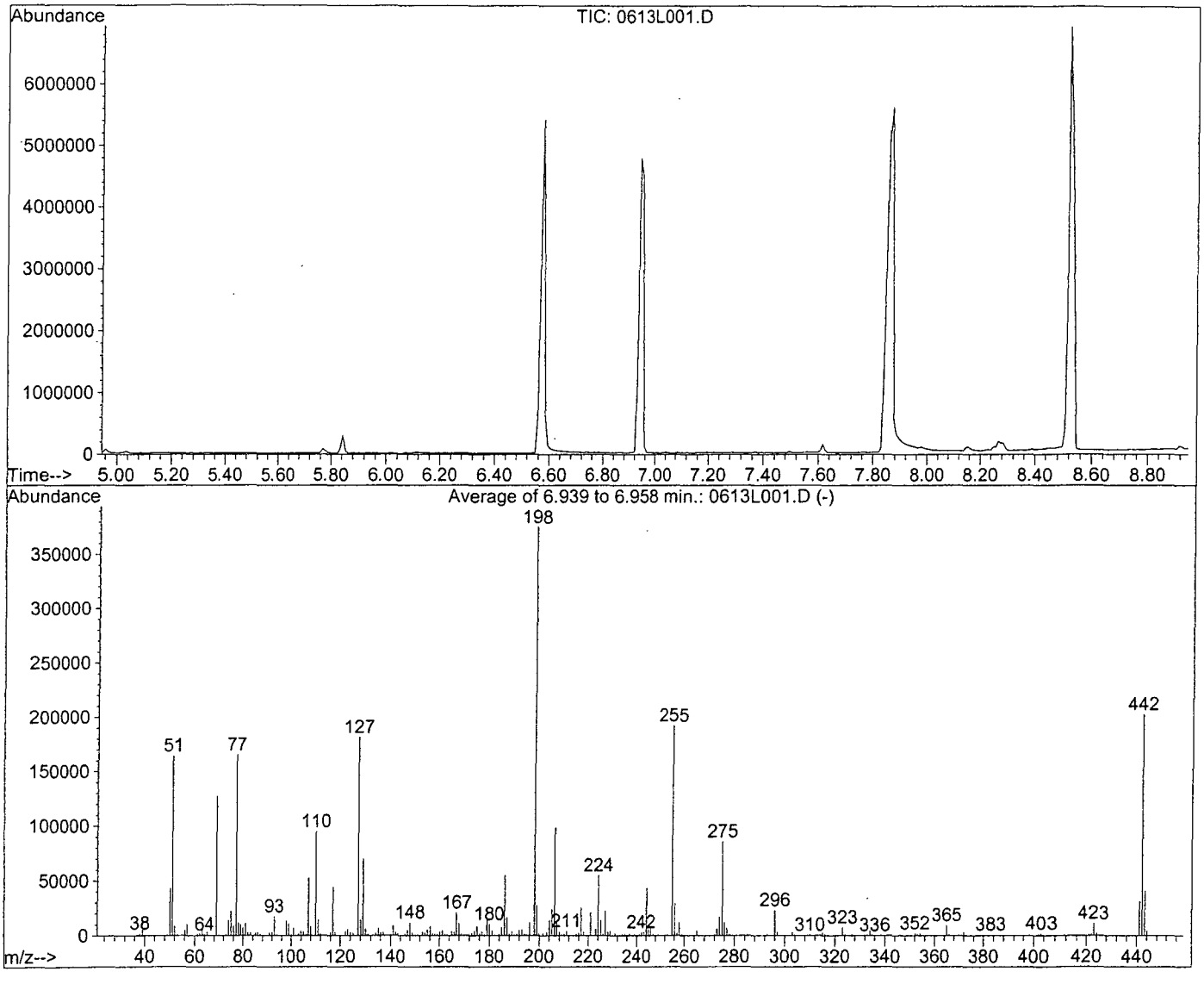
Quant Time: Jul 27 7:48 2012 Quant Results File: SIMB.RES

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 Vial: 1
Acq On : 13 Jun 12 13:07 Operator: LF
Sample : SVTUNE 2-28-12 Inst : Linus
Misc : Multiplr: 1.00

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



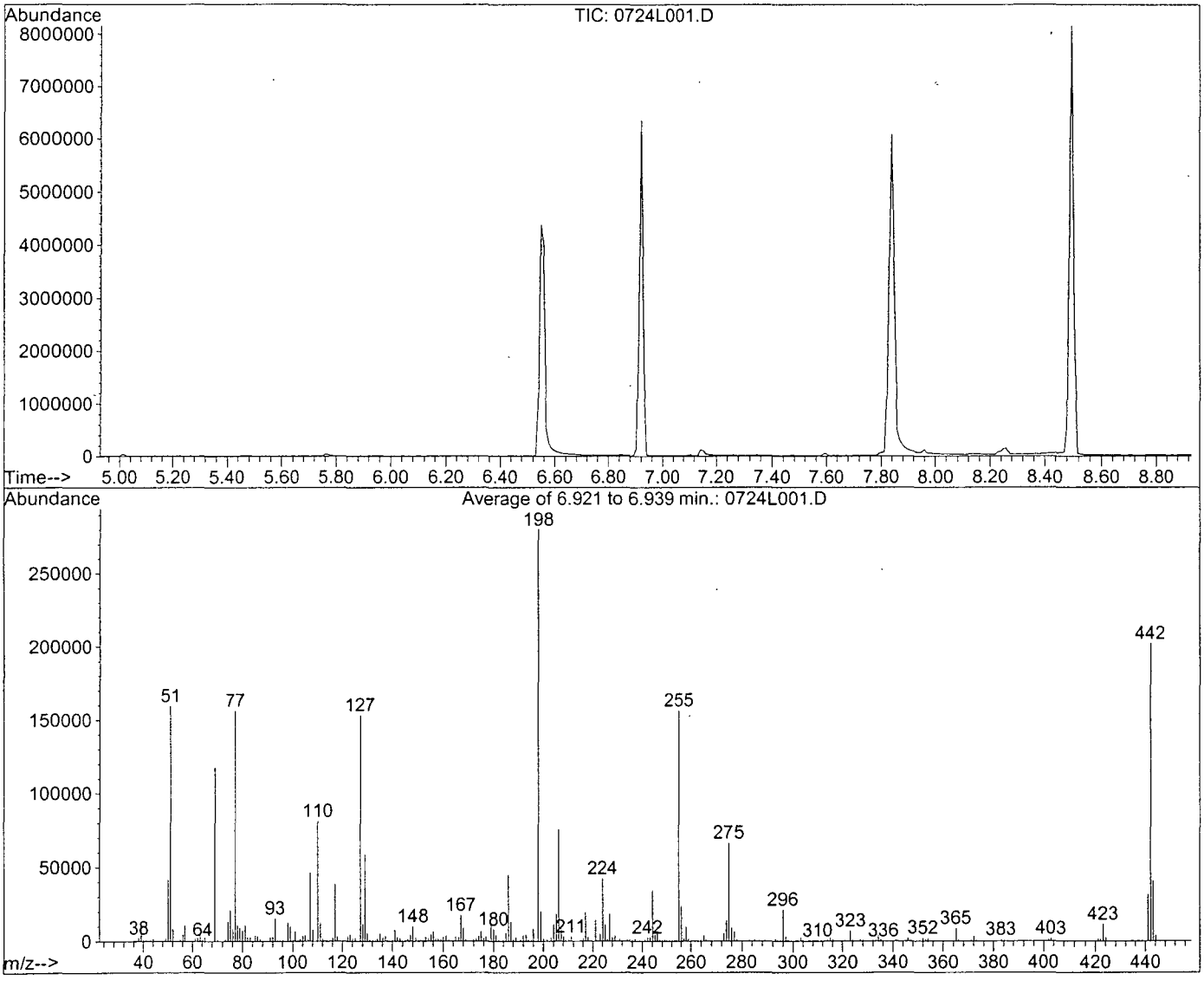
Spectrum Information: Average of 6.939 to 6.958 min.

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

DFTPP

Data File : M:\LINUS\DATA\L120613\0724L001.D Vial: 1
Acq On : 24 Jul 12 18:05 Operator: LF
Sample : SVTUNE 2-28-12 Inst : Linus
Misc : Multiplr: 1.00

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



Spectrum Information: Average of 6.921 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

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

exp 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
ABSOLUTE STANDA
Lot #: 042910 - 29085
Rec: 8/4/11 MFR exp. 04/29/13

exp 7/31/12

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

exp 7/31/12

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

exp 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
ABSOLUTE STANDARDS
CLP Semi-Volatiles Toxic Substances #1
Lot #: 101509 - 28453
Rec: 3/8/11 MFR exp. 10/15/201

exp 10/16/12

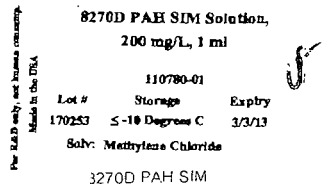
Part #: 10004 Laboratory Use Only - See MSDS
Lot #: 101509 Exp: 101514 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #1
4 components
2000 ug/mL in metl
ABSOLUTE STANDAR
CLP Semi-Volatiles Toxic Substances #1
Lot #: 101509 - 29095
Rec: 8/4/11 MFR exp. 10/15/14

exp 10/18/12

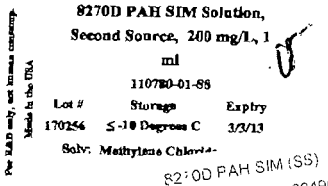
Part #: 10005 Laboratory Use Only - See MSDS
Lot #: 061209 Exp: 061214 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #2
8 components
2000 ug/mL in methy
ABSOLUTE STANDARD
CLP Semi-Volatiles Toxic Substances #2
Lot #: 061209 - 28458
Rec: 3/8/11 MFR exp. 6/12/2014

exp 10/18/12

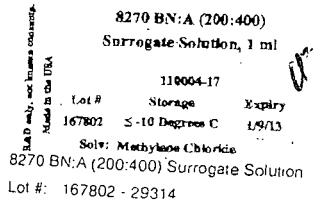
Part #: 10005 Laboratory Use Only - See MSDS
Lot #: 121208 Exp: 121213 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #2
8 components
2000 ug/mL in met
ABSOLUTE STANDAR
CLP Semi-Volatiles Toxic Substances #2
Lot #: 121208 - 29100
Rec: 8/4/11 MFR exp. 12/12/13



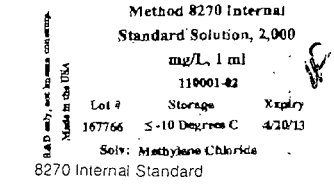
8270D PAH SIM
Lot # 170253 - 28478
Rec 3/10/11 MFR exp 3/3/2013



8270D PAH SIM (SS)
Lot # 170256 - 28490
Rec 3/10/11 MFR exp 3/3/2013



8270 BN:A (200:400) Surrogate Solution
Lot #: 167802 - 29314
Rec: 8/8/11 MFR exp 01/09/13



8270 Internal Standard
Lot #. 167766 - 28151
Rec 1/20/11 MFR exp. 04/20/13

PREP DATE:	02-25-12						
SIM Semivolitile Int. Std. Mix 125 ug/ml							
Exp:	08-25-12						
		Conc.		Date	CODE:	B	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	
O2SI	Int. Std	2000	167766-28151	02/25/12	02-25-13	100	
EM Science	MeCl2		47186			1500	
						1600	

PREP DATE:	02-25-12												
8270 SIM STANDARD CURVE													
						0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
		Conc.		Date	CODE:	A	A	C	D	E	F	G	H
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

VF 2/27/12

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

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
ULTRA 1 mL
For Lab Use Only

VF

exp 2/28/13

VF 2/28/12

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

VF 2/29/12

VF

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

VF 2/29/12

VF

PREP DATE:	02-29-12				
SIM 8270 Second Source (5µg/mL)					
Exp:	03-14-12				
		Conc.	Date	CODE:	
Supplier	ID #	Lot #	µg/mL	Code	Exp.Date	µL
	8270D PAH SIM (SS)	170256-28490	200	02/25/12	02-25-13	5
	MeCl2		Lot#47186			195
				Final Volume		200

VF 3/18/12

VF

PREP DATE:	03-18-12												
8270 STANDARD CURVE													
						5	10	20	40	50	60	80	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
	8270T Stock	200		02/13/12	07-31-12	5	5	10	20	25	30	40	50
	Surrogate Stock	VAR	167802-29314	02/25/12	01-09-13	5	5	10	20	25	30	40	50
EM Science	Methylene Chloride		47186			190	90	80	60	50	40	20	0
					Final Vol.	200	100	100	100	100	100	100	100

VF 3/19/12

VF

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

VF 5/1/12

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

Exp 4/29/13

VF 5/1/12

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

exp 7/31/12

VF 5/1/12

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

exp 10/15/14

VF 5/1/12

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

exp 12/12/13

VF 5/1/12

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

exp 7/12/14

VF 5/1/12

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

exp 10/9/14

VF 5/1/12

Part #: 10018
Lot #: 062111
Laboratory Use Only - See MSDS
Exp: 062116 Storage 4 °C
EPA Method 8270A - Analytes Mix #8
13 components - Pl
2000 ug/mL in metl
ABSOLUTE STANDAR
EPA Method 8270A - Analytes Mix #8
Lot #: 062111 - 29112
Re 1 MFR exp. 06/21/16

exp 6/21/16

VF 5/1/12

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

exp 3/16/16

VF 5/1/12

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 041911 Exp: 041914 Storage 4 °C



EPA Method 8270A
4 components
2000 ug/mL in acet

EPA Method 8270A - Mix #18
Lot #: 041911 - 29122
Rec: 8/4/11 MFR exp. 04/19/14

ABSOLUTE STANDARD

Exp 4/19/14

VF 5/1/12

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 030411 Exp: 030414 Storage 4 °C



Semi-Volatile Standard
11 components
Varied ug/mL in m

Semi-Volatile Standard
Lot #: 030411 - 29127
Rec: 8/4/11 MFR exp. 03/04/14

ABSOLUTE STANDARD

Exp 3/4/14

VF 5/1/12

PREP DATE:	05-01-12					
8270C Stock/Spike Standard						
Exp:	07-31-12					
		Conc.		Date	CODE:	P
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
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

PREP DATE.	05-04-12												
8270 STANDARD CURVE													
						5	10	20	40	50	60	80	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
	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 5/4/12

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

7/23/12

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 mel

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 042910 - 29082
Rec: 8/4/11 MFR exp. 04/29/13

ABSOLUTE STANDAR

exp 4/29/13

7/31/12

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 me

CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 073109 - 29087
Rec: 8/4/11 MFR exp. 07/31/12

ABSOLUTE STANDAI

exp 7/31/12

_SEP004S

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

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

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

	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 74 **Date** 07/24/12

_SEP004S

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	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,78				
15	AY65149	AY65149W03			0.025	1	1060	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,78				
16	AY65150	AY65150W06			0.025	1	1060	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,78				
17	AY65151	AY65151W04			0.025	1	1060	1	2/1	07/23/12 16:30	68266-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,78				

DRA 7/24/12

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

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	LF
Date	7/24/12
Time	1700
Refrigerator	Lab 4

	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 75 **Date** 07/24/12

Injection Log

Directory: M:\LINUS\DATA\L120613\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0613L001.D	1	SVTUNE 2-28-12		13 Jun 12 13:07
2	3	0613L003.D	1	0.1ug/ml PAH 06-13-12		13 Jun 12 13:51
3	4	0613L004.D	1	0.2ug/ml PAH		13 Jun 12 14:16
4	5	0613L005.D	1	0.5ug/ml PAH		13 Jun 12 14:41
5	6	0613L006.D	1	1.0ug/ml PAH		13 Jun 12 15:07
6	7	0613L007.D	1	5.0ug/ml PAH		13 Jun 12 15:33
7	8	0613L008.D	1	10ug/ml PAH		13 Jun 12 15:59
8	9	0613L009.D	1	50ug/ml PAH		13 Jun 12 16:25
9	10	0613L010.D	1	100ug/ml PAH		13 Jun 12 16:51
10	11	0613L011.D	1	5.0ug/ml SS PAH 06-13-12		13 Jun 12 17:17
11	1	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	8	0724L008.D	0.97087	AY65112W07 1/1030		24 Jul 12 21:00
16	9	0724L009.D	0.95238	AY65113W06 1/1050		24 Jul 12 21:26

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 Avenu
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 6:05:52 PM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 Date Analyzed: 07/31/12

Matrix: WATER 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	
AY65112	ES081	28-142	58.9		57-132	70.6	
AY65113	ES082	28-142	54.6		57-132	77.5	

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
SURROGATE: OCTACOSANE (S)	150	87.7	58.5	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	137	91.3	57-132

Comments: _____

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

Printed: 08/02/12 6:05:47 PM

APPL Standard LCS

EPA 8015B-e

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 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
AY65112	ES081	731019	07/31/12 1703
AY65113	ES082	731022	07/31/12 1816

Comments: Batch: #TPETD-120723A

EPA 8015B
Total Petroleum Hydrocarbons -

Sample Data

TPH Diesel Water

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68258

Sample ID: ES081

APPL ID: AY65112

Sample Collection Date: 07/18/12

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)	58.9	28-142			%	07/23/12	07/31/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (S	70.6	57-132			%	07/23/12	07/31/12

Quant Method: TPH0719.M
Run #: 731019
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 6:05:49 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731019.D Vial: 19
Acq On : 7-31-12 17:03:40 Operator: LAC
Sample : AY65112W04 5/1030 Inst : Apollo
Misc : Water Multiplr: 4.85
IntFile : events.e
Quant Time: Aug 1 16:32 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

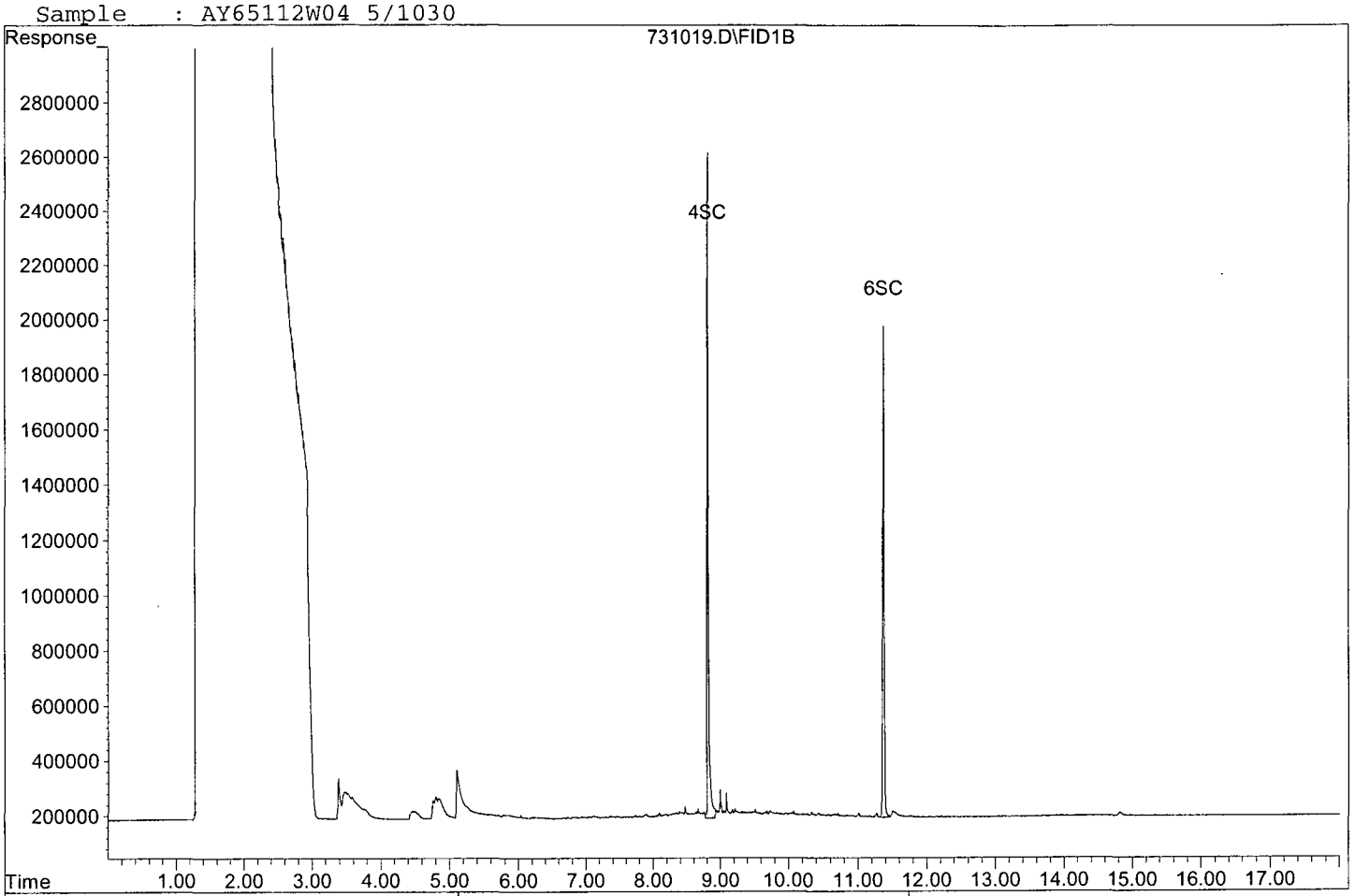
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

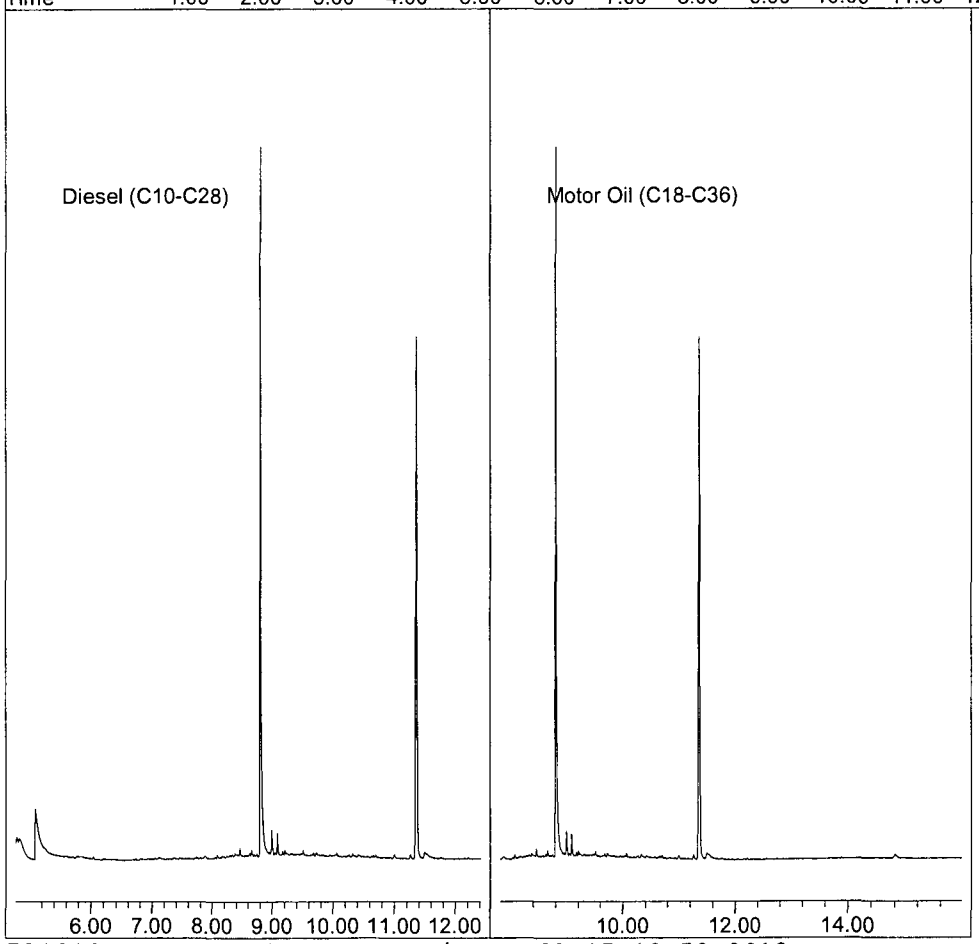
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	29825661	102.736 ppb
Surrogate Spike 145.631		Recovery =	70.55%
6) SC Octacosane(S)	11.37	26606823	85.697 ppb
Surrogate Spike 145.631		Recovery =	58.85%
Target Compounds			

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

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731019.D
Sample : AY65112W04 5/1030





731019.D TPH0719.M Fri Aug 03 15:19:52 2012

TPH Diesel Water

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68258

Sample ID: ES082

APPL ID: AY65113

Sample Collection Date: 07/18/12

QCG: #TPETD-120723A-169578

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	1700 ++	150	80.8	40.4	ug/L	07/23/12	07/31/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	54.6	28-142			%	07/23/12	07/31/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (S	77.5	57-132			%	07/23/12	07/31/12

++(T2M) The analyst has noted that the chromatogram of this sample is mainly lower boiling hydrocarbons.

Quant Method: TPH0719.M
Run #: 731022
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 6:05:50 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731022.D Vial: 22
Acq On : 7-31-12 18:16:17 Operator: LAC
Sample : AY65113W05 5/1030 Inst : Apollo
Misc : Water Multiplr: 4.85
IntFile : events.e
Quant Time: Aug 1 16:38 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

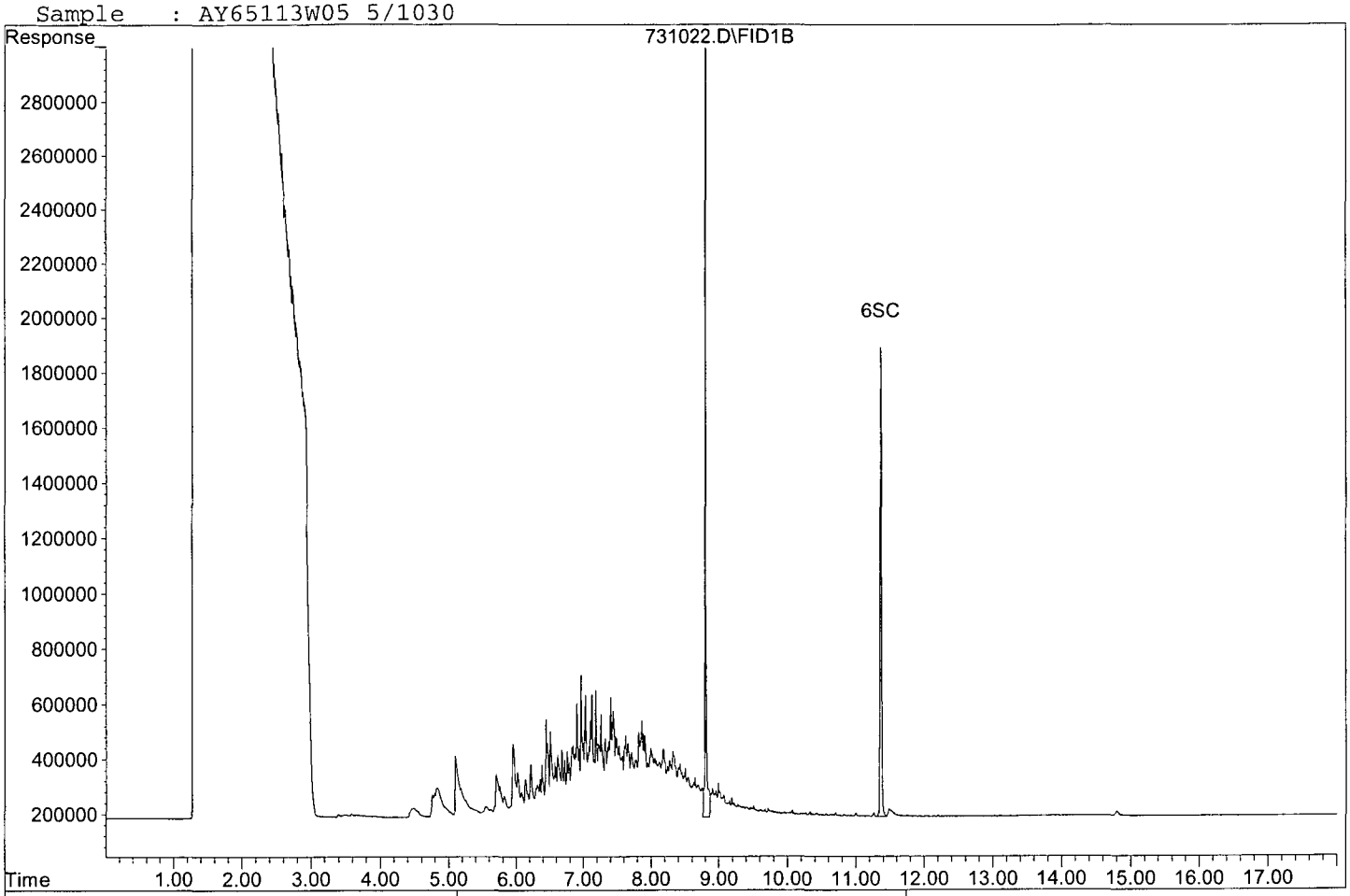
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

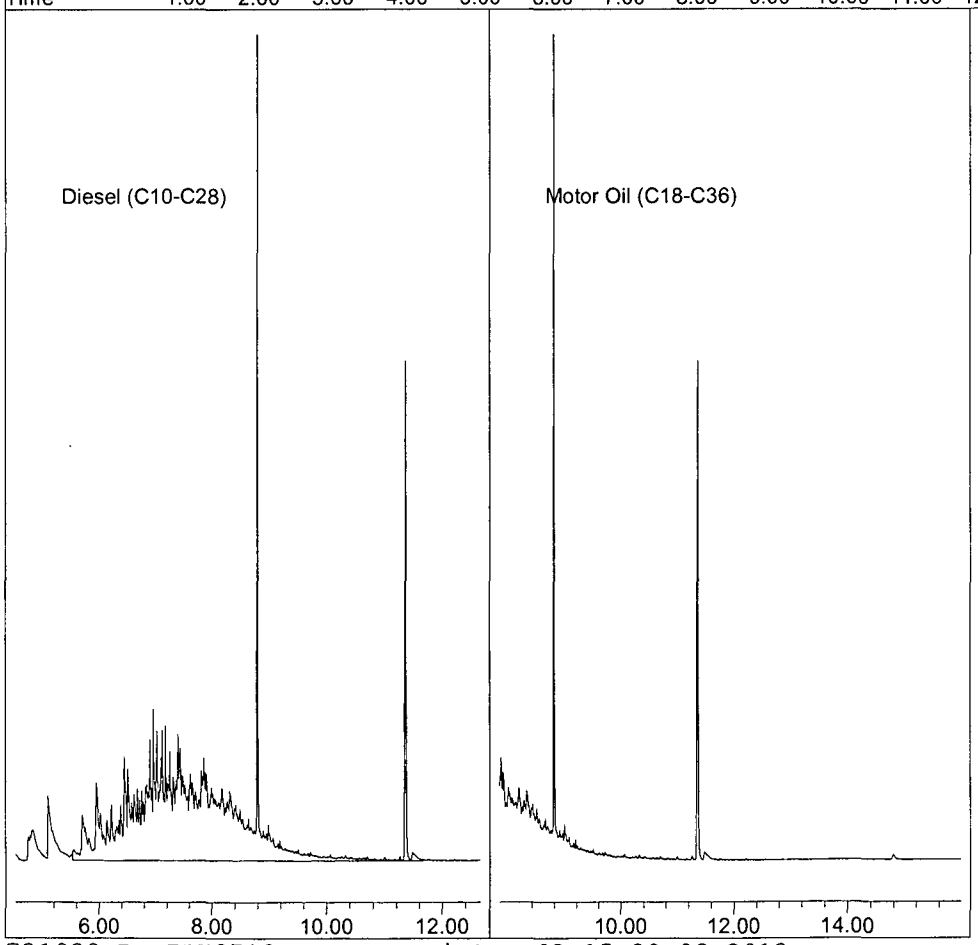
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	32771315	112.882 ppb
Surrogate Spike 145.631		Recovery =	77.51%
6) SC Octacosane(S)	11.36	24693342	79.534 ppb
Surrogate Spike 145.631		Recovery =	54.61%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	377168158	1666.008 ppb

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

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731022.D
Sample : AY65113W05 5/1030





EPA 8015B
Total Petroleum Hydrocarbons -

Calibration Data

TPH Extractables
TPH0719

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68258
Case No: Initial Cal. Date: 06/22/2012 and 7/19/12
Matrix: 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													
6													
7													
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* Not Used

0.475552

Quantitation Report (QT Reviewed)

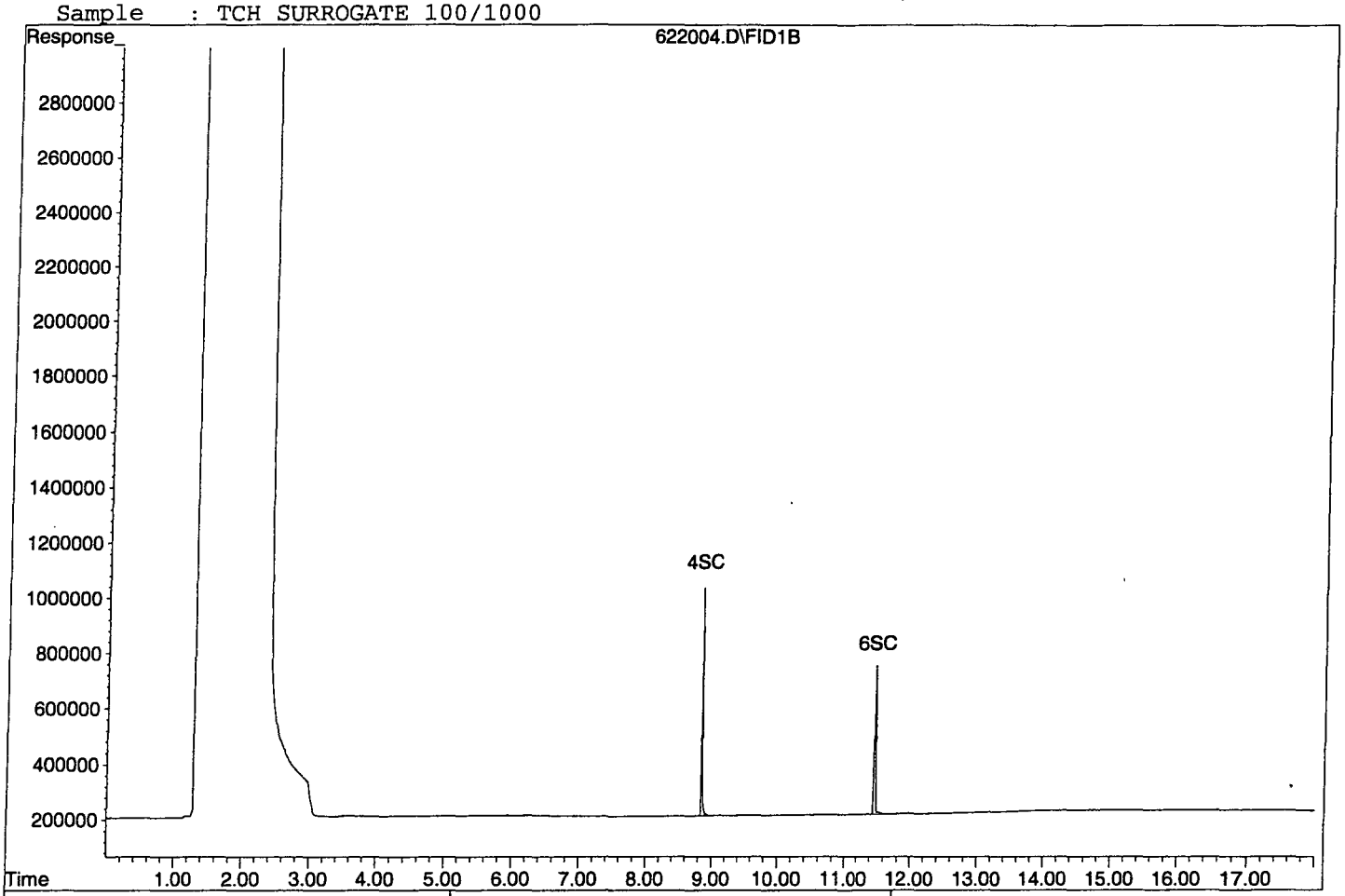
Data File : G:\APOLLO\DATA\120622\622004.D Vial: 4
Acq On : 6-22-12 18:22:29 Operator: LAC
Sample : TCH SURROGATE 100/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

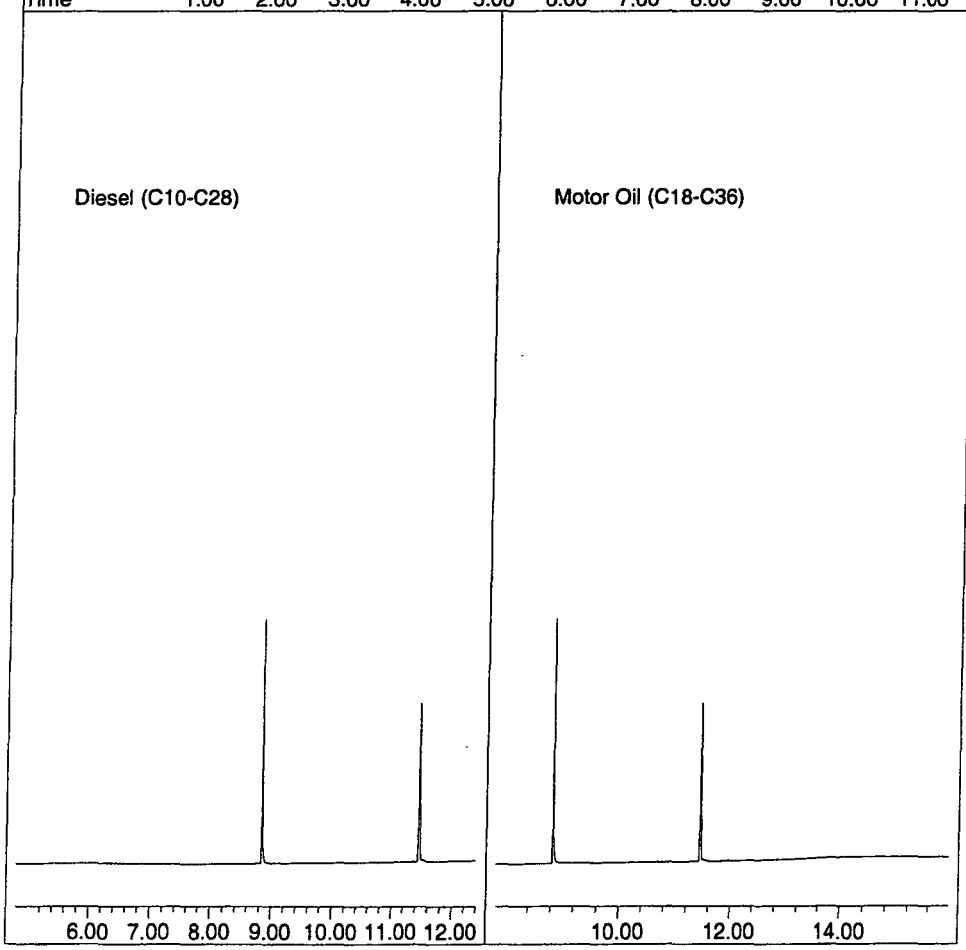
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
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				

Data File: G:\APOLLO\DATA\120622\622004.D
Sample : TCH SURROGATE 100/1000





Quantitation Report (QT Reviewed)

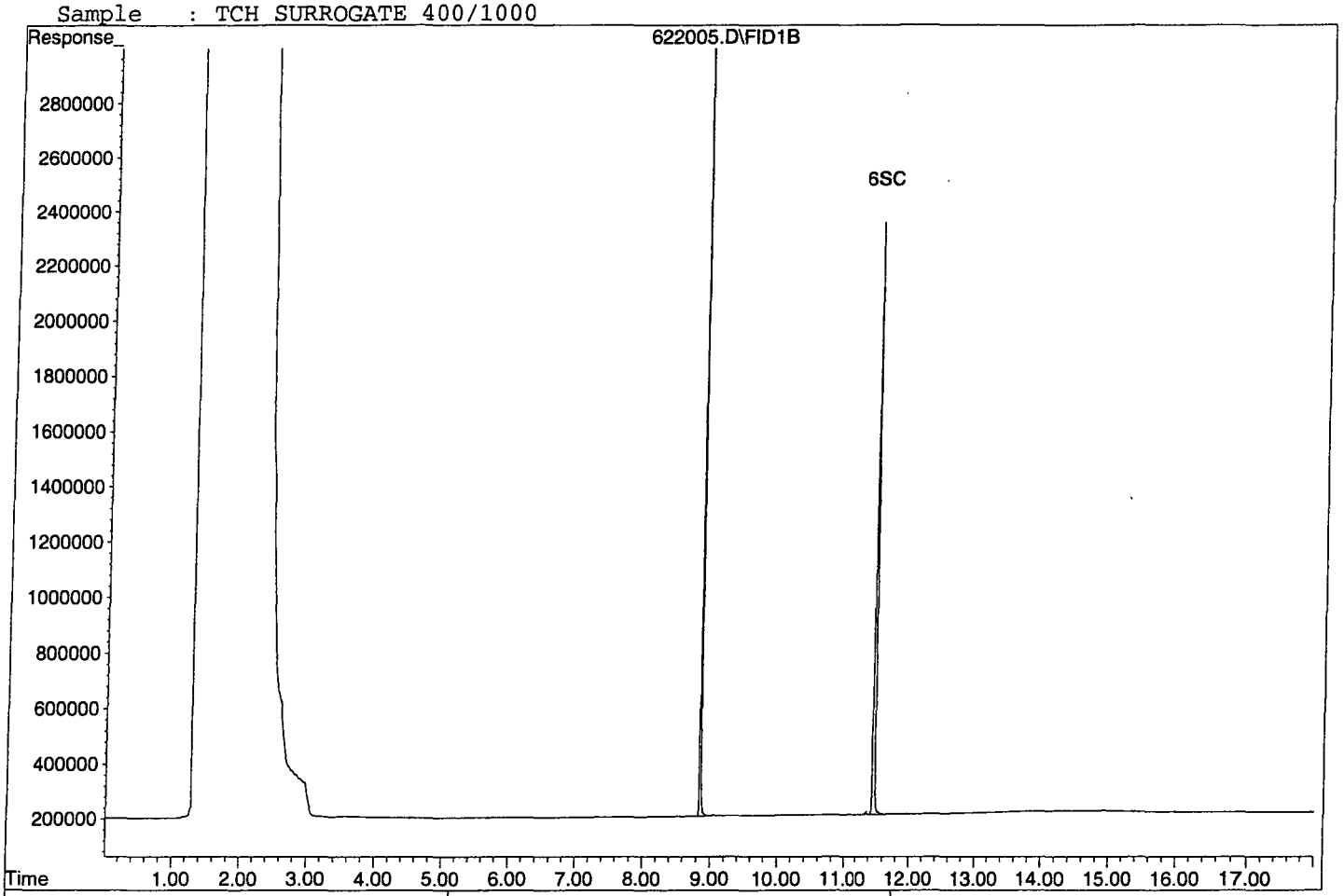
Data File : G:\APOLLO\DATA\120622\622005.D Vial: 5
Acq On : 6-22-12 18:46:55 Operator: LAC
Sample : TCH SURROGATE 400/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

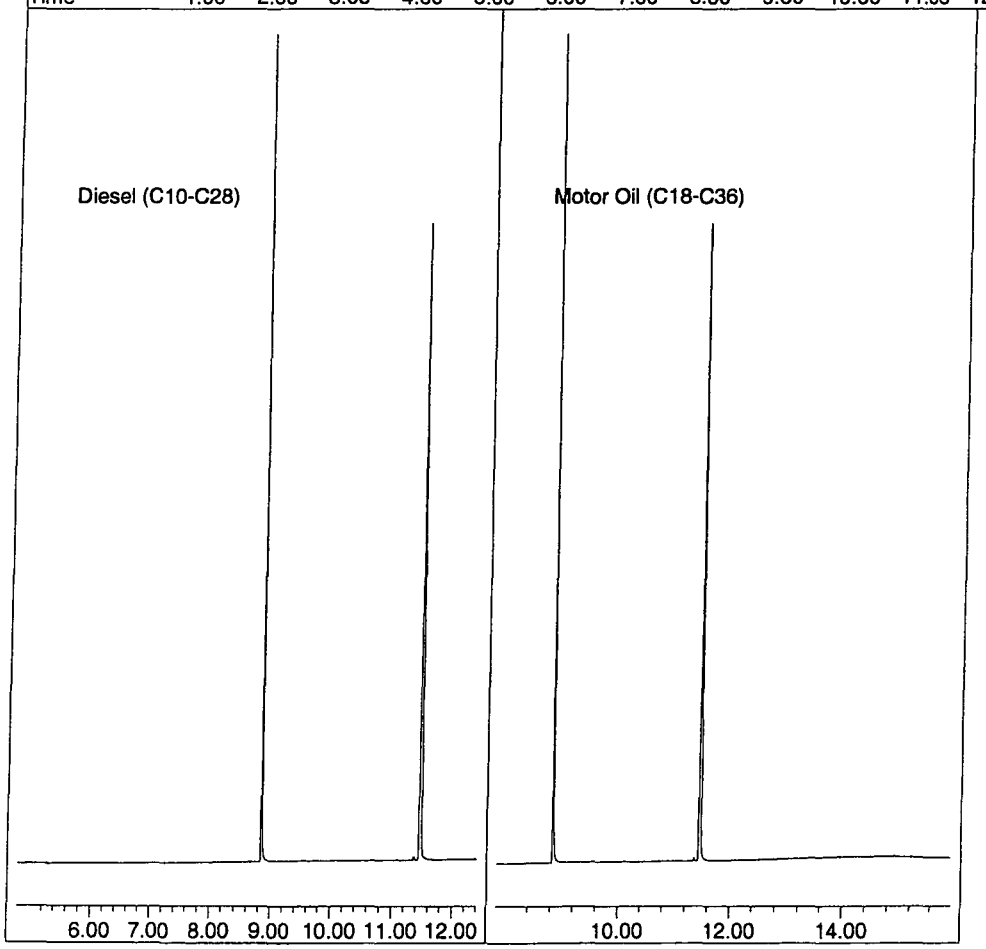
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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			

Data File: G:\APOLLO\DATA\120622\622005.D
Sample : TCH SURROGATE 400/1000





Quantitation Report (QT Reviewed)

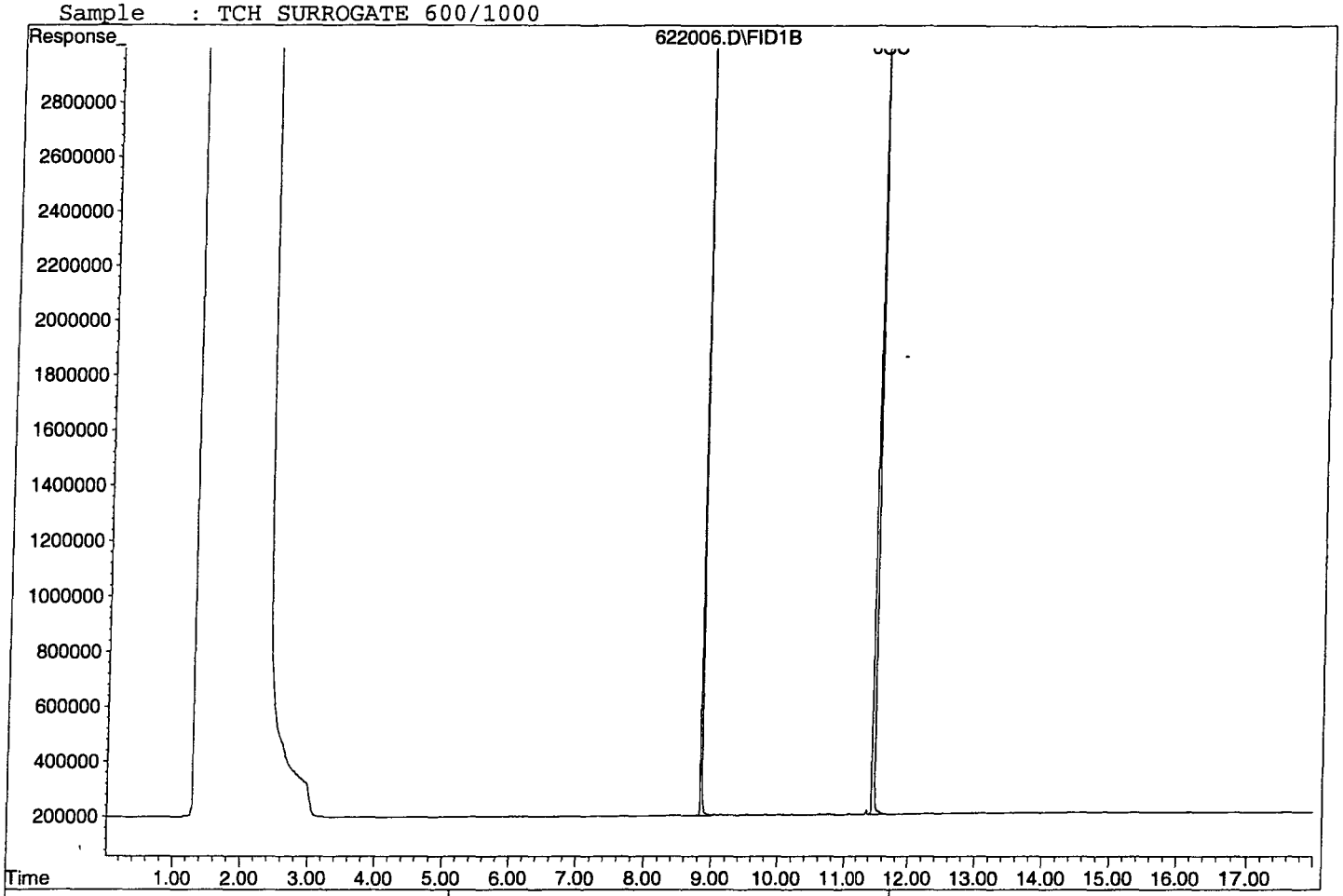
Data File : G:\APOLLO\DATA\120622\622006.D Vial: 6
Acq On : 6-22-12 19:10:46 Operator: LAC
Sample : TCH SURROGATE 600/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

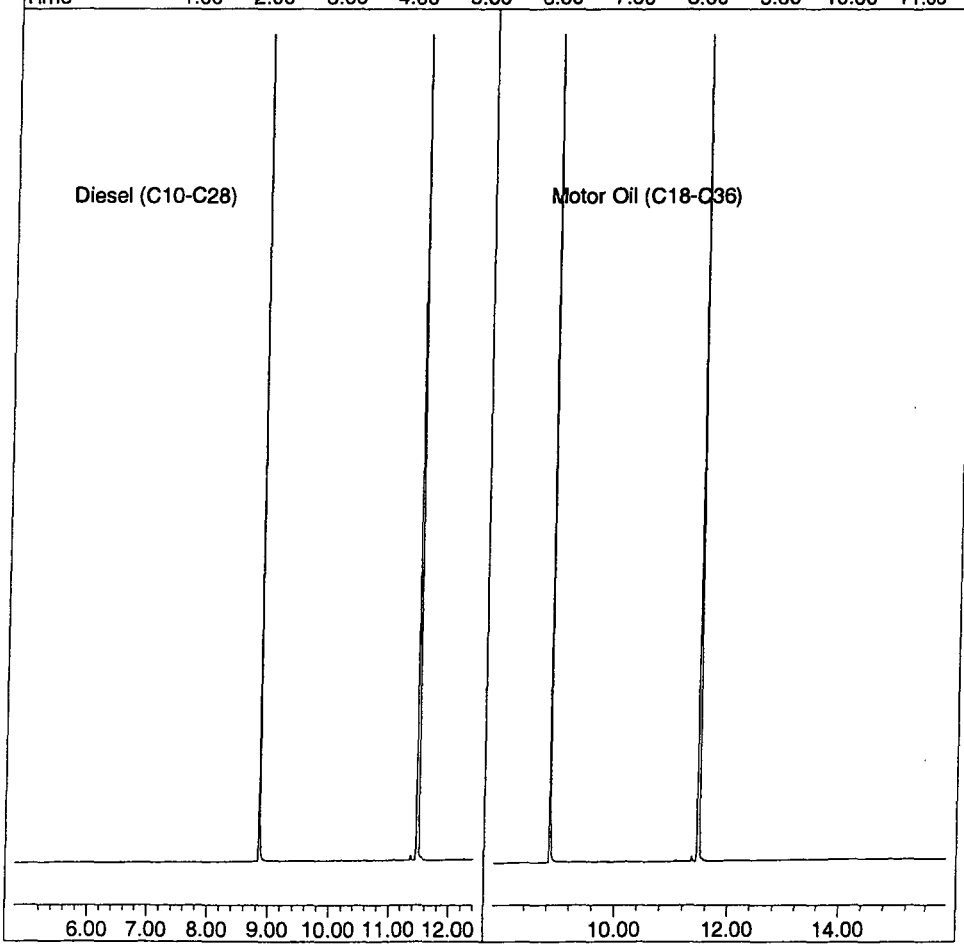
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
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				

Data File: G:\APOLLO\DATA\120622\622006.D
Sample : TCH SURROGATE 600/1000





Quantitation Report (QT Reviewed)

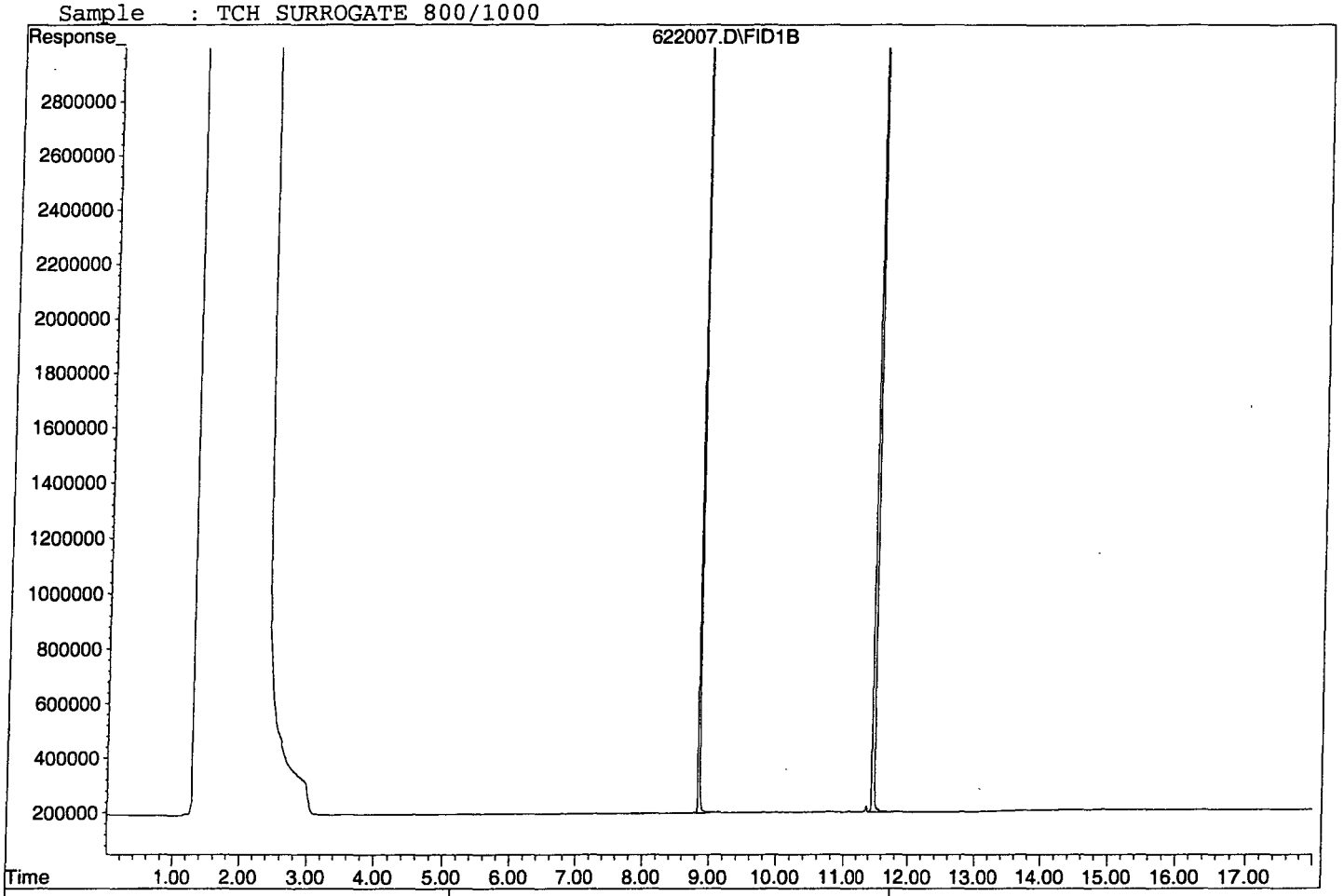
Data File : G:\APOLLO\DATA\120622\622007.D Vial: 7
Acq On : 6-22-12 19:34:47 Operator: LAC
Sample : TCH SURROGATE 800/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

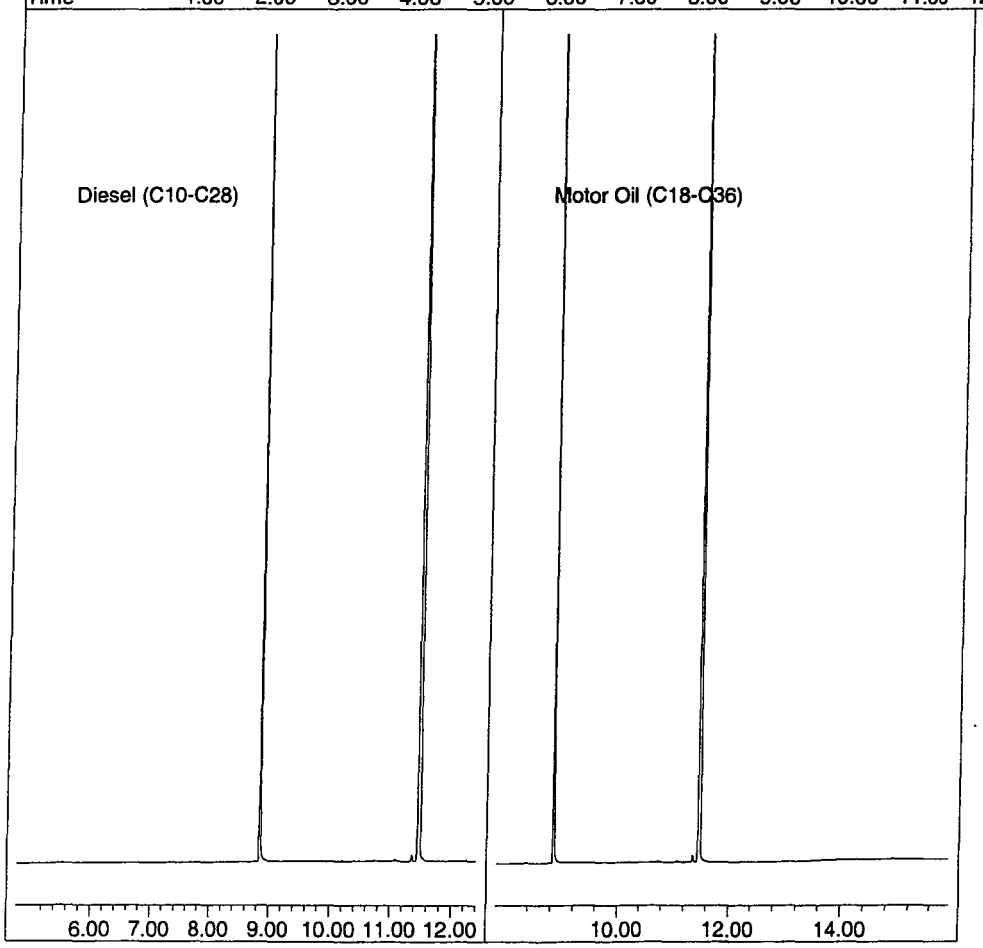
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc	Units
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				

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





Quantitation Report (QT Reviewed)

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

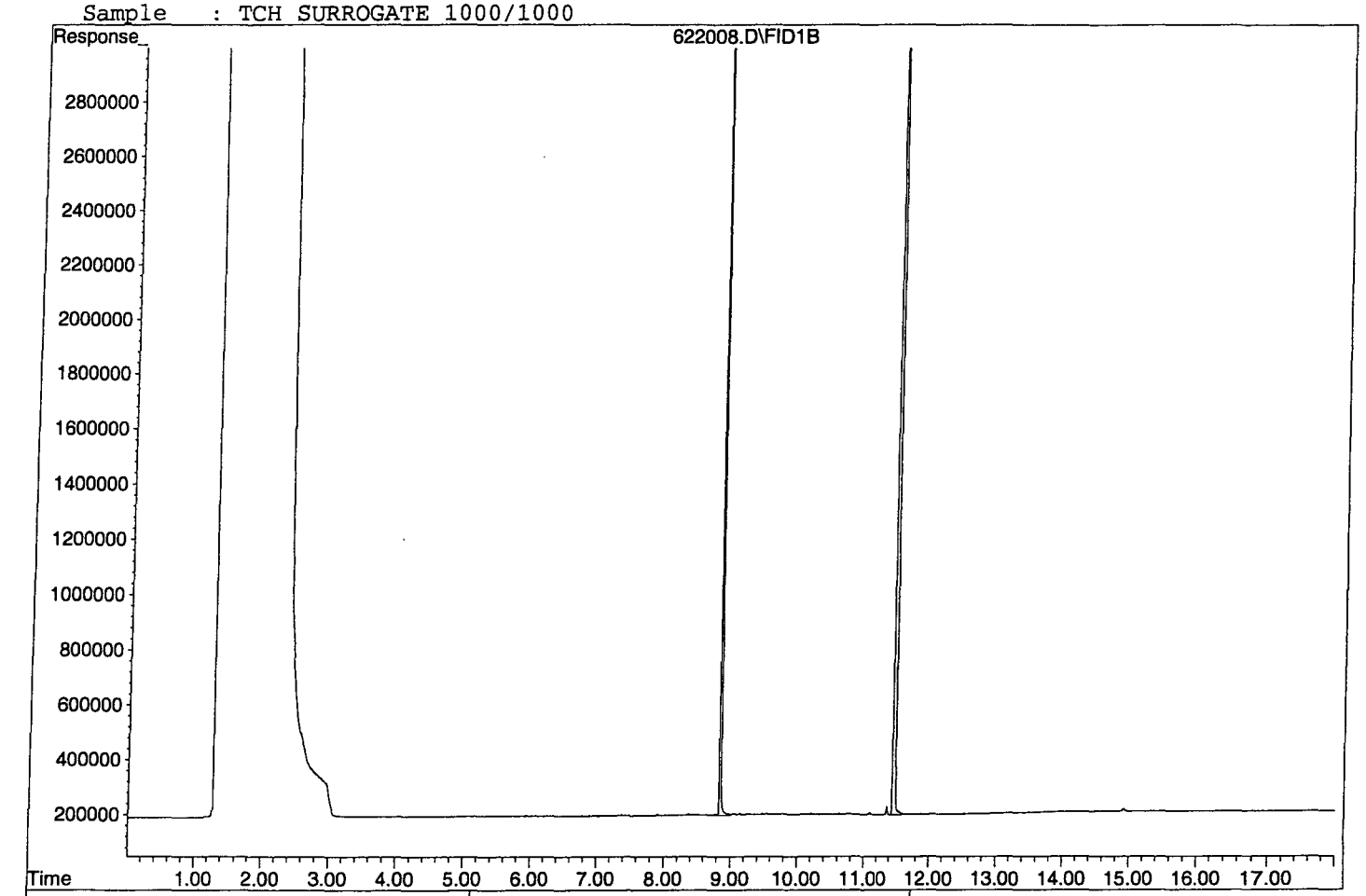
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

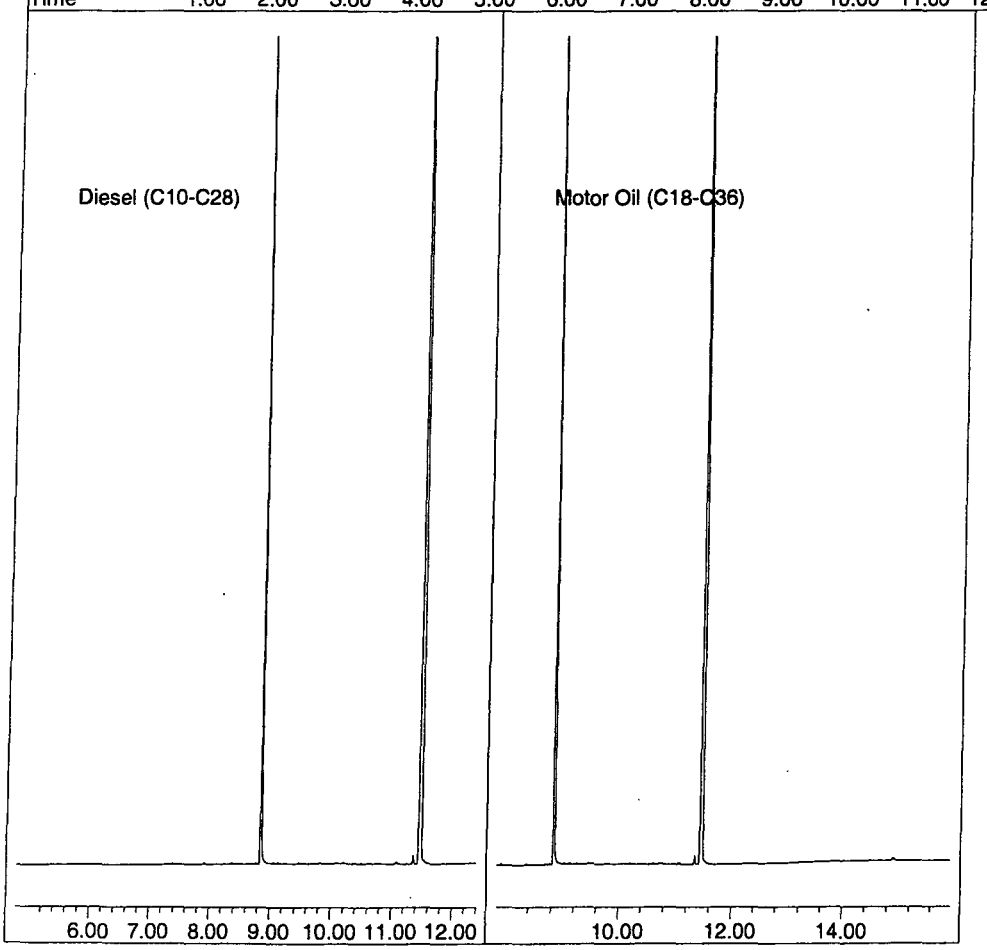
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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





Quantitation Report (QT Reviewed)

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

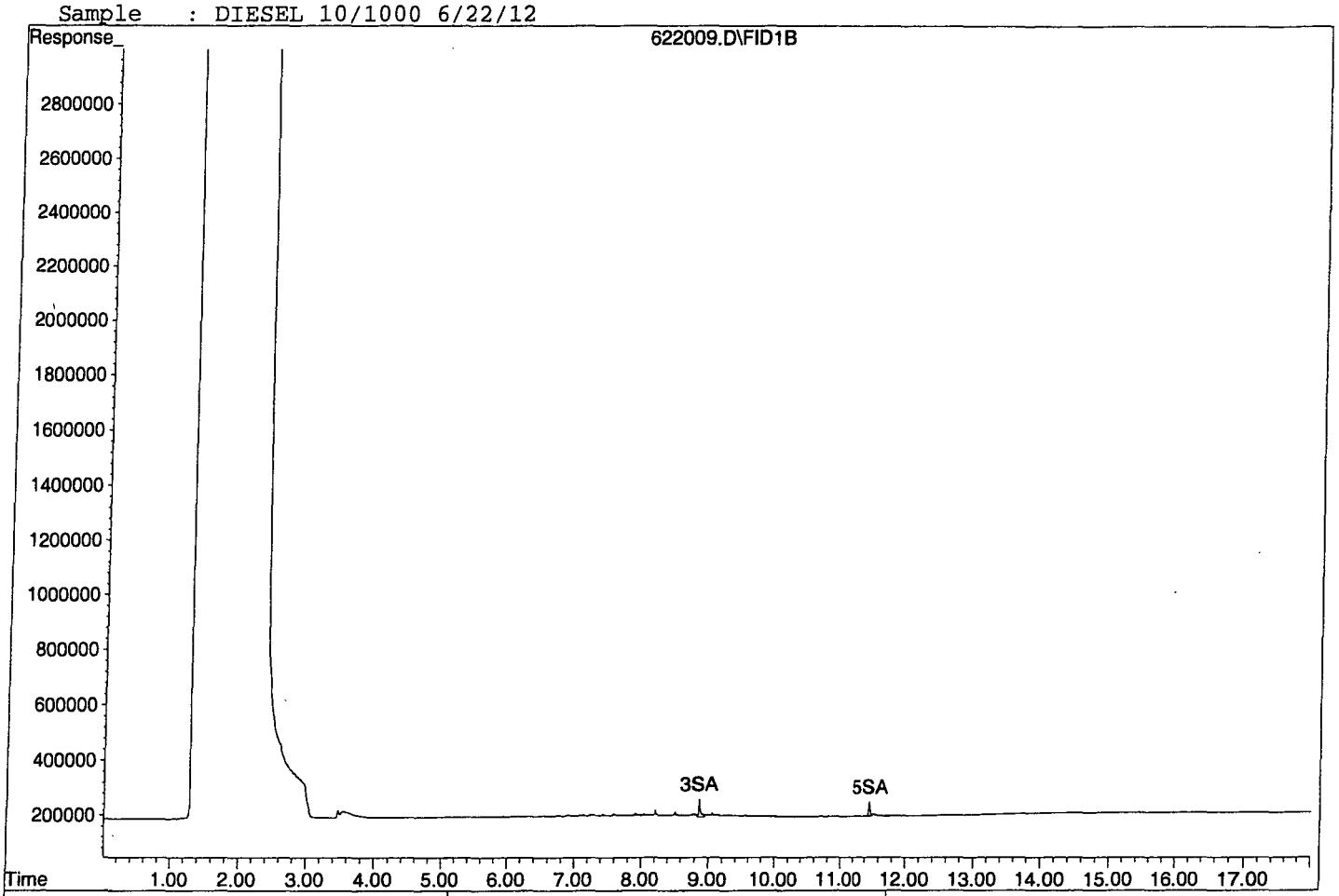
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

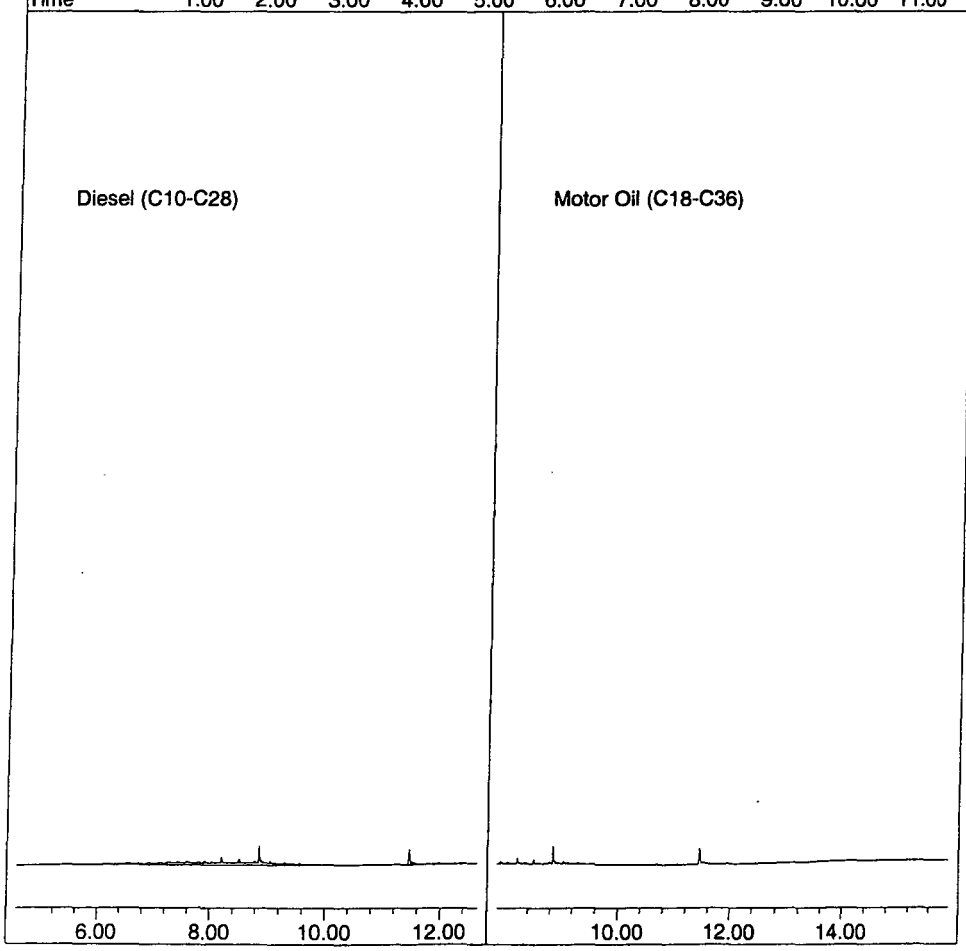
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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





Quantitation Report (Not Reviewed)

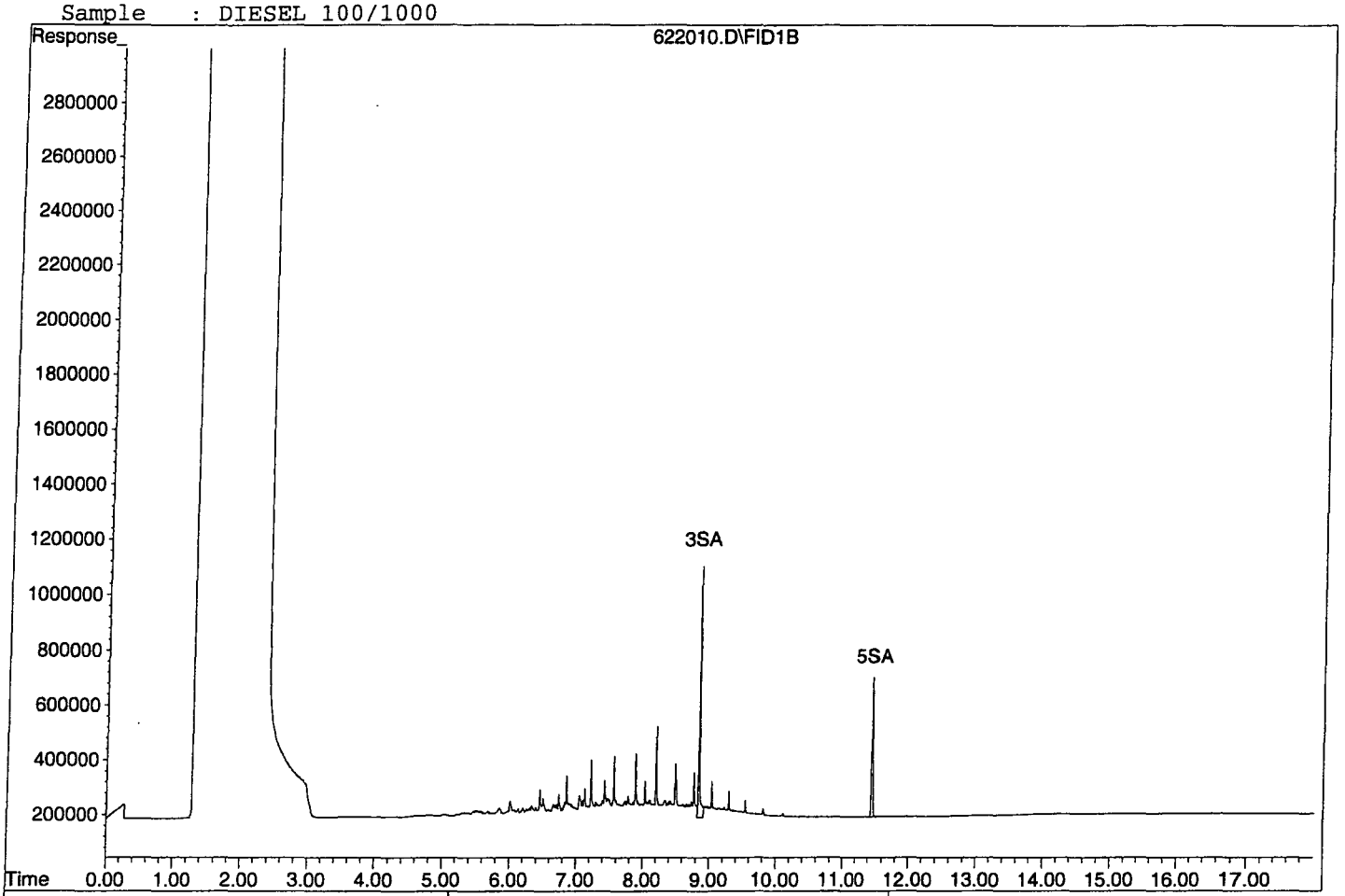
Data File : G:\APOLLO\DATA\120622\622010.D Vial: 10
Acq On : 6-22-12 20:47:06 Operator: LAC
Sample : DIESEL 100/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

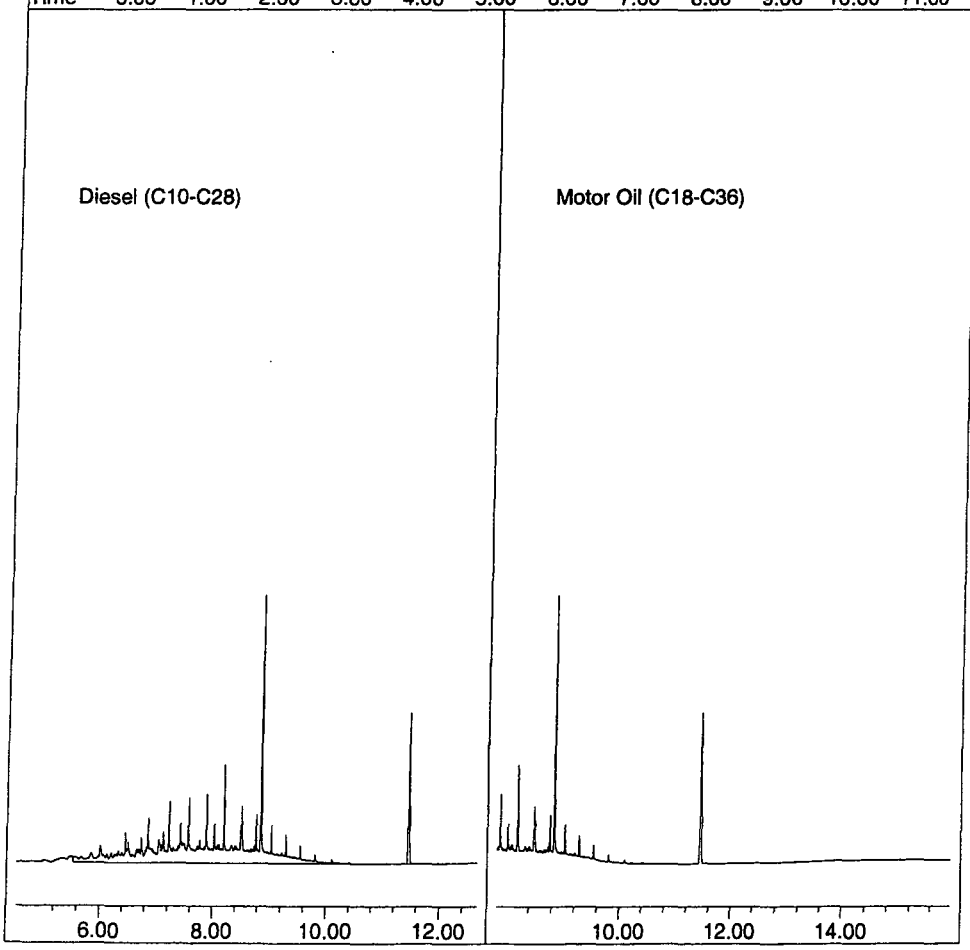
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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

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





Quantitation Report (Not Reviewed)

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

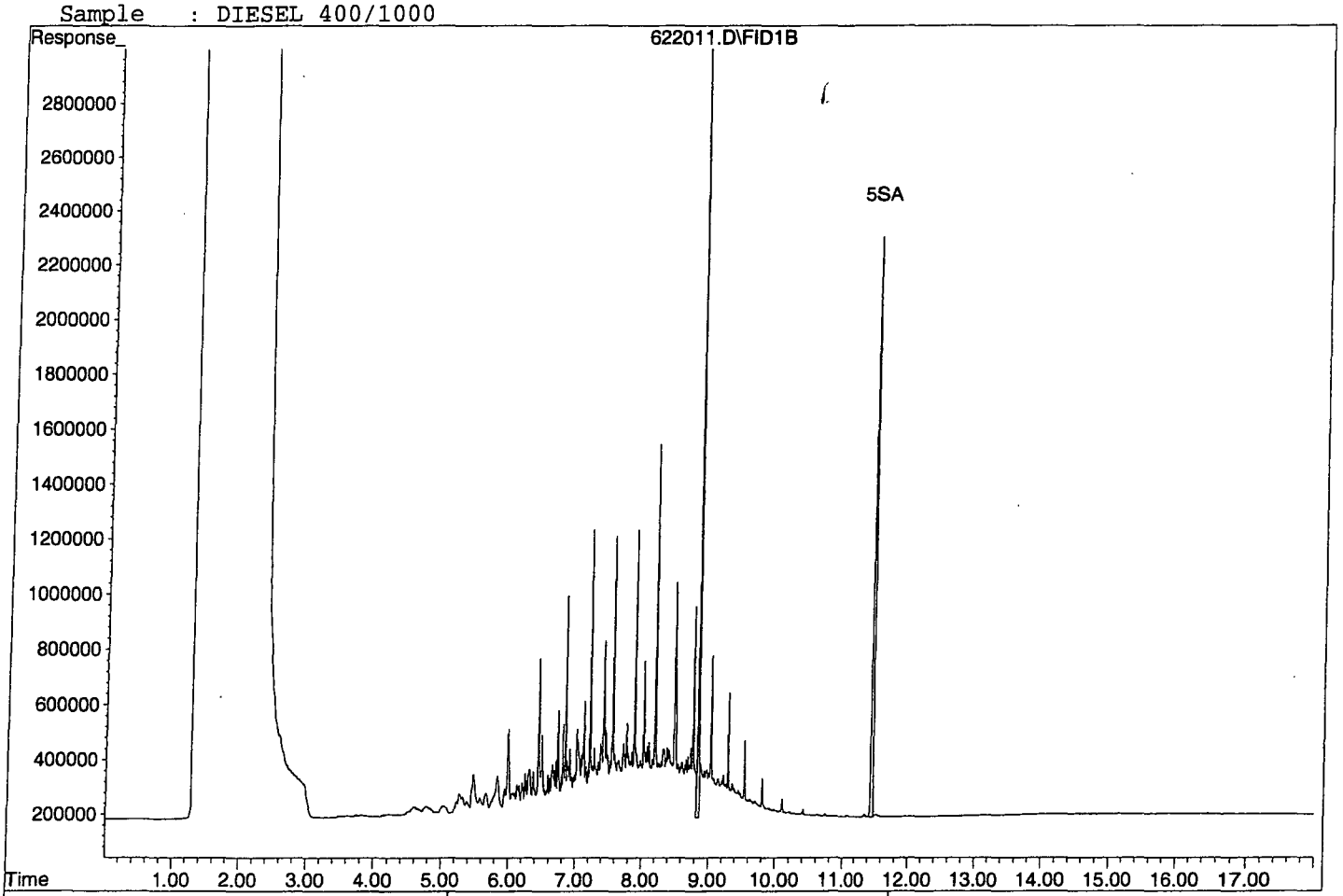
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

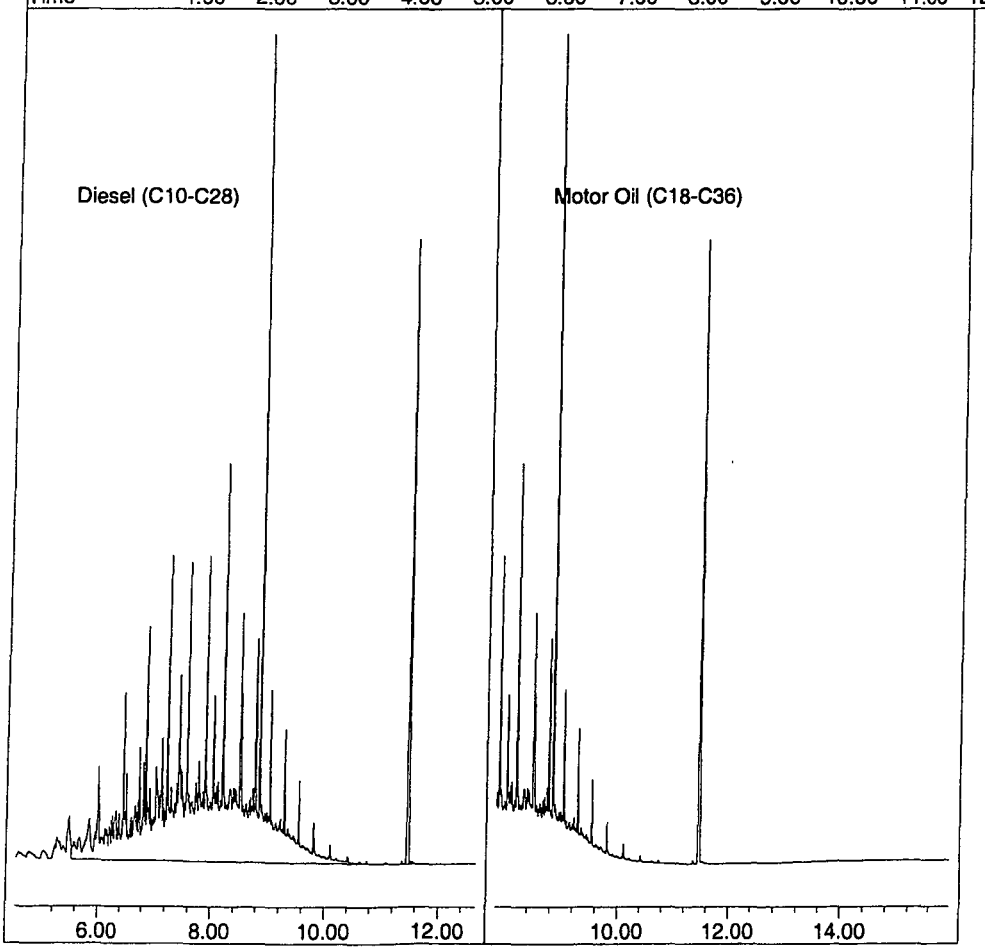
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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





Quantitation Report (Not Reviewed)

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

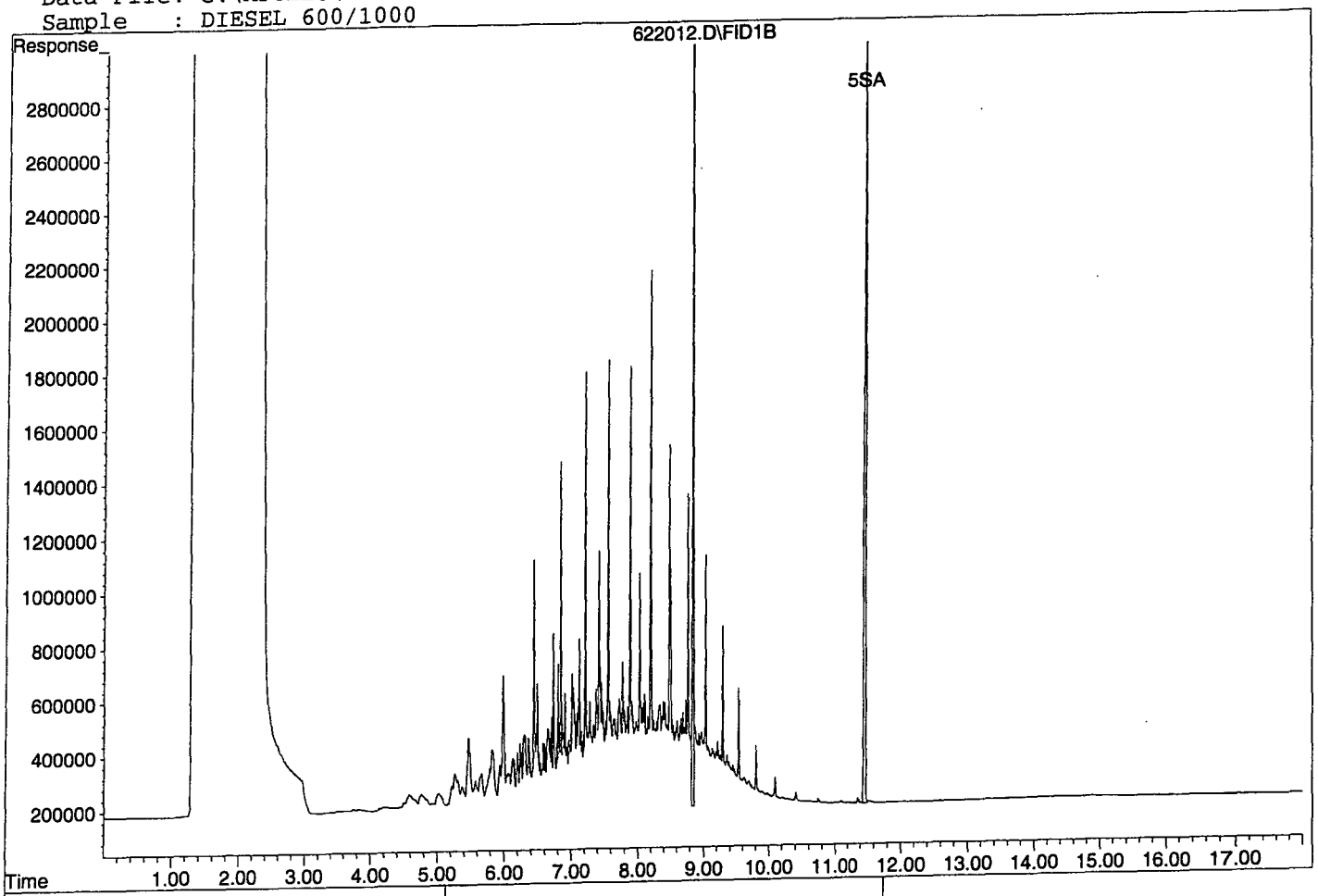
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

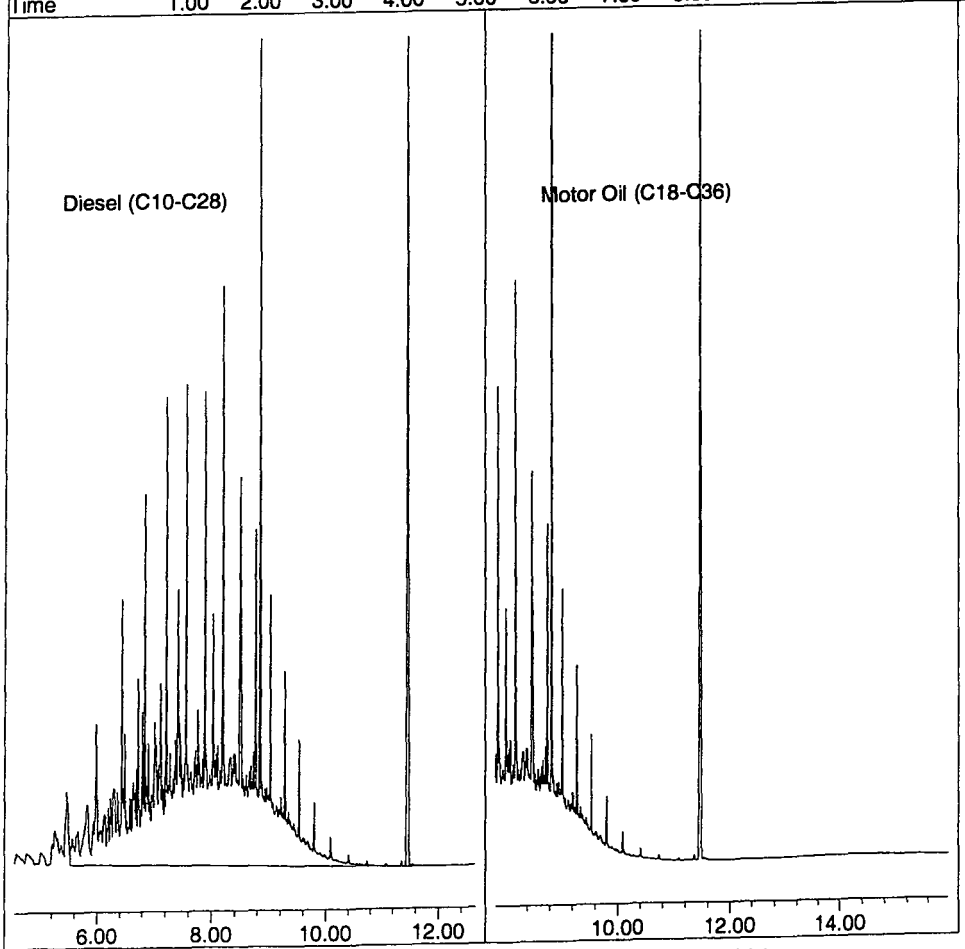
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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





Quantitation Report (Not Reviewed)

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

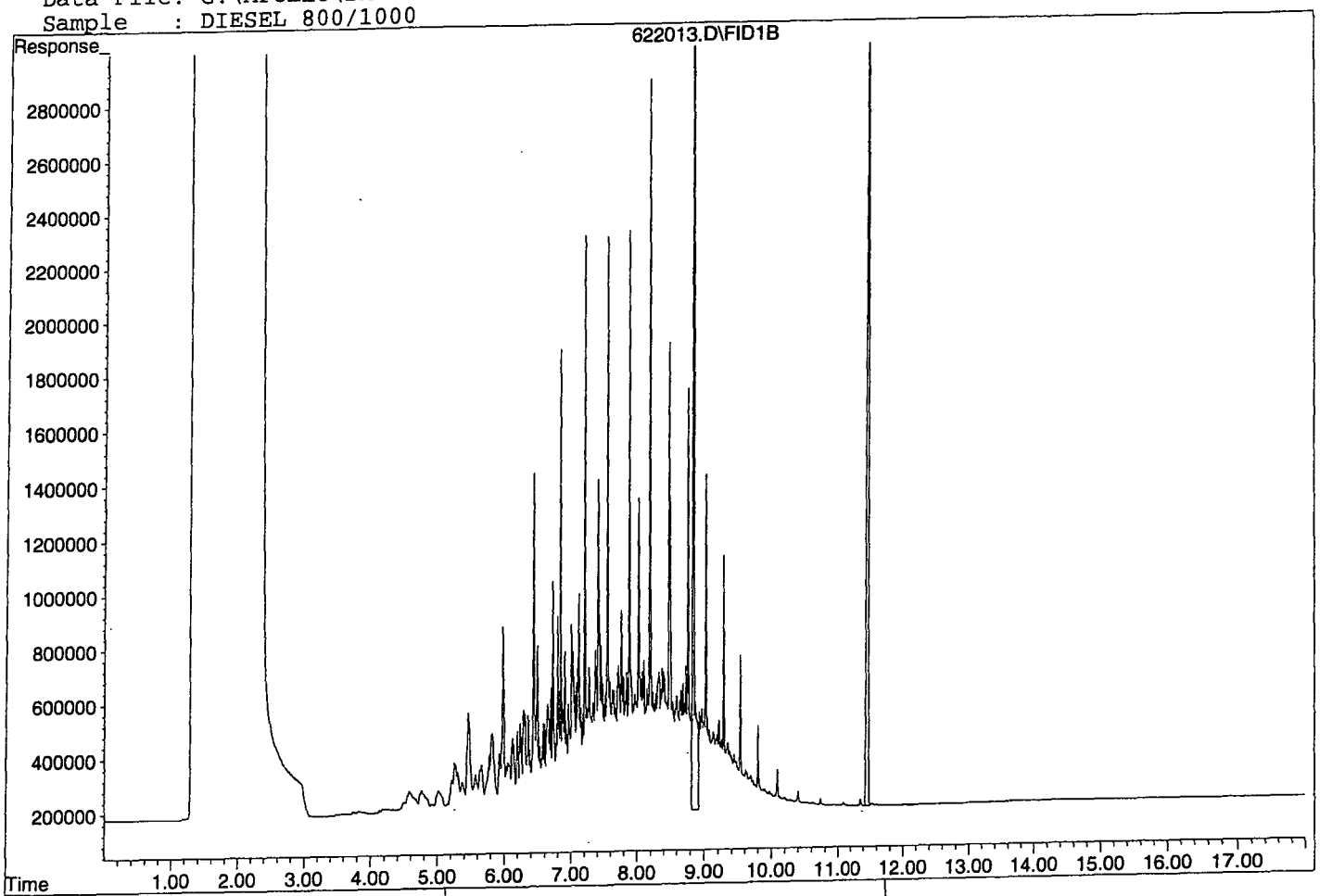
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

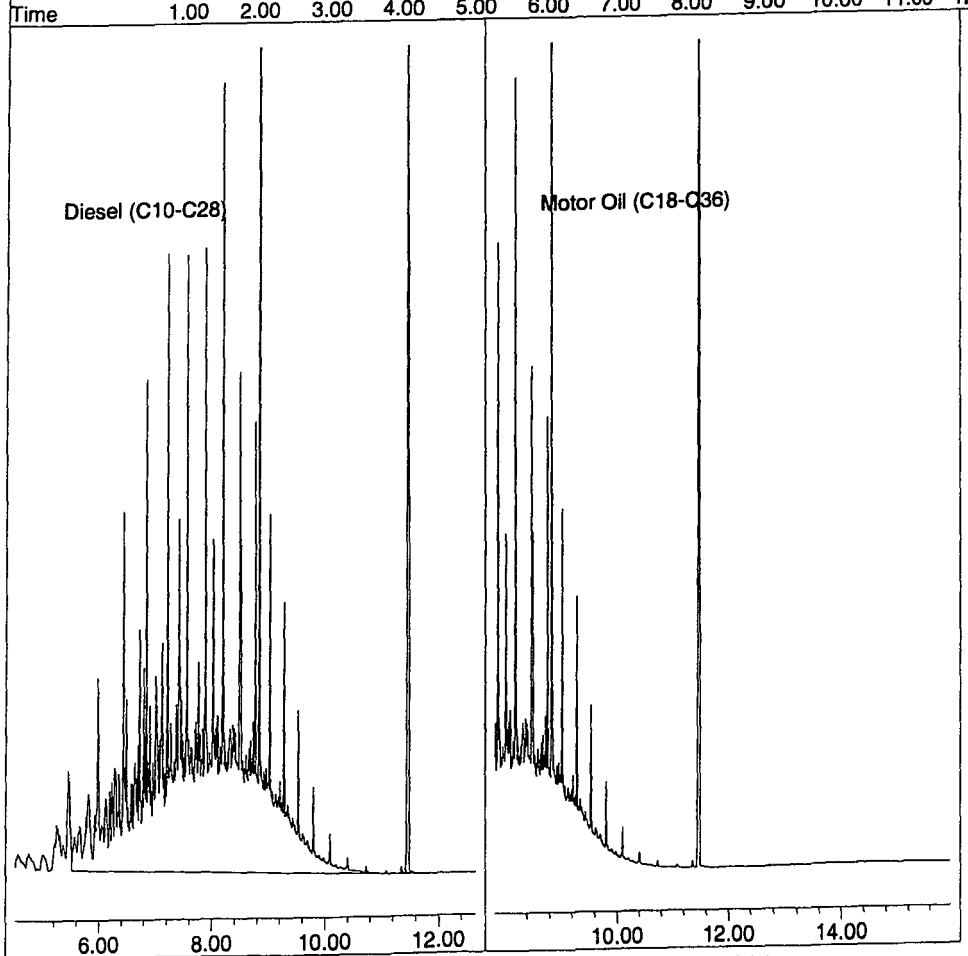
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

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

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





Quantitation Report (Not Reviewed)

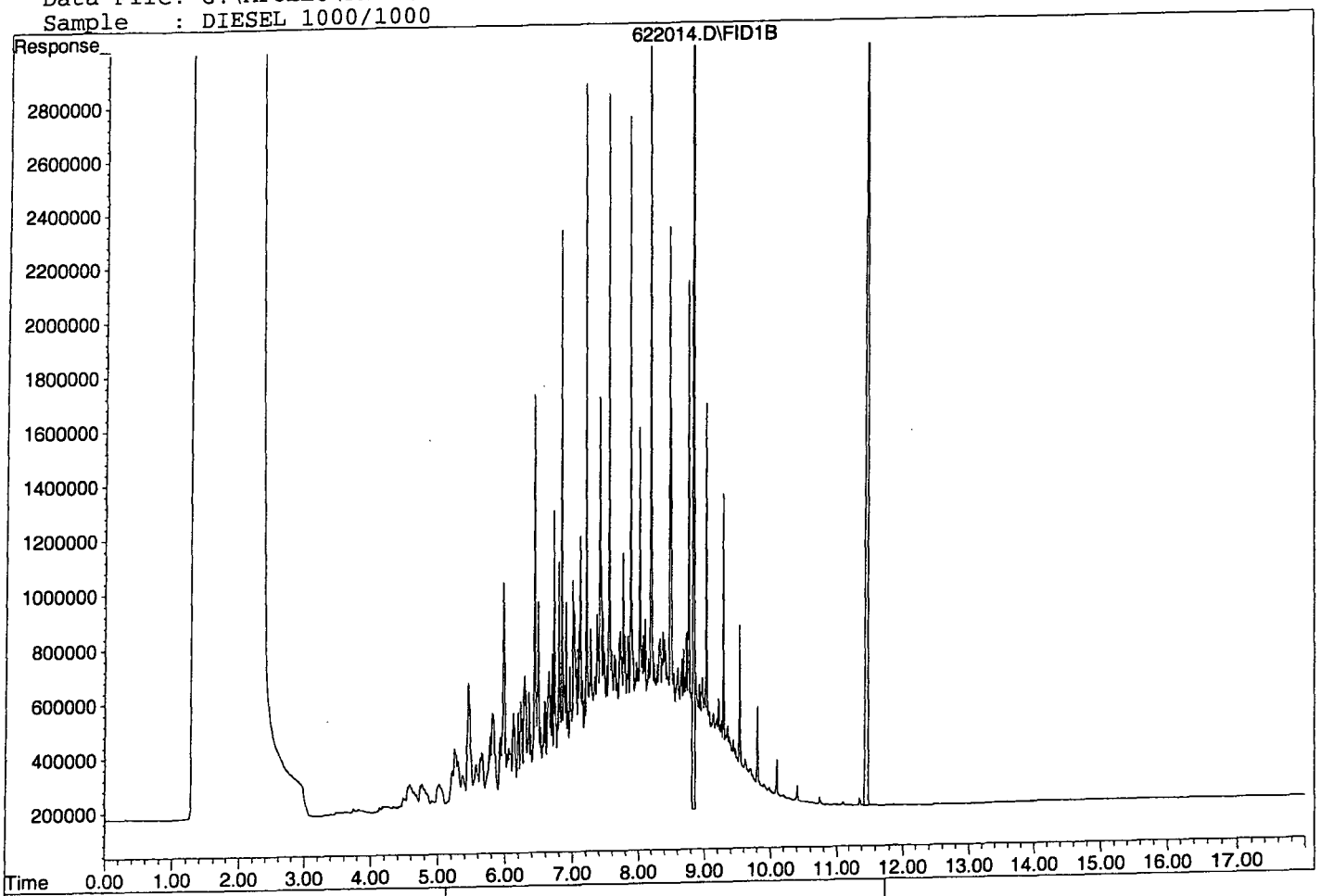
Data File : G:\APOLLO\DATA\120622\622014.D Vial: 14
Acq On : 6-22-12 22:23:21 Operator: LAC
Sample : DIESEL 1000/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

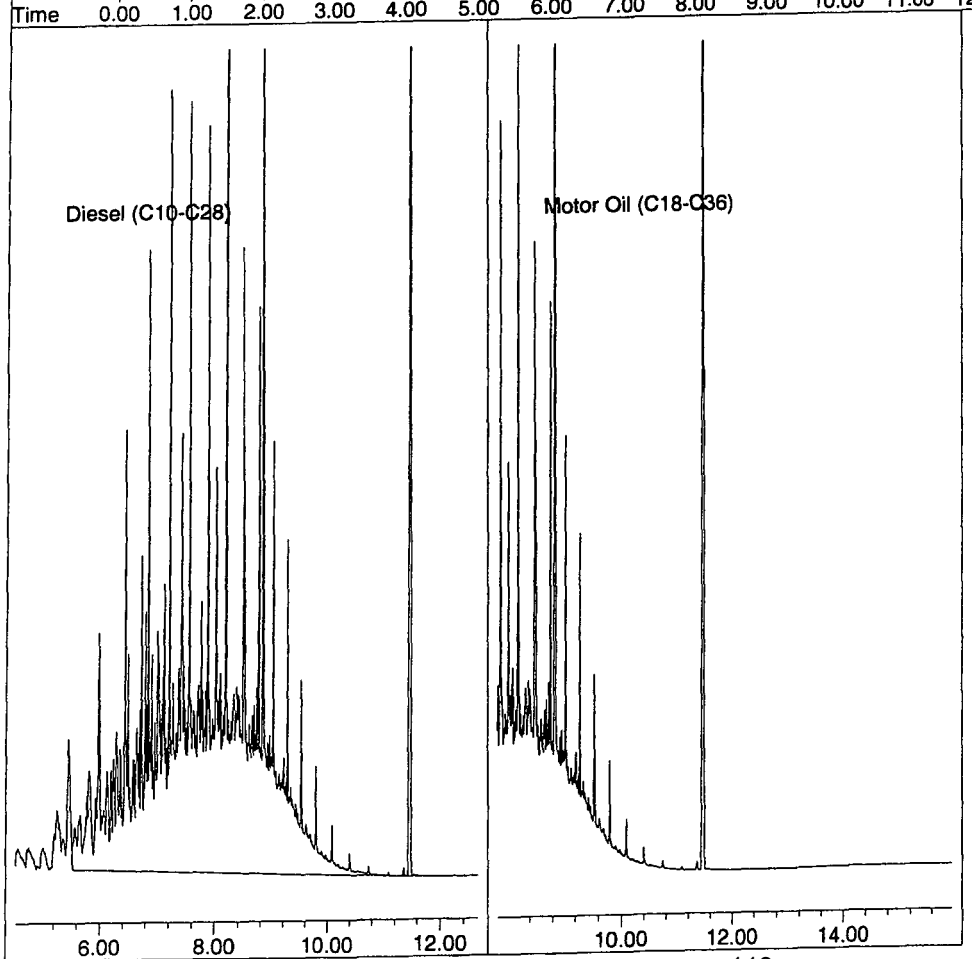
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
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

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: 68258
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							
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39							
40							
		Average			6.0		

Quantitation Report (QT Reviewed)

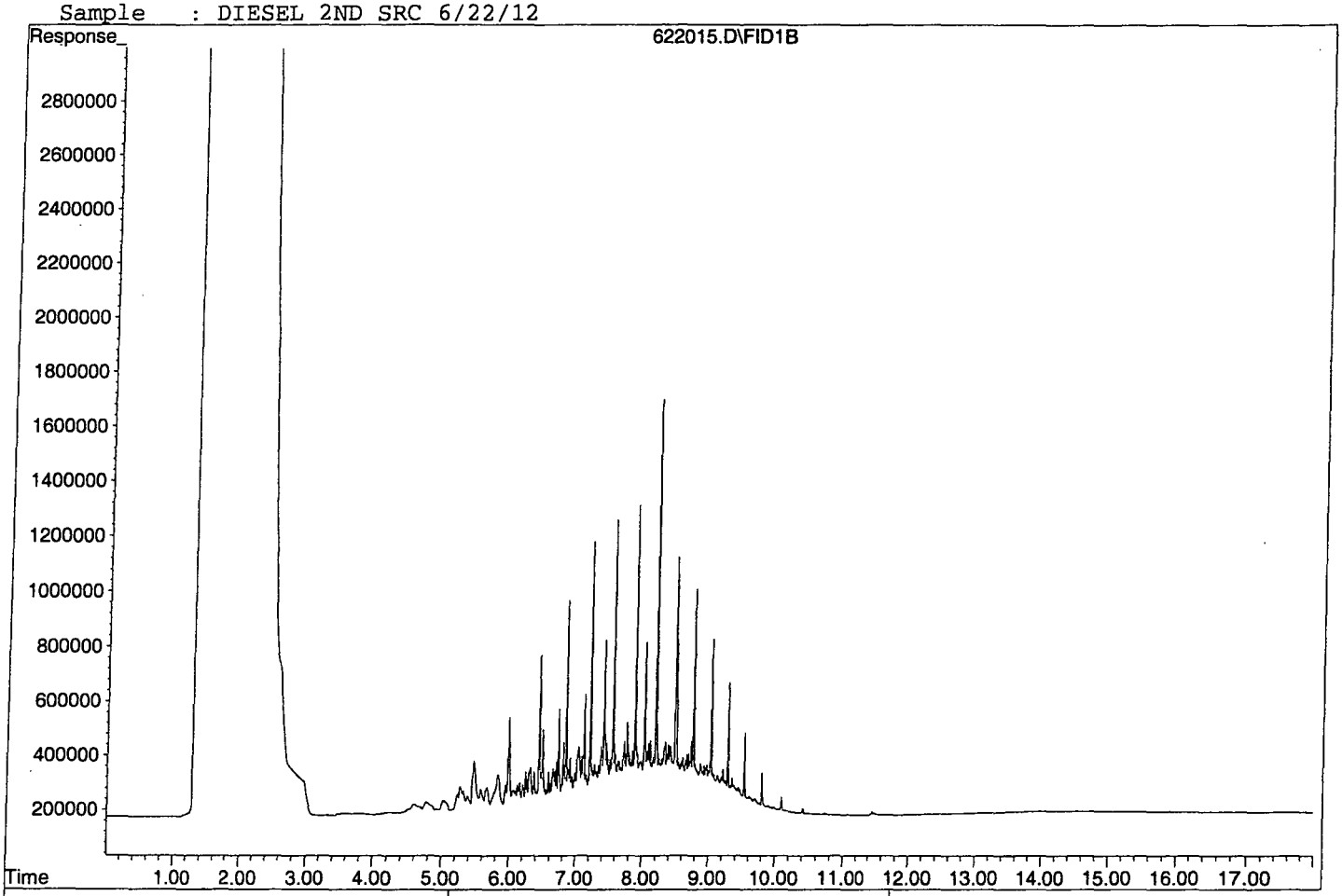
Data File : G:\APOLLO\DATA\120622\622015.D Vial: 15
Acq On : 6-22-12 22:47:20 Operator: LAC
Sample : DIESEL 2ND SRC 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:28 2012 Quant Results File: TPH0622.RES

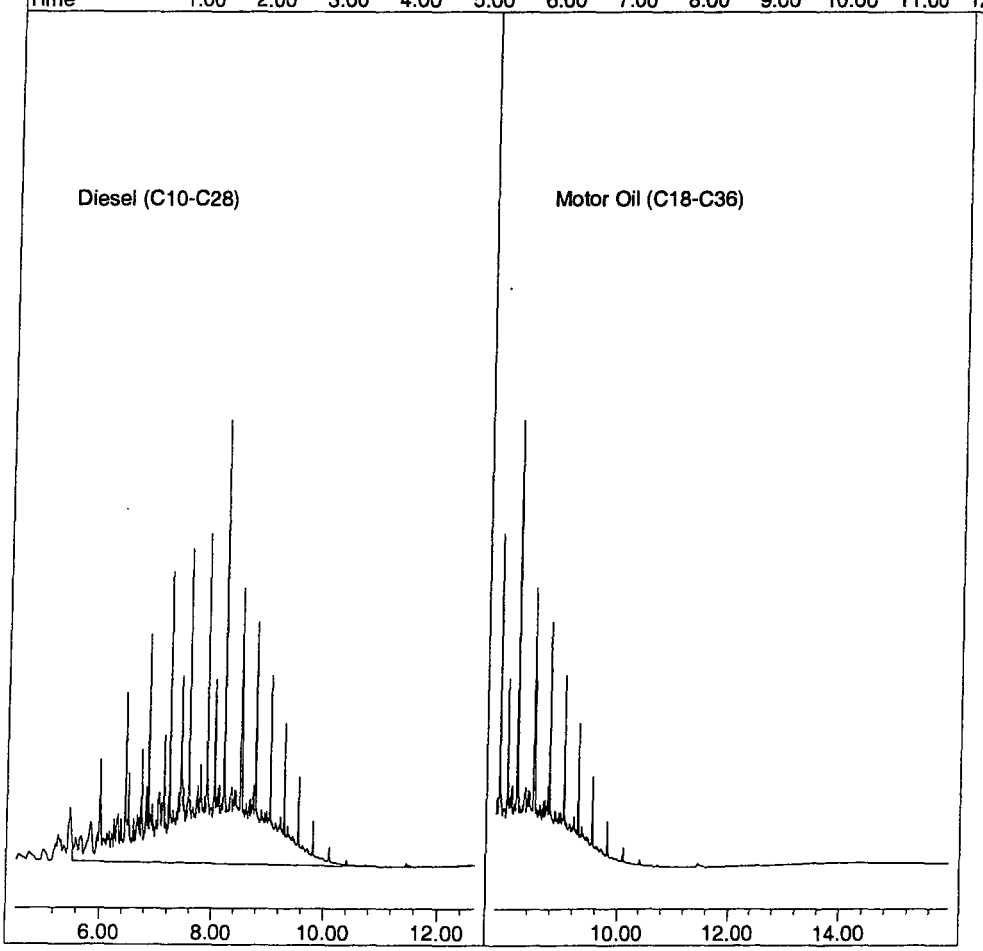
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	413291584	376.067 ppb

Data File: G:\APOLLO\DATA\120622\622015.D
Sample : DIESEL 2ND SRC 6/22/12





TPH Extractables
TPH0719

Form 7

Continuing Calibration

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

SDG No: 68258
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							
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39							
40							
		Average			11.0		

Quantitation Report (QT Reviewed)

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

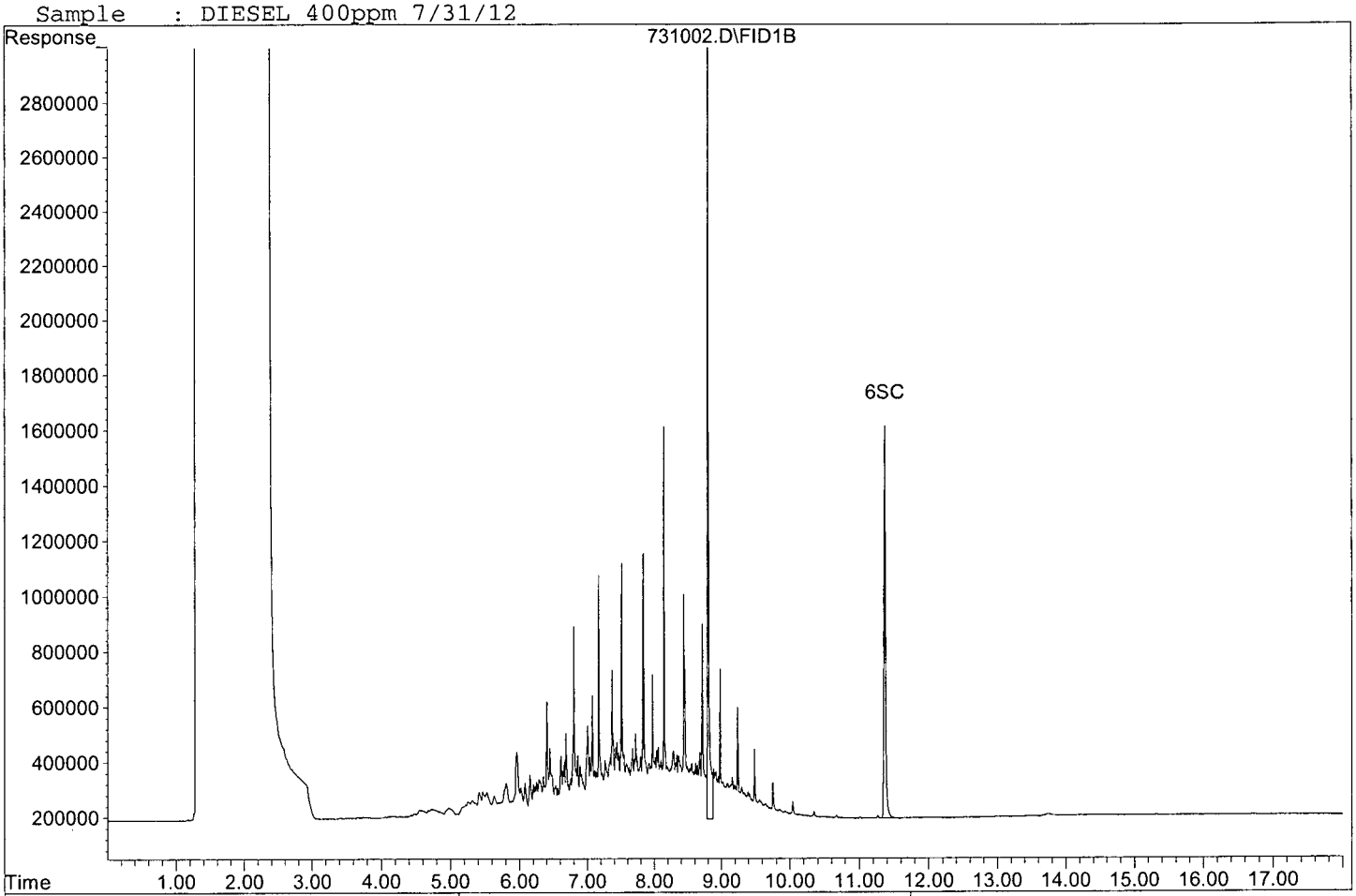
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

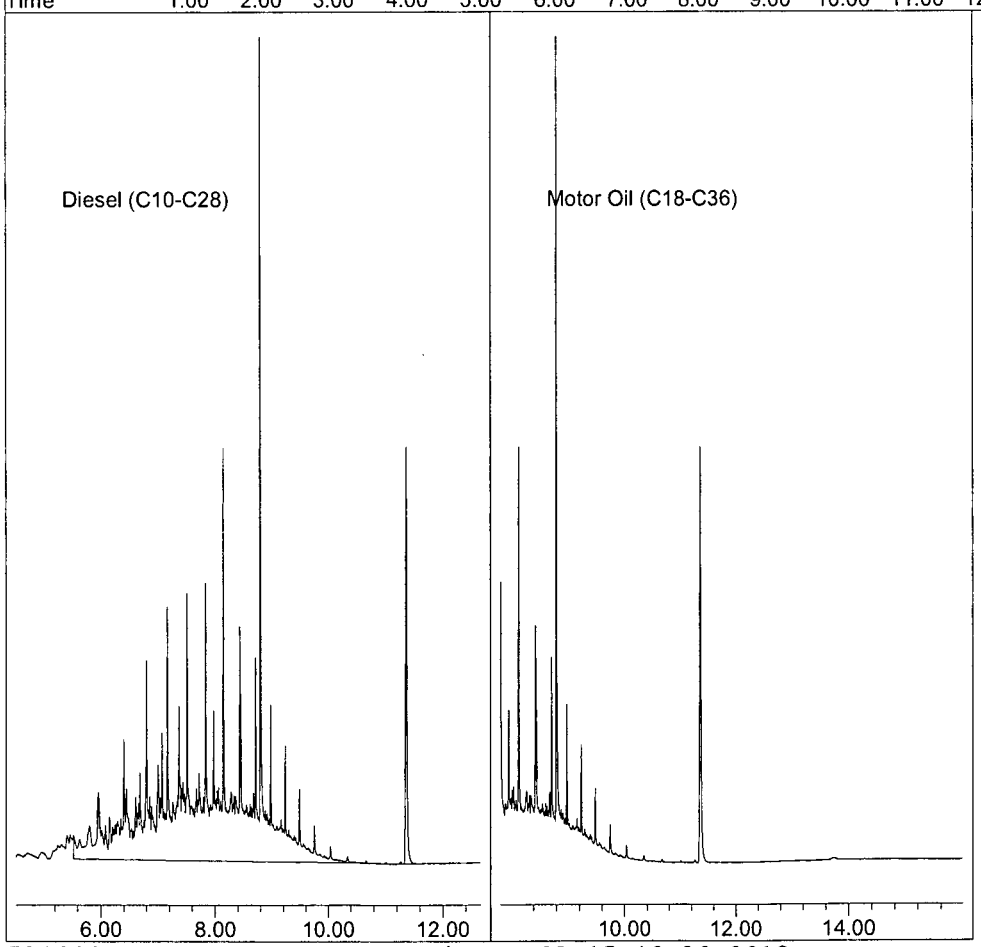
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	34641855	24.581 ppb
Surrogate Spike 30.000	Recovery =		81.94%
6) SC Octacosane(S)	11.37	23218499	15.405 ppb
Surrogate Spike 30.000	Recovery =		51.35%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	395673584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

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

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731002.D
Sample : DIESEL 400ppm 7/31/12





731002.D TPH0719.M Fri Aug 03 15:19:30 2012

TPH Extractables
TPH0719

Form 7

Continuing Calibration

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

SDG No: 68258
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							
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39							
40							
		Average			8.1		

Quantitation Report (QT Reviewed)

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

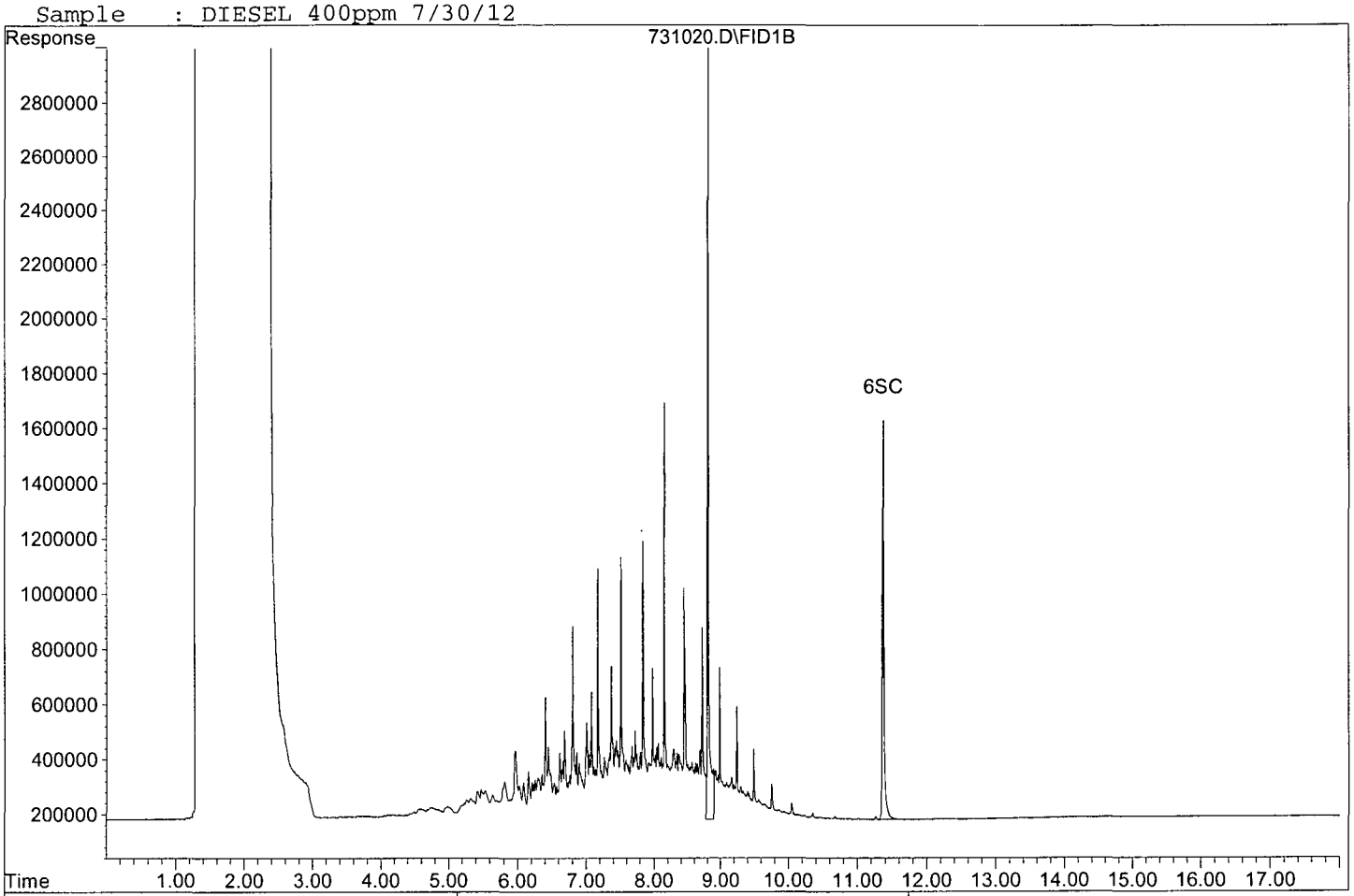
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

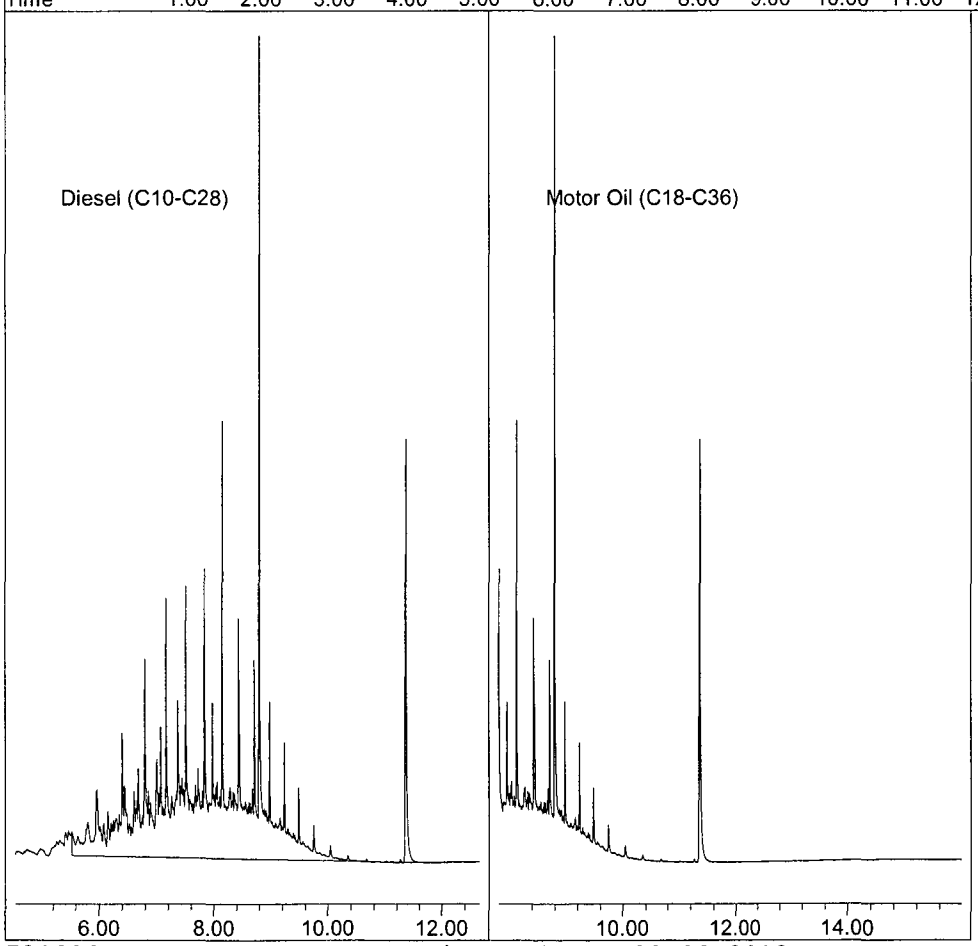
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	38819888	27.546 ppb
Surrogate Spike 30.000	Recovery =		91.82%
6) SC Octacosane(S)	11.36	23947613	15.889 ppb
Surrogate Spike 30.000	Recovery =		52.96%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	407298733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

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

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731020.D
Sample : DIESEL 400ppm 7/30/12





731020.D TPH0719.M Fri Aug 03 15:20:00 2012

TPH Extractables
TPH0719

Form 7

Continuing Calibration

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

SDG No: 68258
Date Analyzed: 07/31/12
Instrument: Apollo
Initial Cal. Date: 07/31/12
Data File: 731032.D, 033.d

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C28)	549491	522051	5.0	HATM	
2	HBTM	Motor Oil (C18-C36)	432503	356513	18	HBTM	
3							
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		Average			11.5		

Quantitation Report (QT Reviewed)

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

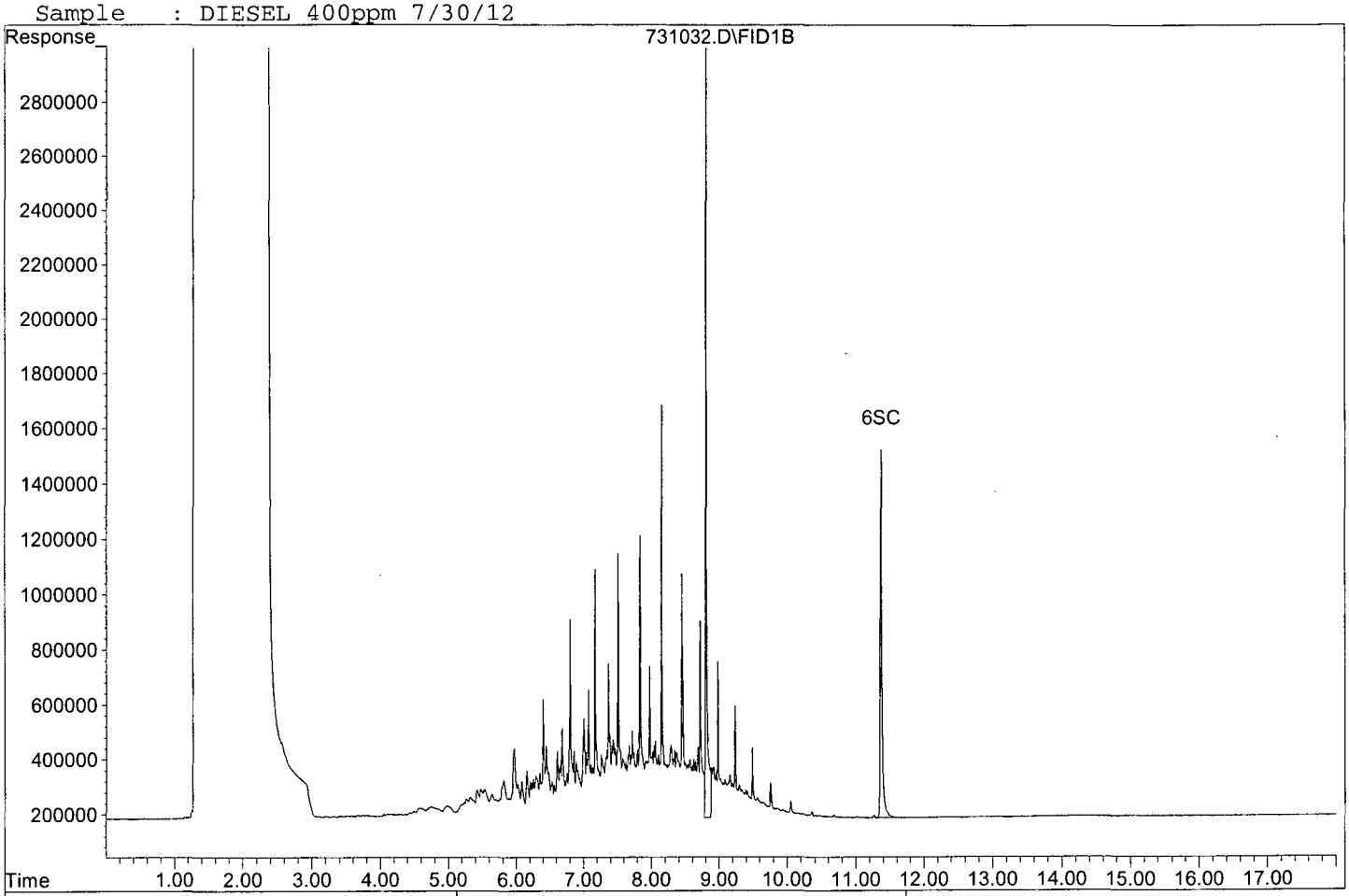
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

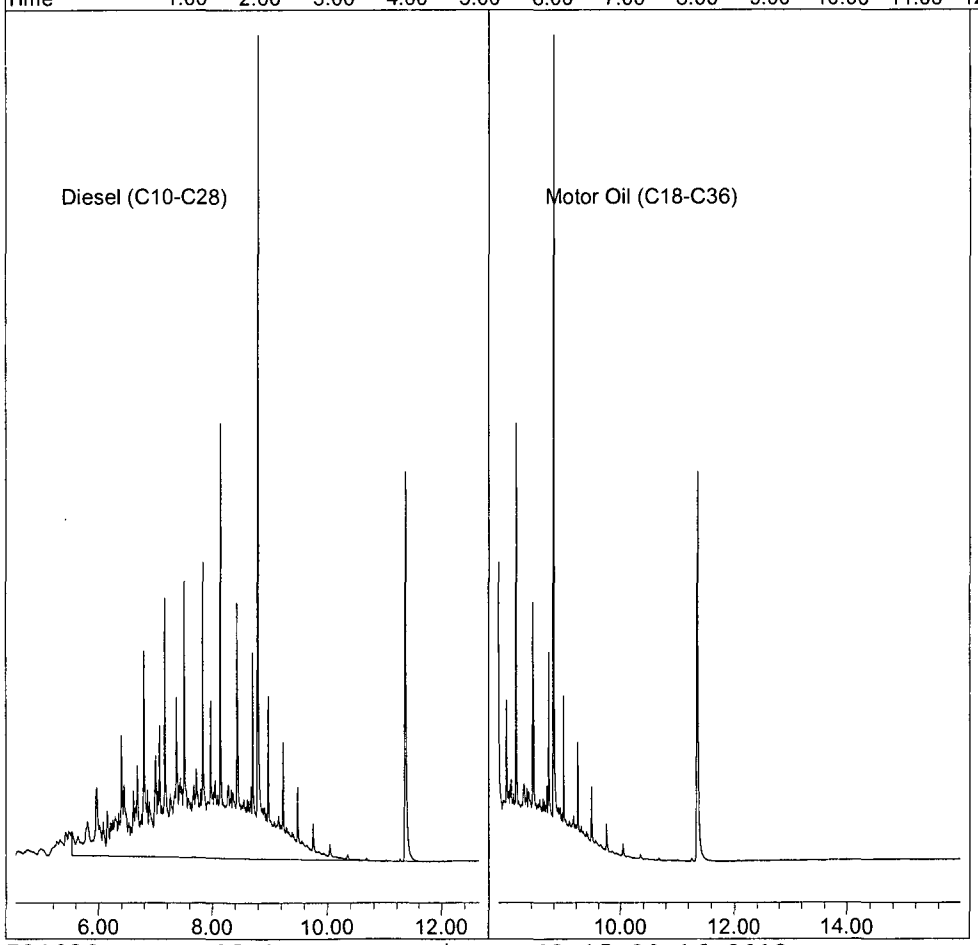
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

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

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

Data File: G:\APOLLO\DATA\120731\731032.D
Sample : DIESEL 400ppm 7/30/12





EPA 8015B
Total Petroleum Hydrocarbons -

Raw Data

Method Blank
TPH Diesel Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

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

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 6:05:52 PM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

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

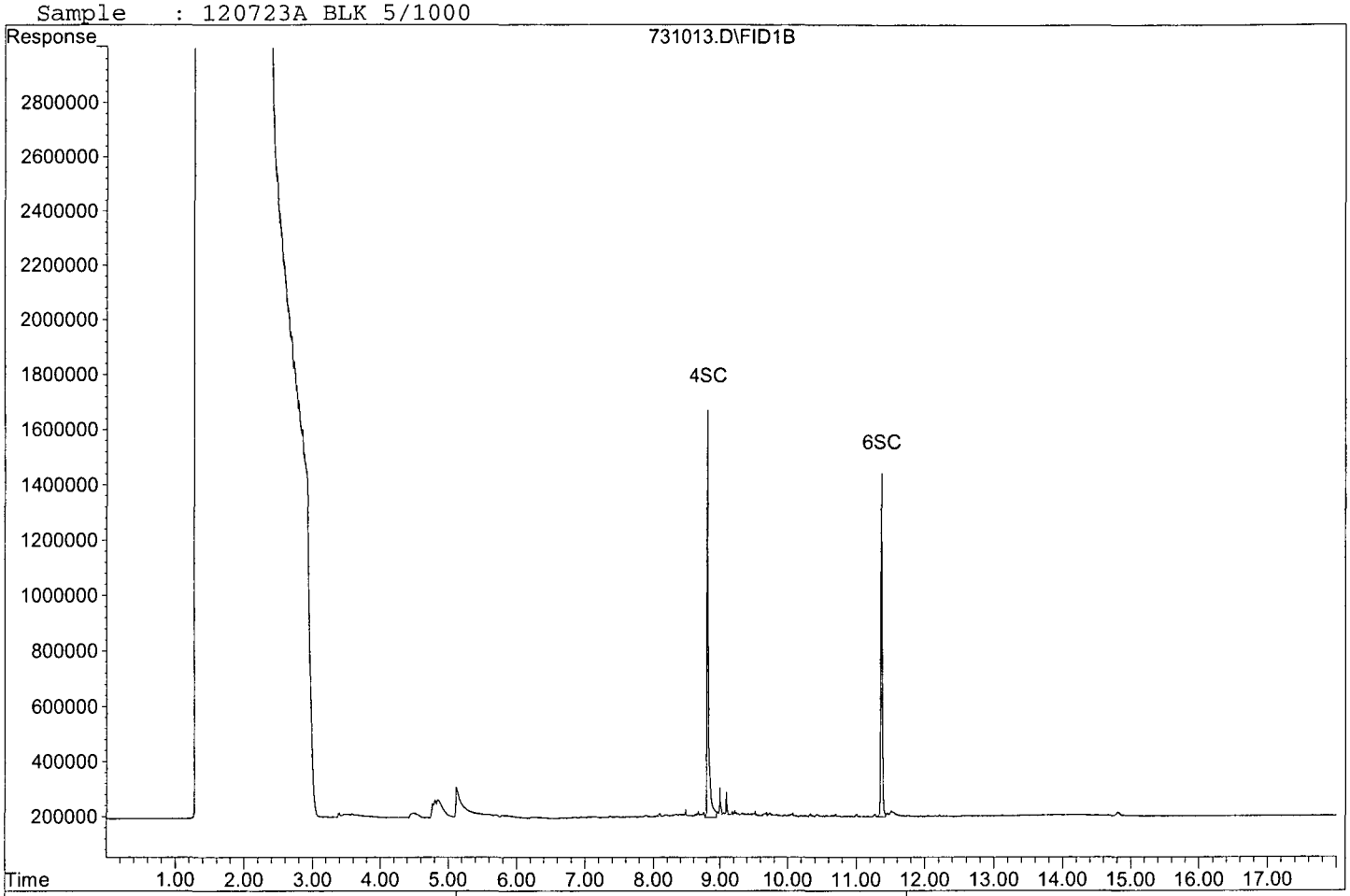
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

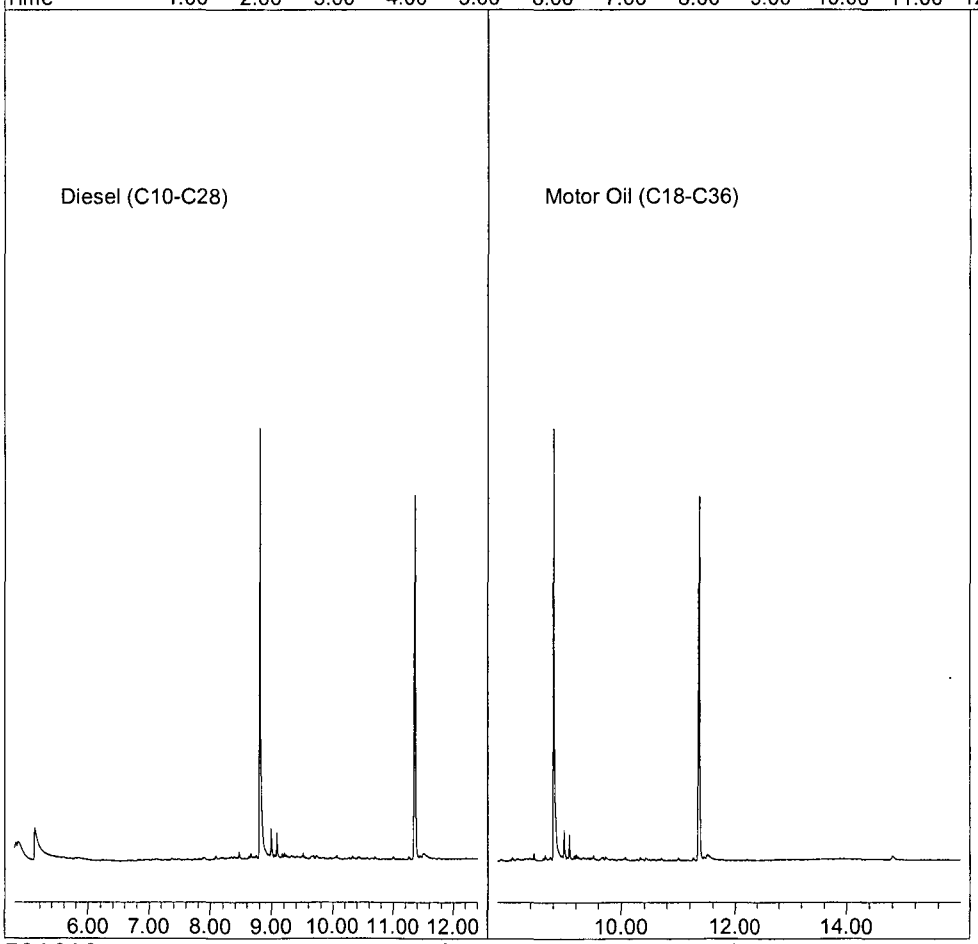
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

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			

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

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
SURROGATE: OCTACOSANE (S)	150	87.7	58.5	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	137	91.3	57-132

Comments: _____

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

Printed: 08/02/12 6:05:48 PM

APPL Standard LCS

Quantitation Report (QT Reviewed)

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

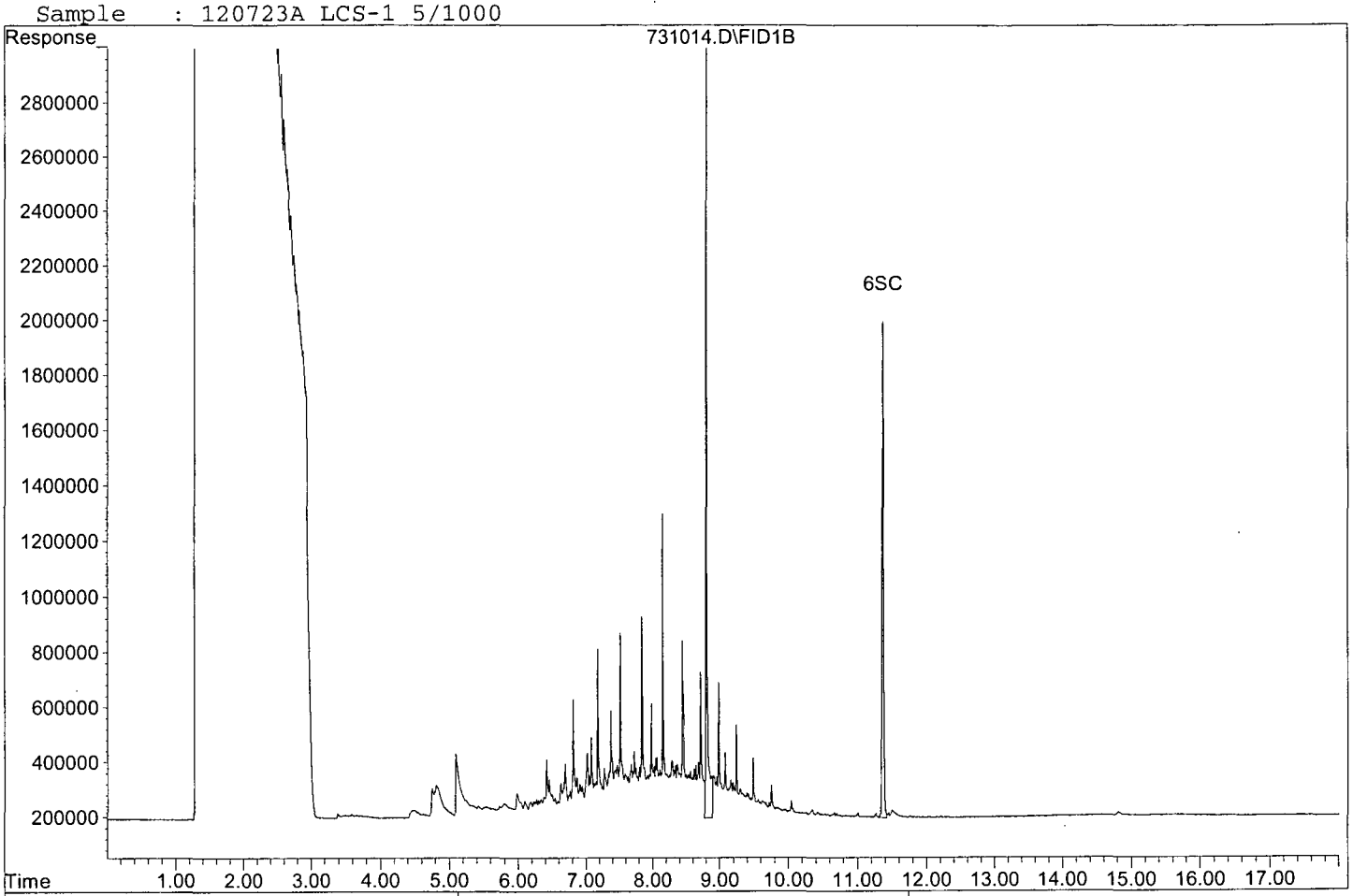
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

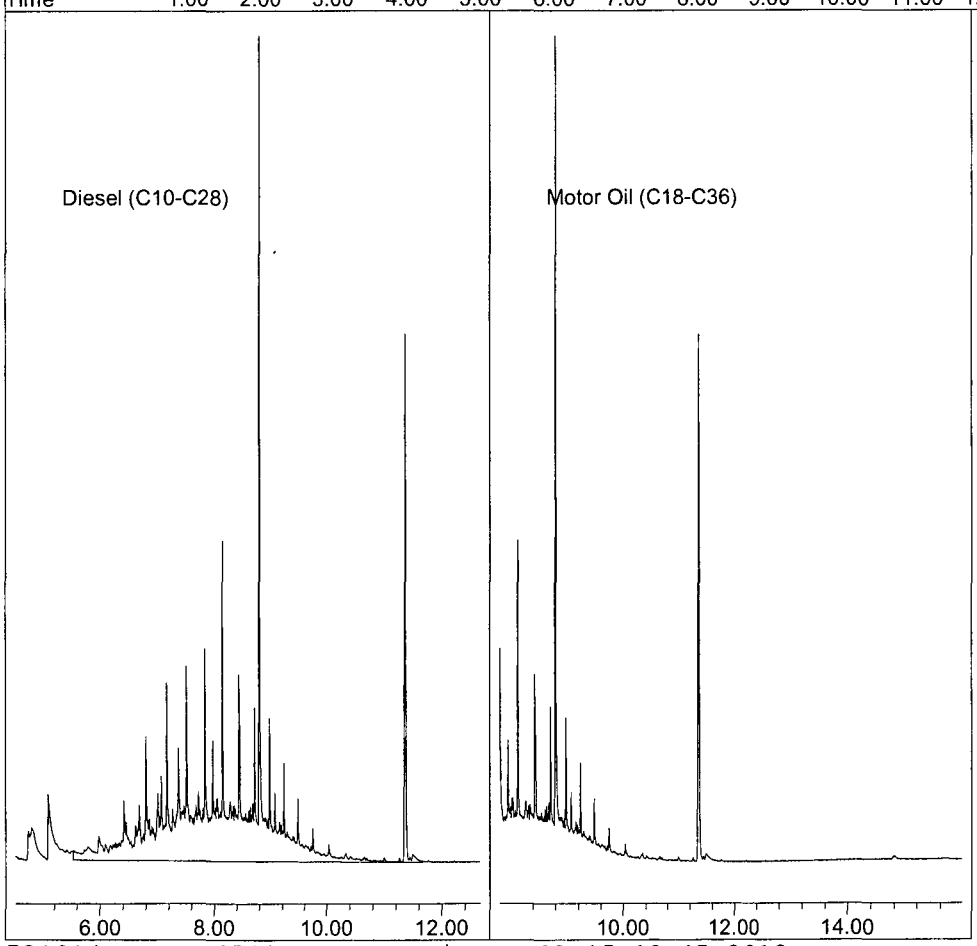
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

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

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

Data File: G:\APOLLO\DATA\120731\731014.D
Sample : 120723A LCS-1 5/1000





STANDARD | CONC | DATE | ALIQUOT | VOLUME | CONC | LOT# | INITIALS

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

005

PCB Soil Spike

AR1016 | 1,000 mg/L | O2SI | 1250 mL | 25mL | 50 ug/mL | Acetone | CM

AR1260 | | | | | | #022912B | 6-21-12

Aroclor 1016 + 1260 Solution, 1,000 mg/L, 1 ml
130011-03
Lot # 163759 | Storage ≤ Ambient | Expiry 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
~~163759~~ op. 2-14-12 CM 6-21-12 ex. 2-14-13

ex. 9-21-12

OCL Soil Surrogate

DECA | 5,000 mg/mL | O2SI | 1mL | 250mL | 20 ug/mL | Acetone | CM

DBC | | | | | | #022912B | 6-21-12

TCMX | | | | | | | ex 9-21-12

Pesticide Surrogate Solution, 5,000 mg/L, 1 ml
o2si
Cat. No: 130070-02
Lot No: 154164
Pesticide Surr. Soln, 5000mg/L
Lot #: 154164 - 29418
Rec: 8/26/11 MFR exp. 12/19/12
CM 6-21-12
Exp: 12/19/2012
Storage: </= Ambient
Solvent: Tol.:Hex. 1:1
ption For Research Use Only
Opened: 6-21-12
ex. 6-21-13

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
011598-03
Lot # 183767 | Storage ≤ -10 Degrees C | Expiry 2/11/16
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	200uL	10mL	1000ug/mL	MC #51306

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

CM 6-22-12

GC/MS STANDARD PREP LOG# _____ PAGE _____

006

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'VENT LOT#	DATE/ INITIALS

MOTOR OIL CAL STD

STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	Motor Oil Composite, 50,000 mg/L, 1 ml; 116390-02; Lot# 183768; Storage ≤ -10 Degrees C; Expiry 1/3/15; R&D only, not human consump. Made in the USA; Solv: Methylene Chloride; Motor oil composite op. 6-22-12; Lot #: 183768 - 30232 ex. 6-22-13; Rec: 1/10/12 MFR exp. 01/08/15; CM 6-22-12	1mL	50mL	1000ug/mL	MC LOT# 51306

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

CM 6-22-12

THC SURR CAL STD

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

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

CM 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	1000

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	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	1000

DIESEL 2ND SOURCE

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

CM 6-22-12

LC/MS STANDARD PREP LOG# _____ PAGE# _____ 039

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	OCL EN.? LOT #	DATE? INITIALS
			MOTOR OIL CCV 500ppm				
MOTOR OIL STD	2000 ug/mL	0725E M.O. STD prep. 7-19-12 exp. 1-19-13	250uL	1mL	500 ug/mL	MC # 51306	CM 7-31-12 exp. 1-19-13
			DIESEL CCV 400ppm				
DIESEL STD	1000 ug/mL	Diesel STD prep. 6-22-12 exp. 12/22/12	400uL	1mL	400 ug/mL	MC #51306	CM 7-31-12 exp. 1-19-13

OCL Second Source

Compounds	Conc in mix	Conc in stock	Aliquot	Source stock	Final Vol
a-BHC	.10 ug/mL	100 ~~10~~ 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~~	~~# 801909B~~
g-BHC			Prep:	~~7~~ 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

LH 8/1/12

LH 8/1/12

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	7/30/13	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: ~~2/13/12~~	8/1/12
		082610B		exp: ~~8/13/12~~	2/1/13
Solvent:	Hexane	Lot: ~~010711A~~	LH 8/3/12		LH 8/3/12

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

LC/MS STANDARD PREP LOG#_____ PAGE#_____

020

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

AR 1248 CALIBRATION CURVE

AR1248 Prep:3/26/12
Exp: 9/26/12

7/18/12
DAL

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

DRA
OP: 7/18/12
EX: 7/18/13

Diesel Fuel #2 Composite,
50,000 mg/L, 1 ml
011598-03

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

Solv: Methylene Chloride

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

DRA 7/18/12

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

THC Surrogate (Gave to Extractions)

CM 7-6-12 2-22-12	O-Terphenyl Octacosane	600 mg/L	O2SI	N/A	25 mL	600 mg/mL	N/A	CM 7-9-12 ex. 7-9-13
			CAT: 110316-05					
			LOT: 188683-30664 thru 668					
			Op. 7-9-12					
			ex. 7-9-13					

MSE002 Surrogate

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

OP FAMPHUR CURVE												
PREP:	07/09/12	EXP:	07/28/12			IA	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL
	OP/FAMPHUR ST	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

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

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

PREP DATE:	07/09/12										
OPC CURVE											
EXP:	10/06/12										
						1	2	3	4	5	6
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	500	700	1000
	Hexane		082610B			990	950	800	500	300	NA
					Final VOL.	1000	1000	1000	1000	1000	1000

CM 7-9-12

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

_SEP011

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
1	120723A Blk				0.250	1 equip	1000 E-WB7,78	5	7	07/23/12 14:15	
2	120723A LCS-1		0.040	1	0.250	1 equip	1000 E-WB7,78	5	7	07/23/12 14:15	
3	120723A LCS-2		0.040	2	0.250	1 equip	1000 E-WB7,78	5	7	07/23/12 14:15	
4	AY65041	AY65041W05			0.250	1 equip	1050 E-WB7,78	5	7	07/23/12 14:15	68248-2 WEEK RUSH -- Amber Liter
5	AY65043	AY65043W06			0.250	1 equip	1050 E-WB7,78	5	7	07/23/12 14:15	68248-2 WEEK RUSH -- Amber Liter
6	AY65044	AY65044W07			0.250	1 equip	1040 E-WB7,78	5	7	07/23/12 14:15	68248-2 WEEK RUSH -- Amber Liter
7	AY65112	AY65112W04			0.250	1 equip	1030 E-WB7,78	5	7	07/23/12 14:15	68258-2 WEEK RUSH -- Amber Liter
8	AY65113	AY65113W05			0.250	1 equip	1030 E-WB7,78	5	7	07/23/12 14:15	68258-2 WEEK RUSH -- Amber Liter
9	AY65144 MS-1	AY65144W15	0.040	1	0.250	1 equip	1000 E-WB7,78	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
0	AY65144 MSD-1	AY65144W07	0.040	1	0.250	1 equip	1020 E-WB5,76	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
1	AY65144 MS-2	AY65144W17	0.040	2	0.250	1 equip	1010 E-WB5,76	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
2	AY65144 MSD-2	AY65144W19	0.040	2	0.250	1 equip	1050 E-WB5,76	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter
3	AY65144	AY65144W05			0.250	1 equip	1010 E-WB5,76	5	7	07/23/12 14:15	68266-2 WEEK RUSH -- Amber Liter

vent and Lot#	
	EMD52104
SO4	2351C512

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

	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

_SEP011

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

olvent and Lot#	
AC	EMD52104
Na2SO4	2351C512

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

	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

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	19	731019.D	4.85437	AY65112W04 5/1030	Water	7-31-12 17:03:40
17	20	731020.D	1	DIESEL 400ppm 7/30/12	Mix(A)	7-31-12 17:28:05
18	22	731022.D	4.85437	AY65113W05 5/1030	Water	7-31-12 18:16:17
19	32	731032.D	1	DIESEL 400ppm 7/30/12	Mix(A)	7-31-12 22:20:07

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank

EPA 8260B VOCs + Gas Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120719W-65112 - 169441**
Batch ID: #86RHB-120719AT1

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: ARS

Printed: 07/31/12 9:50:32 AM
GC SC-Blank-REG MDLs

Method Blank

EPA 8260B VOCs + Gas Water

Blank Name/QCG: **120719W-65112 - 169441**

Batch ID: #86RHB-120719AT1

APPL Inc.
908 North Temperance Avenu
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: ARS

Printed: 07/31/12 9:50:32 AM
GC SC-Blank-REG MDLs

Method Blank

EPA 8260B VOCS + GAS WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120719W-65113 - 169517**
Batch ID: #86RHB-120719AT2

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	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: ARS

Printed: 07/31/12 1:07:17 PM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 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
120719AT1-LCS	Lab Control Spike	70-120	97.8		75-120	102	
120719AT1-BLK	Blank	70-120	102		75-120	101	
AY65114	ES085-TRIP BLANK	70-120	99.9		75-120	99.3	
AY65112	ES081	70-120	98.7		75-120	98.5	
AY65113	ES082	70-120	99.0		75-120	100	

Comments: Batch: #86RHB-120719AT

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 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
120719AT1-LCS	Lab Control Spike	85-115	98.2		85-120	98.0	
120719AT1-BLK	Blank	85-115	100		85-120	99.7	
AY65114	ES085-TRIP BLANK	85-115	98.6		85-120	99.2	
AY65112	ES081	85-115	98.8		85-120	98.8	
AY65113	ES082	85-115	99.3		85-120	98.7	

Comments: Batch: #86RHB-120719AT

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 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
120719AT2-LCS	Lab Control Spike	70-120	97.8		75-120	102	
120719AT2-BLK	Blank	70-120	102		75-120	101	
AY65113	ES082	70-120	99.0		75-120	100	

Comments: Batch: #86RHB-120719AT

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 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
120719AT2-LCS	Lab Control Spike	85-115	98.2		85-120	98.0	
120719AT2-BLK	Blank	85-115	100		85-120	99.7	
AY65113	ES082	85-115	99.3		85-120	98.7	

Comments: Batch: #86RHB-120719AT

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: **120719W-65112 LCS - 169441**
Batch ID: #86RHB-120719AT1

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

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

Comments: _____

Printed: 07/31/12 9:50:23 AM
APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: **120719W-65112 LCS - 169441**
Batch ID: #86RHB-120719AT1

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	290	96.7	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

Comments: _____

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

Printed: 07/31/12 9:50:24 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B VOCS + GAS WATER

APPL ID: **120719W-65113 LCS - 169517**
Batch ID: #86RHB-120719AT2

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	389	130 #	75-125
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: _____

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

Printed: 07/31/12 1:07:01 PM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 Date Analyzed: 07/20/12

Matrix: WATER Instrument: Thor

Blank ID: 120719AT1-BLK Time Analyzed: 0218

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120719AT1-LCS	Lab Control Spike	0719T31	07/19/12 2303
120719AT1-BLK	Blank	0719T38	07/20/12 0218
AY65114	ES085-TRIP BLANK	0719T42	07/20/12 0408
AY65112	ES081	0719T46	07/20/12 0559
AY65113	ES082	0719T47	07/20/12 0626

Comments: Batch: #86RHB-120719AT

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68258

Case No: 68258 Date Analyzed: 07/20/12

Matrix: WATER Instrument: Thor

Blank ID: 120719AT2-BLK Time Analyzed: 0218

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120719AT2-LCS	Lab Control Spike	0719T31	07/19/12 2303
120719AT2-BLK	Blank	0719T38	07/20/12 0218
AY65113	ES082	0719T47	07/20/12 0626

Comments: Batch: #86RHB-120719AT

Printed: 07/31/12 1:06:51 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: 68258
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	ES085-TRIP BLANK	AY65114W01	0719T42.D	07/20/12 4:08
5	ES081	AY65112W01	0719T46.D	07/20/12 5:59
6	ES082	AY65113W01	0719T47.D	07/20/12 6:26
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

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

Form 5
Tune Summary

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

SDG No: 68258
Date Analyzed: 07/19/12
Instrument: Thor
Time Analyzed: 21:40

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		CCV gas 300ug/L (SS)	0719T33.D	07/19/12 23:59
2		CCV gas 300ug/L	0719T34.D	07/20/12 0:27
3	Lab Control Spike	LCS gas 300ug/L	0719T35.D	07/20/12 0:54
4	Blank	120719A BLK-1WT	0719T38.D	07/20/12 2:18
5	ES082	AY65113W01	0719T47.D	07/20/12 6:26
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.9
75	30 - 60% of mass 95	47.3
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.8
173	0 - 2% of mass 174	1.0
174	50 - 100% of mass 95	95.8
175	5 - 9% of mass 174	7.5
176	95 - 101% of mass 174	96.9
177	5 - 9% of mass 176	6.2

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 0725T13.D
Matrix: Water
ID: 5ng- BFB STD 07-16-12B

SDG No: 68258
Date Analyzed: 07/25/12
Instrument: Thor
Time Analyzed: 14:59

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		CCV gas 300ug/L	0725T14.D	07/25/12 15:27
2	Lab Control Spike	LCS gas 300ug/L (SS)	0725T15.D	07/25/12 15:55
3	Blank	120725A BLK-1WT	0725T20.D	07/25/12 18:14
4	ES085-TRIP BLANK	AY65114W02	0725T22.D	07/25/12 19:09
5	ES081	AY65112W02	0725T23.D	07/25/12 19:37
6				
7				
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11				
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14				
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16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	16.9
75	30 - 60% of mass 95	46.8
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	6.7
173	0 - 2% of mass 174	0.3
174	50 - 100% of mass 95	94.5
175	5 - 9% of mass 174	7.4
176	95 - 101% of mass 174	97.6
177	5 - 9% of mass 176	6.1

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 68258

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	AY65114W01	437504	6.73	353408	9.88	204928	12.20
05	AY65112W01	437824	6.73	354240	9.87	200896	12.20
06	AY65113W01	461440	6.72	370688	9.87	220608	12.20
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.: 68258

Lab File ID (Standard): 0719T21.D Date Analyzed: 07/19/12

Instrument ID: Thor Time Analyzed: 18:26

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	908946	6.73	1020090	9.88	1167560	12.20
	UPPER LIMIT	1817892	7.23	2040180	10.38	2335120	12.70
	LOWER LIMIT	454473	6.23	510045	9.38	583780	11.70
	SAMPLE NO.						
01	CCV gas 300ug/L (SS)	931728	6.73	1044020	9.87	1183160	12.20
02	CCV gas 300ug/L	923126	6.73	1020890	9.87	1142880	12.20
03	LCS gas 300ug/L	943495	6.73	1050870	9.87	1213950	12.20
04	120719A BLK-1WT	913286	6.73	1028060	9.87	1144200	12.20
05	AY65113W01	945344	6.72	1059320	9.87	1222850	12.20
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.: 68258

Lab File ID (Standard): 0725T07.D Date Analyzed: 07/25/12

Instrument ID: Thor Time Analyzed: 12:13

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

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	782981	6.73	897407	9.87	996199	12.20
	UPPER LIMIT	1565962	7.23	1794814	10.37	1992398	12.70
	LOWER LIMIT	391491	6.23	448704	9.37	498100	11.70
	SAMPLE NO.						
01	CCV gas 300ug/L	819782	6.73	915724	9.87	1043660	12.20
02	LCS gas 300ug/L (SS)	788179	6.73	879850	9.88	1024200	12.20
03	120725A BLK-1WT	787932	6.73	886149	9.87	982900	12.20
04	AY65114W02	780377	6.73	884072	9.87	988550	12.20
05	AY65112W02	775499	6.73	885186	9.88	1012070	12.20
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.

Manual Integration Summary

ARF: 68258

APPL ID	Client ID	Method	Analyte	Type	Comment
AY65112	Blank	EPA 8260B	GASOLINE	Blank	(MI1) Integration does not follow baseline.
AY65112	LCS	EPA 8260B	GASOLINE	LCS	(MI1) Integration does not follow baseline.
AY65112	ES081	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.
AY65114	ES085-TRIP BLANK	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.

Manual Integration Summary

ARF: 68258

APPL ID	Client ID	Method	Analyte	Type	Comment
AY65113	Blank	EPA 8260B	GASOLINE	Blank	(MI1) Integration does not follow baseline.
AY65113	LCS	EPA 8260B	GASOLINE	LCS	(MI1) Integration does not follow baseline.
AY65113	ES082	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

ARF: 68258

Sample ID: ES081

APPL ID: AY65112

Sample Collection Date: 07/18/12

QCG: #86RHB-120719AT1-169441

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 #: 0719T46
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:50:45 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

ARF: 68258

Sample ID: ES081

APPL ID: AY65112

Sample Collection Date: 07/18/12

QCG: #86RHB-120719AT1-169441

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	98.7	70-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.5	75-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.8	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 #: 0719T46
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:50:45 AM
APPL-F1-SC-NoMC-REG MDLs

Data File : M:\THOR\DATA\T120719\0719T46.D Vial: 46
Acq On : 20 Jul 12 5:59 Operator: DG,RS,HW,ARS,SV
Sample : AY65112W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 12:18 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	437824	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	354240	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	200896	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.94	111	215711	31.48437 ppb	0.00
Spiked Amount 31.881			Recovery = 98.754%		
36) 1,2-DCA-D4(S)	6.32	65	211537	33.22239 ppb	0.00
Spiked Amount 33.647			Recovery = 98.738%		
56) Toluene-D8(S)	8.43	98	772846	36.90355 ppb	0.00
Spiked Amount 37.345			Recovery = 98.819%		
64) 4-Bromofluorobenzene(S)	11.05	95	287895	29.06868 ppb	0.00
Spiked Amount 29.515			Recovery = 98.488%		

Target Compounds Qvalue

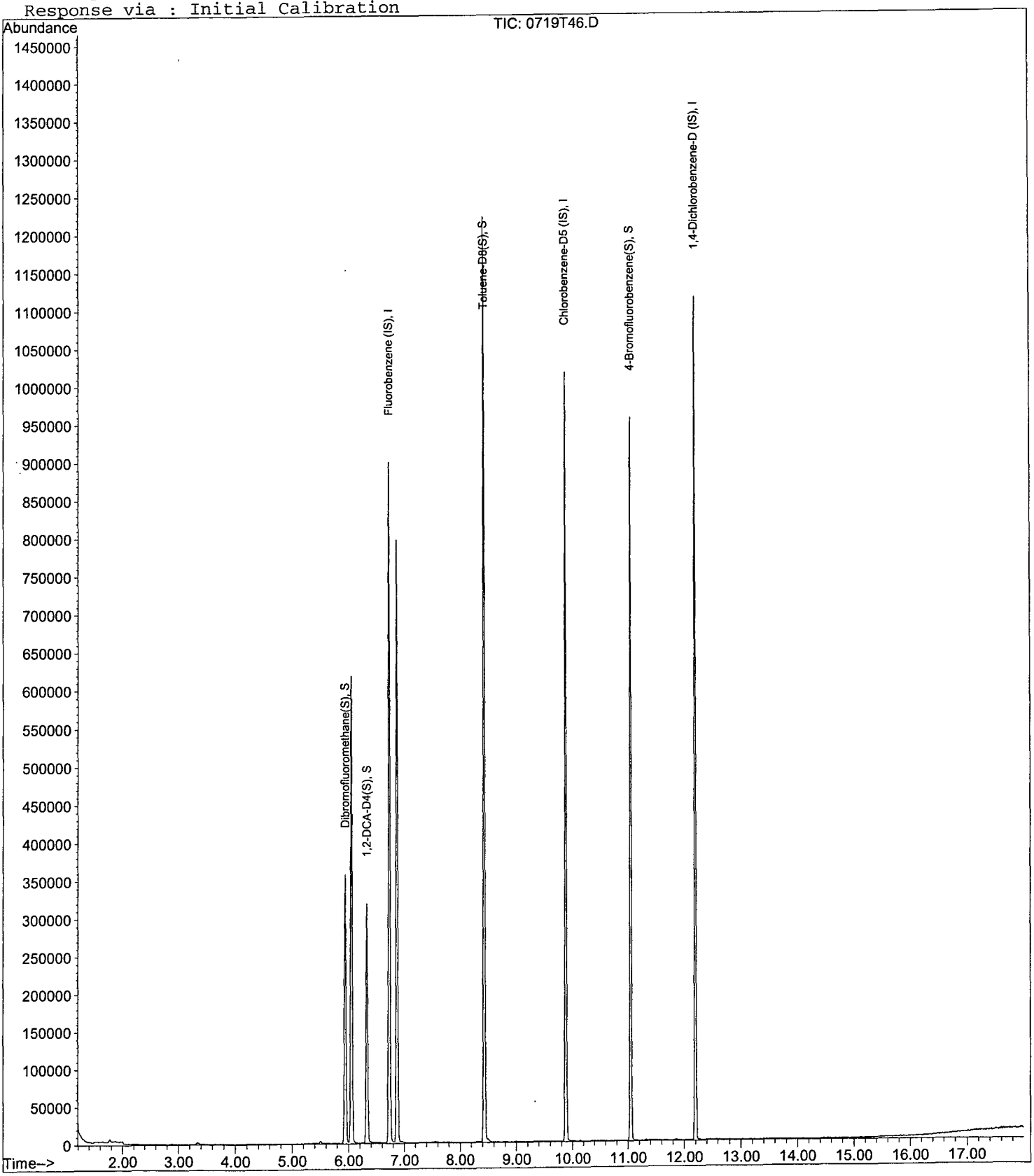
(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120719\0719T46.D
Acq On : 20 Jul 12 5:59
Sample : AY65112W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 46
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 12:18 2012 Quant Results File: TALLW.RES

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



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T23.D Vial: 22
Acq On : 25 Jul 12 19:37 Operator: DG,RS,HW,ARS,SV
Sample : AY65112W02 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 8:11 2012 Quant Results File: TGAS.RES

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

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	775499	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	885186	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1012066	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10254338m	24.83425	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

(#) = qualifier out of range (m) = manual integration
0725T23.D TGAS.M Thu Jul 26 08:28:58 2012 Page 1

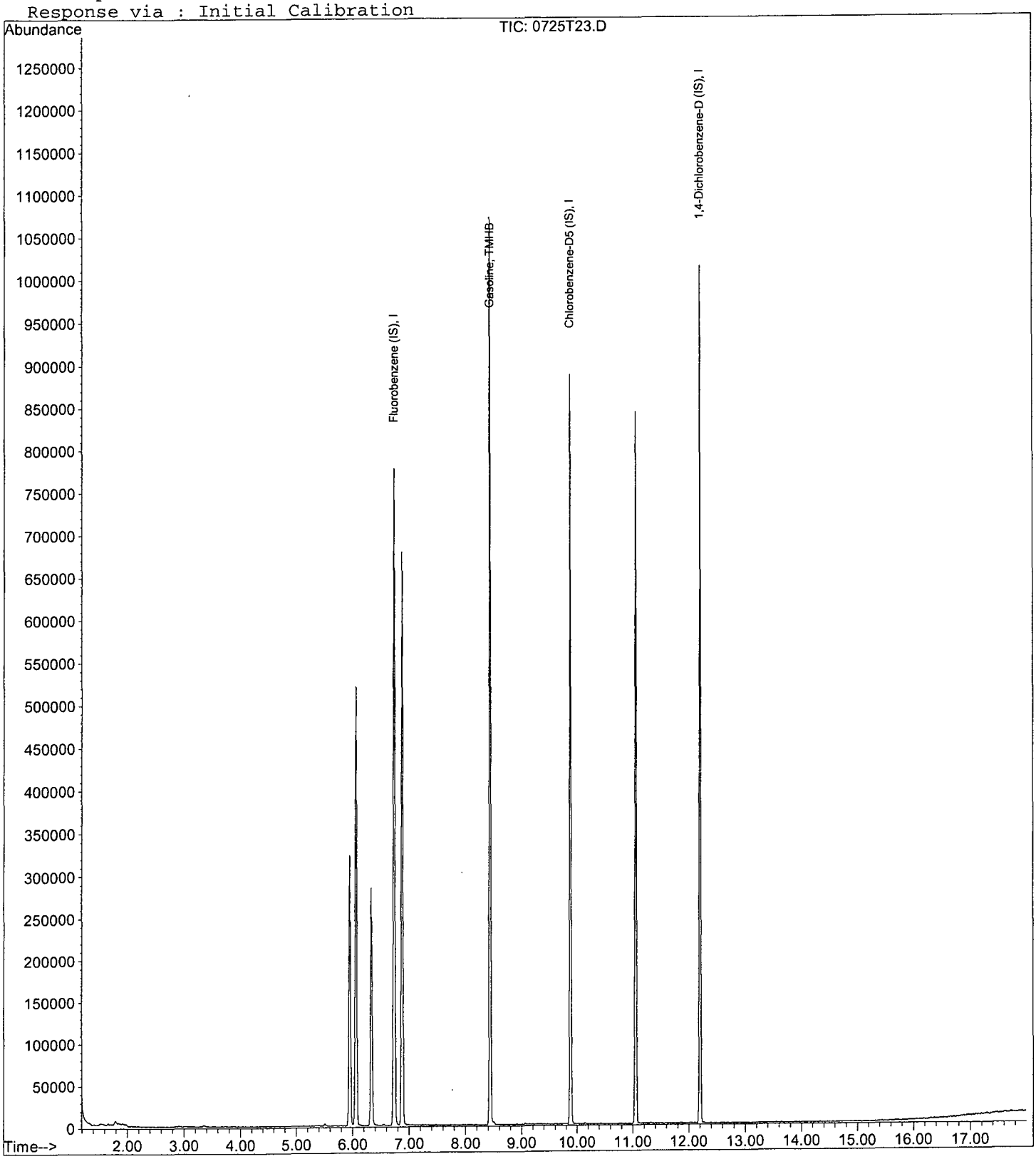
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T23.D
Acq On : 25 Jul 12 19:37
Sample : AY65112W02
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 22
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 8:11 2012 Quant Results File: TGAS.RES

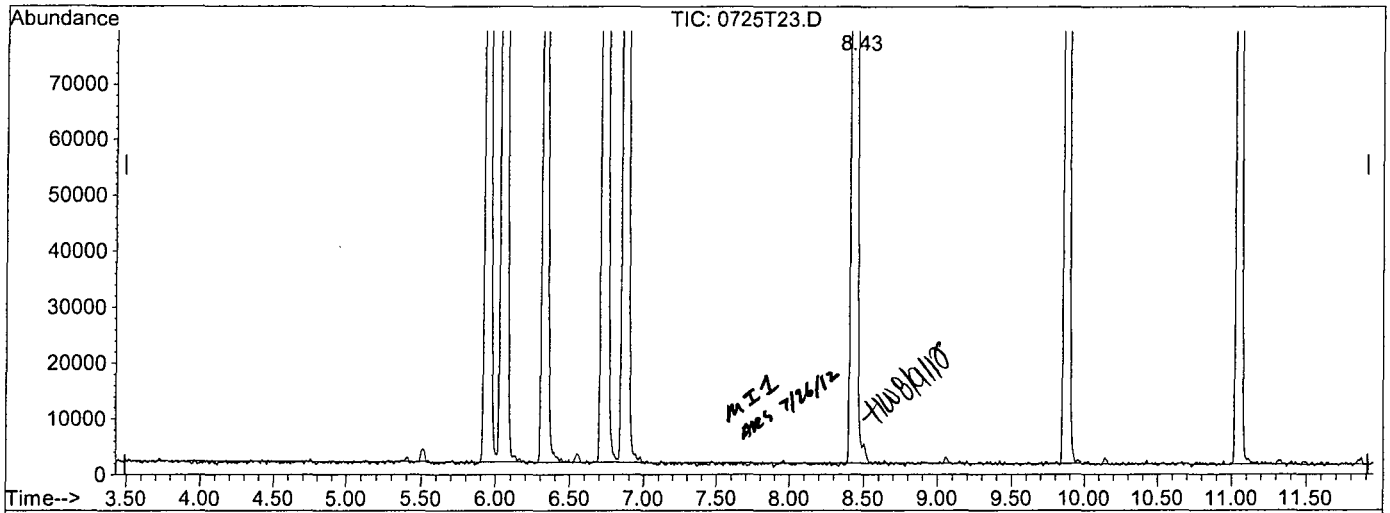
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

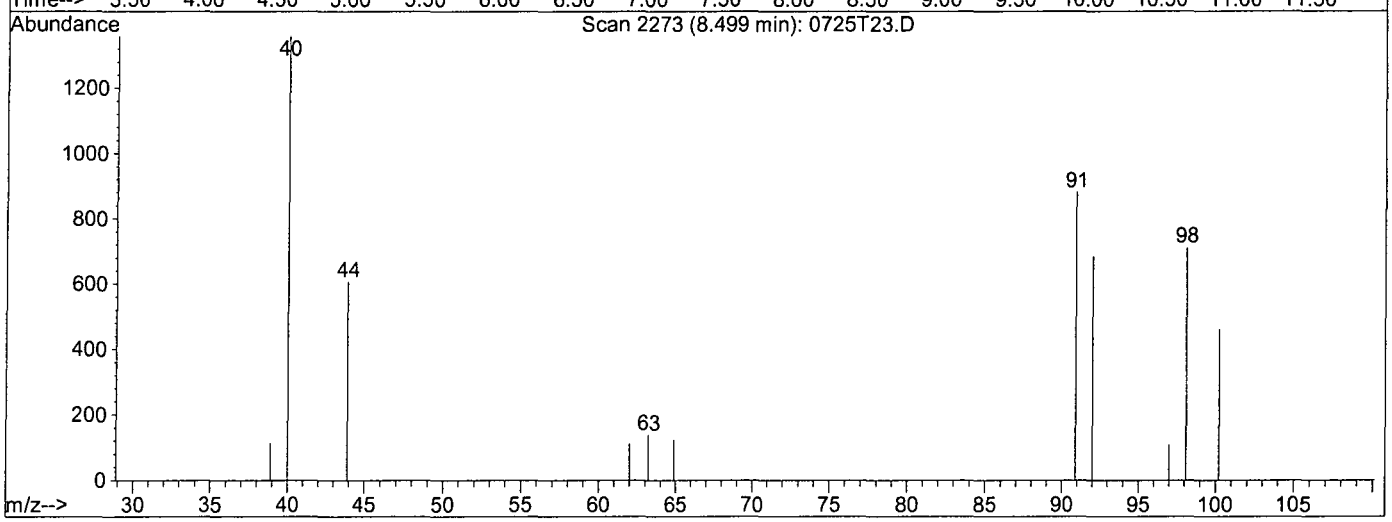


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T23.D Vial: 22
Acq On : 25 Jul 12 19:37 Operator: DG,RS,HW,ARS,SV
Sample : AY65112W02 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:10 2012 Quant Results File: temp.res

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





TIC: 0725T23.D

(2) Gasoline (TMHB)

8.50min -56.2379ppb m

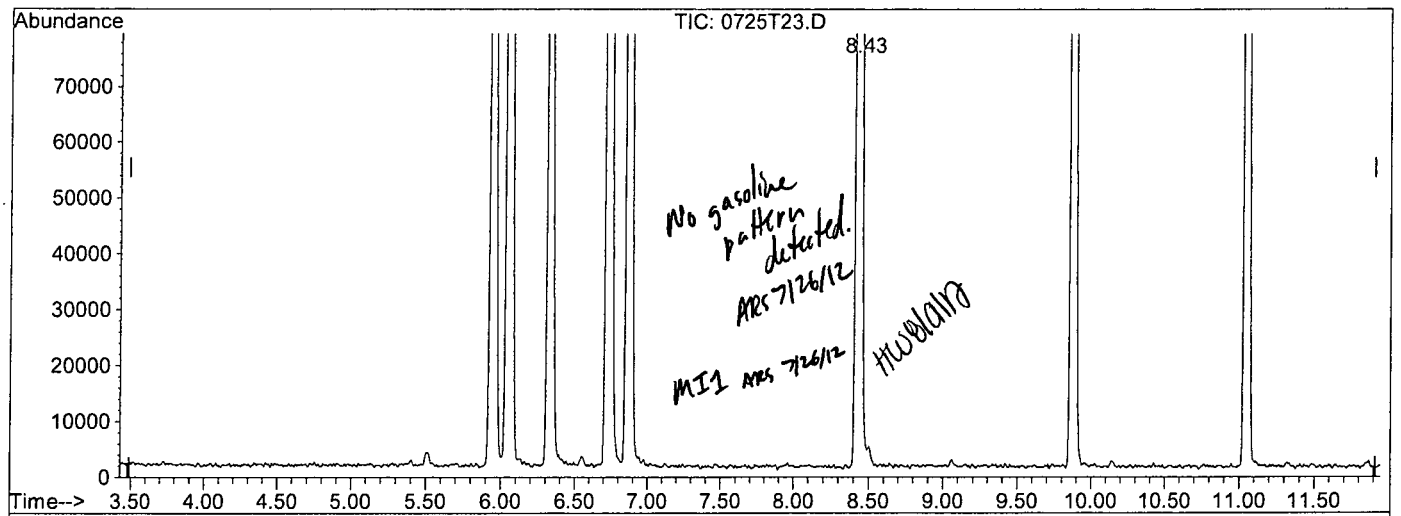
response 7514555

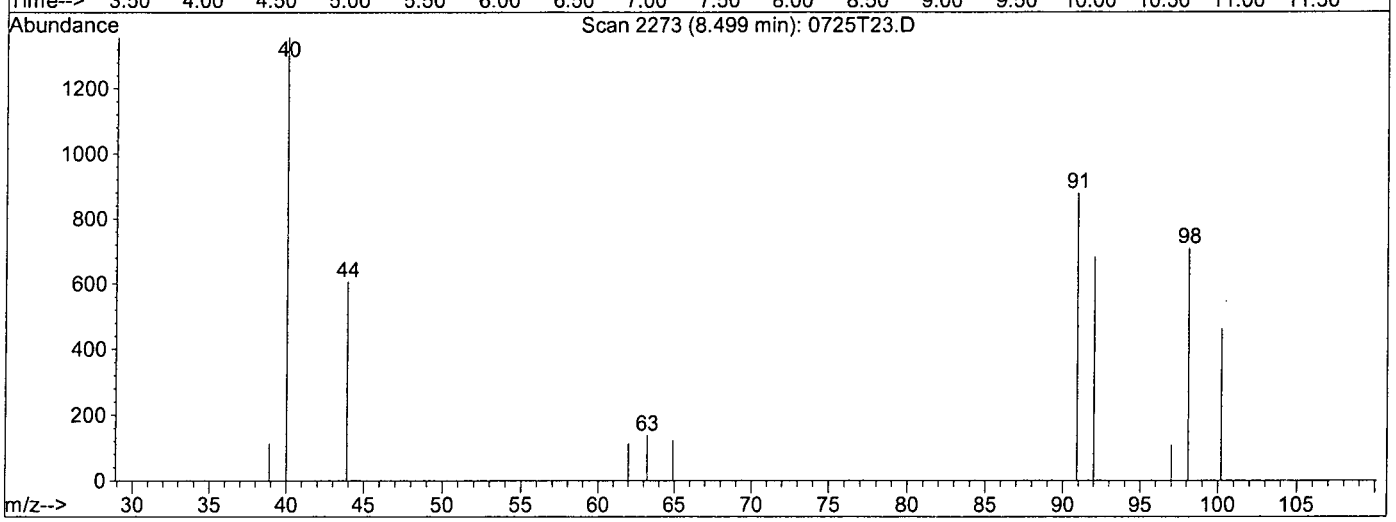
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.30#
0.00	0.00	3.74#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T23.D Vial: 22
Acq On : 25 Jul 12 19:37 Operator: DG,RS,HW,ARS,SV
Sample : AY65112W02 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:11 2012 Quant Results File: temp.res

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





TIC: 0725T23.D

(2) Gasoline (TMHB)

8.43min 24.8342ppb m

response 10254338

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.95#
0.00	0.00	2.74#
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: ES082

Sample Collection Date: 07/18/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68258

APPL ID: AY65113

QCG: #86RHB-120719AT1-169441

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	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
EPA 8260B	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/20/12	07/20/12

J = Estimated value.

Quant Method: TALLW.M
Run #: 0719T47
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 1:13:46 PM
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

ARF: 68258

Sample ID: ES082

APPL ID: AY65113

Sample Collection Date: 07/18/12

QCG: #86RHB-120719AT1-169441

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
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)	0.43 J	1.0	0.38	0.19	ug/L	07/20/12	07/20/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	99.0	70-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	75-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.3	85-115			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.7	85-120			%	07/20/12	07/20/12

J = Estimated value.

Quant Method: TALLW.M
Run #: 0719T47
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 1:13:46 PM
APPL-F1-SC-NoMC-REG MDLs

Data File : M:\THOR\DATA\T120719\0719T47.D Vial: 47
Acq On : 20 Jul 12 6:26 Operator: DG,RS,HW,ARS,SV
Sample : AY65113W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 12:21 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	461440	25.00000 ppb	-0.01
55) Chlorobenzene-D5 (IS)	9.87	117	370688	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	220608	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.93	111	228631	31.66228 ppb	-0.01
Spiked Amount 31.881			Recovery = 99.312%		
36) 1,2-DCA-D4(S)	6.32	65	223642	33.32593 ppb	-0.01
Spiked Amount 33.647			Recovery = 99.047%		
56) Toluene-D8(S)	8.43	98	807883	36.86487 ppb	0.00
Spiked Amount 37.345			Recovery = 98.715%		
64) 4-Bromofluorobenzene(S)	11.05	95	305752	29.50187 ppb	0.00
Spiked Amount 29.515			Recovery = 99.955%		
Target Compounds					Qvalue
45) Methyl Cyclohexane	7.35	83	1864	0.46377 ppb N.T	85
62) o-Xylene	10.53	106	5109	0.43122 ppb ✓	90
71) Isopropylbenzene	10.91	105	26568	0.92106 ppb N.T	98
76) n-Propylbenzene	11.32	91	19942	0.53696 ppb	99
81) Tert-Butylbenzene	11.82	119	16941	0.69946 ppb	90
83) Sec-Butylbenzene	12.04	105	9972	0.30839 ppb	98
94) Naphthalene	14.43	128	952297	42.68779 ppb	99

8/9/12

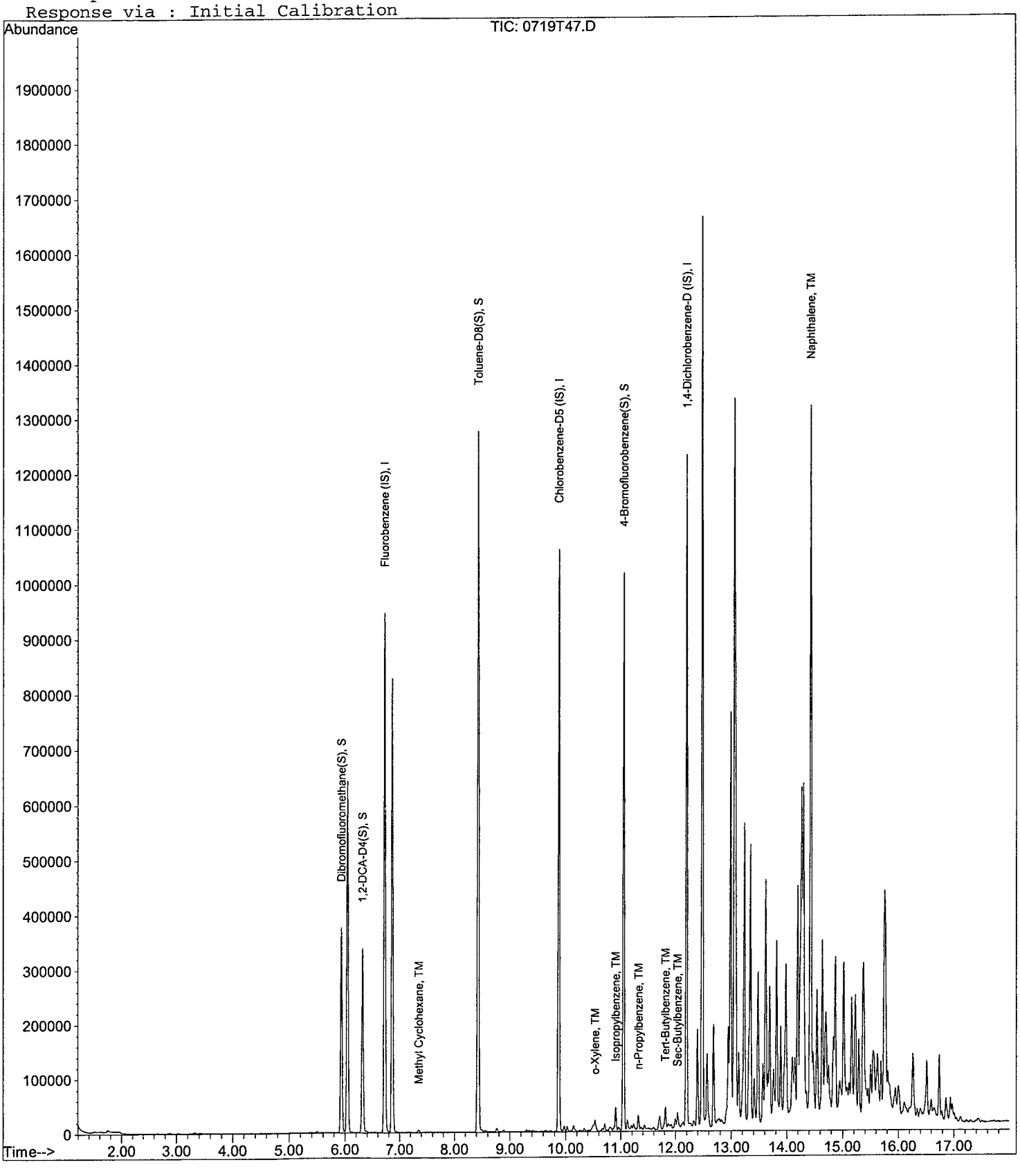
(#) = qualifier out of range (m) = manual integration
0719T47.D TALLW.M Tue Jul 24 12:28:53 2012 274

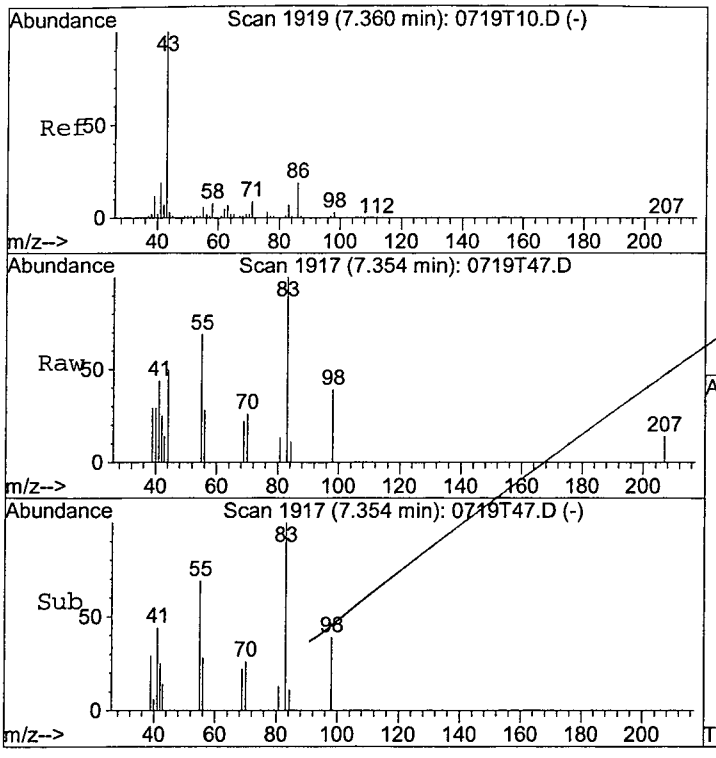
Data File : M:\THOR\DATA\T120719\0719T47.D
Acq On : 20 Jul 12 6:26
Sample : AY65113W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 47
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 12:21 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



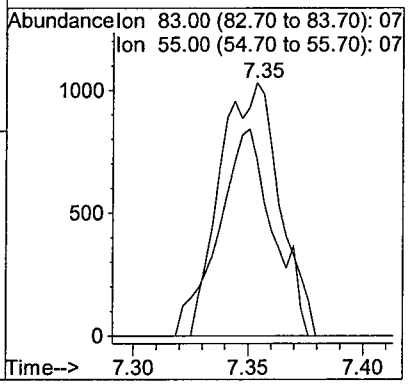


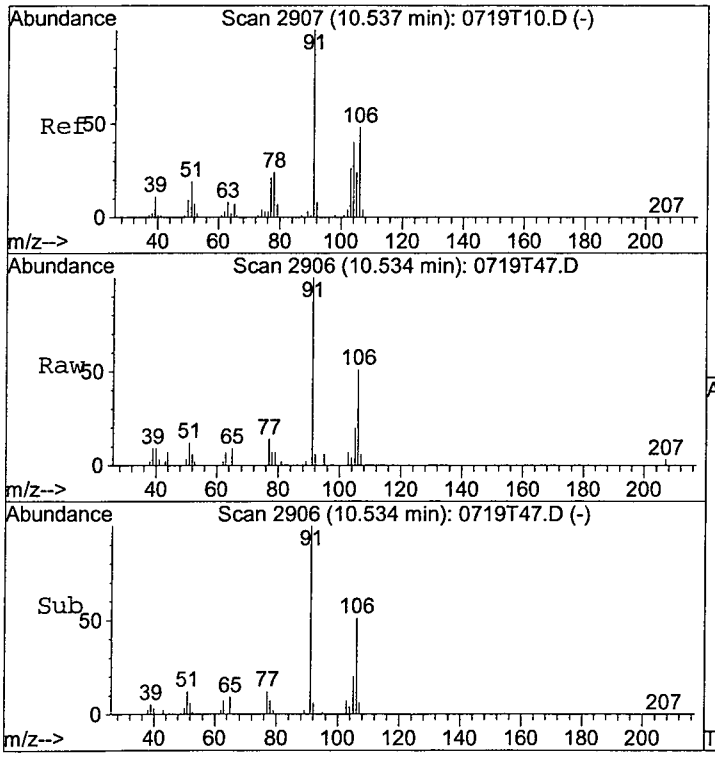
#45
Methyl Cyclohexane
Concen: 0.46377 ppb
RT: 7.35 min Scan# 1917
Delta R.T. -0.01 min
Lab File: 0719T47.D
Acq: 20 Jul 12 6:26

Tgt Ion: 83 Resp: 1864

Ion	Ratio	Lower	Upper
83	100		
55	69.4	57.8	107.3

N.T
DAD
8/9/12

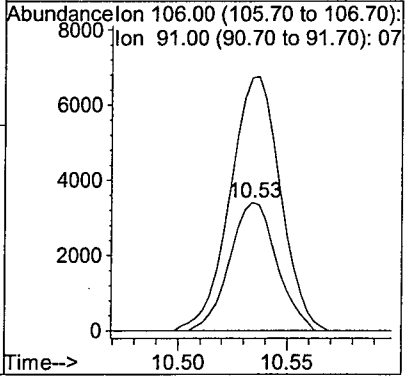




#62
o-Xylene
Concen: 0.43122 ppb
RT: 10.53 min Scan# 2906
Delta R.T. -0.00 min
Lab File: 0719T47.D
Acq: 20 Jul 12 6:26

Tgt Ion:106 Resp: 5109

Ion	Ratio	Lower	Upper
106	100		
91	193.9	146.7	272.5



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: ES082

Sample Collection Date: 07/18/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68258

APPL ID: AY65113

QCG: #86RHB-120719AT2-169517

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/20/12	07/20/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	99.0	70-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	75-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.3	85-115			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.7	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 #: 0719T47
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 1:07:11 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T47.D Vial: 47
Acq On : 20 Jul 12 6:26 Operator: DG,RS,HW,ARS,SV
Sample : AY65113W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 15:50 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.72	TIC	945344	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	1059323	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1222853	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	12330684m	144.07139	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

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

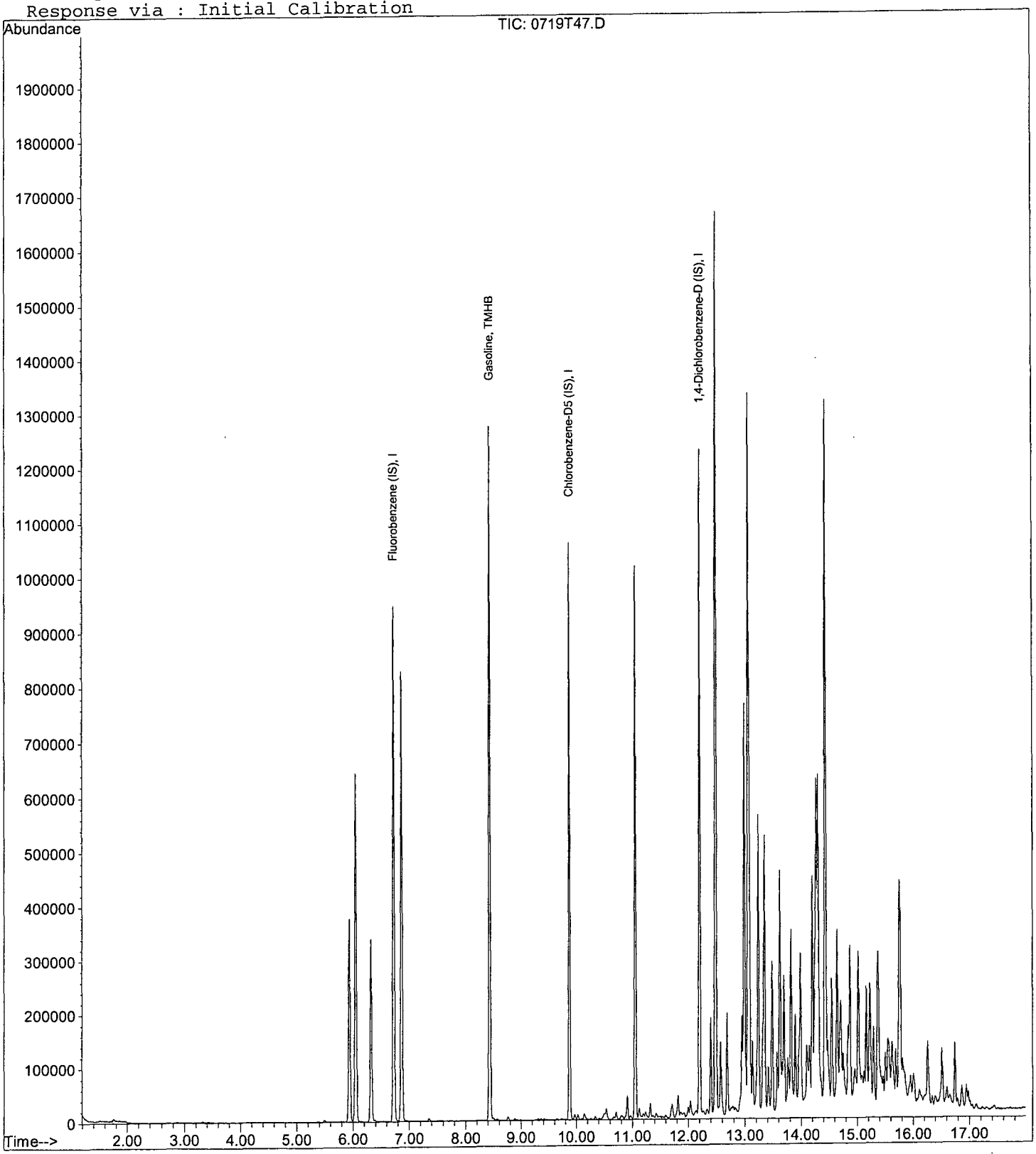
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T47.D
Acq On : 20 Jul 12 6:26
Sample : AY65113W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 47
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 15:50 2012 Quant Results File: TGAS.RES

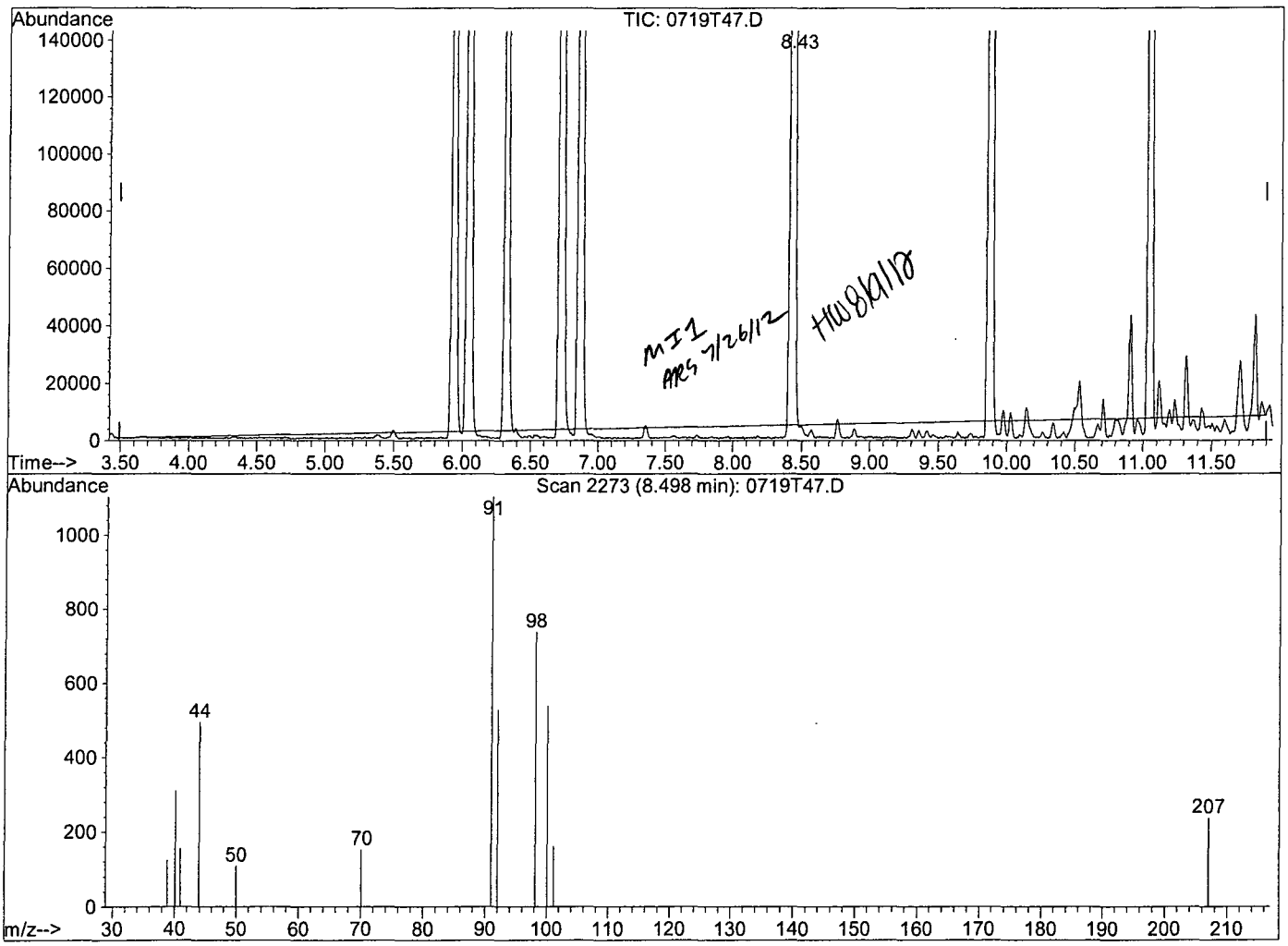
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T47.D Vial: 47
Acq On : 20 Jul 12 6:26 Operator: DG,RS,HW,ARS,SV
Sample : AY65113W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 15:40 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration



TIC: 0719T47.D

(2) Gasoline (TMHB)

8.50min 72.8679ppb m

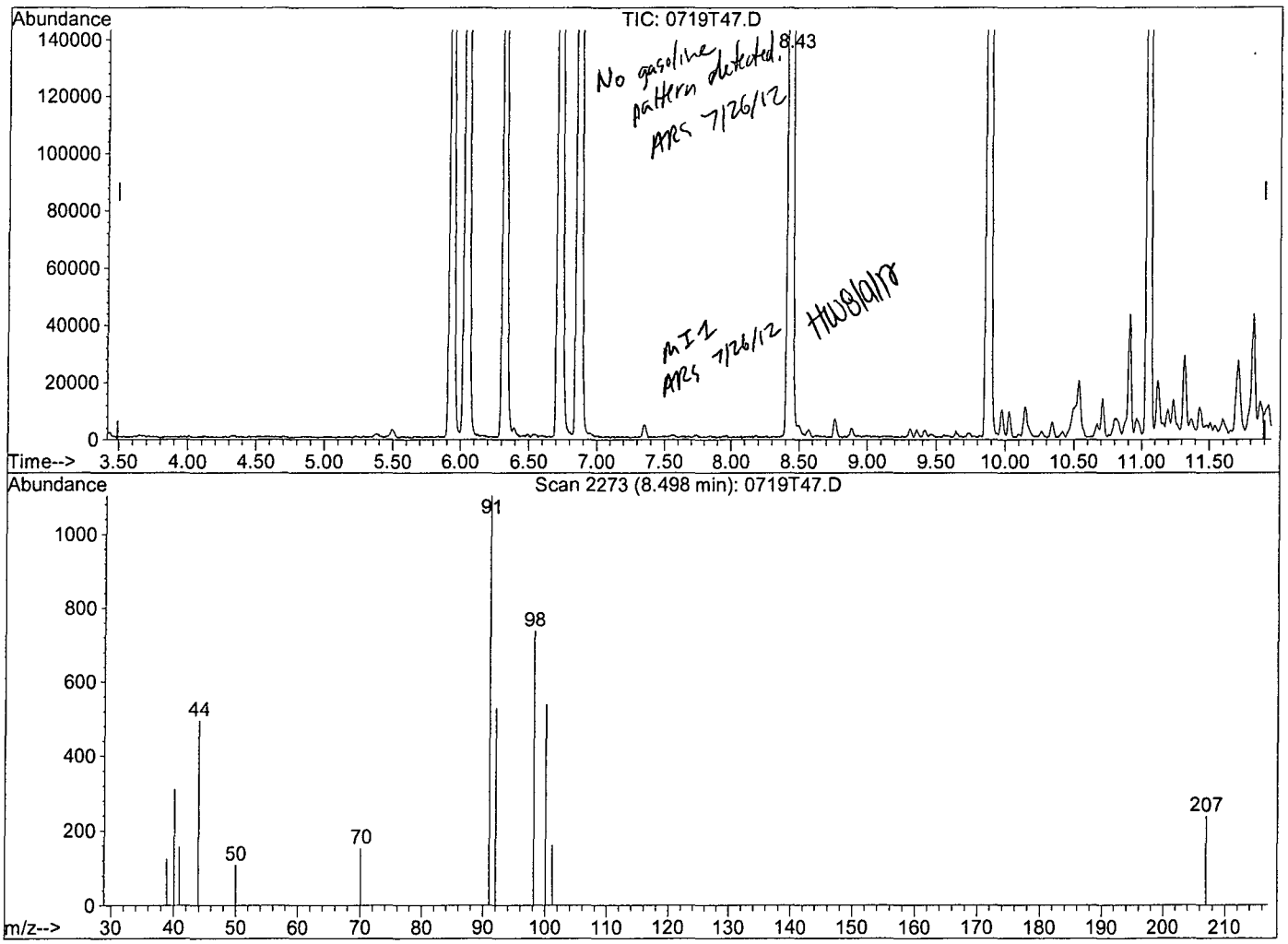
response 9430289

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.27#
0.00	1.80	3.65#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T47.D Vial: 47
Acq On : 20 Jul 12 6:26 Operator: DG,RS,HW,ARS,SV
Sample : AY65113W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 15:50 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration



TIC: 0719T47.D

(2) Gasoline (TMHB)

8.43min 144.0714ppb m

response 12330684

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.97#
0.00	1.80	2.79#
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: 68258

Sample ID: ES085-TRIP BLANK

APPL ID: AY65114

Sample Collection Date: 07/18/12

QCG: #86RHB-120719AT1-169441

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

J = Estimated value.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0719T42
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:50:46 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

ARF: 68258

Sample ID: ES085-TRIP BLANK

APPL ID: AY65114

Sample Collection Date: 07/18/12

QCG: #86RHB-120719AT1-169441

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	METHYLENE CHLORIDE	0.80 J	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	99.3	75-120			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	98.6	85-115			%	07/20/12	07/20/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.2	85-120			%	07/20/12	07/20/12

J = Estimated value.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0719T42
Instrument: Thor
Sequence: T120719
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:50:46 AM
APPL-F1-SC-NoMC-REG MDLs

Data File : M:\THOR\DATA\T120719\0719T42.D Vial: 42
Acq On : 20 Jul 12 4:08 Operator: DG,RS,HW,ARS,SV
Sample : AY65114W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 12:13 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	437504	25.00000	ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	353408	25.00000	ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	204928	25.00000	ppb	0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	215125	31.42180	ppb	0.00
Spiked Amount 31.881			Recovery = 98.560%			
36) 1,2-DCA-D4(S)	6.33	65	213776	33.59859	ppb	0.00
Spiked Amount 33.647			Recovery = 99.858%			
56) Toluene-D8(S)	8.43	98	774255	37.05787	ppb	0.00
Spiked Amount 37.345			Recovery = 99.232%			
64) 4-Bromofluorobenzene(S)	11.05	95	289700	29.31979	ppb	0.00
Spiked Amount 29.515			Recovery = 99.338%			
Target Compounds						Qvalue
18) Methylene chloride	3.45	84	2778	0.79676	ppb	99

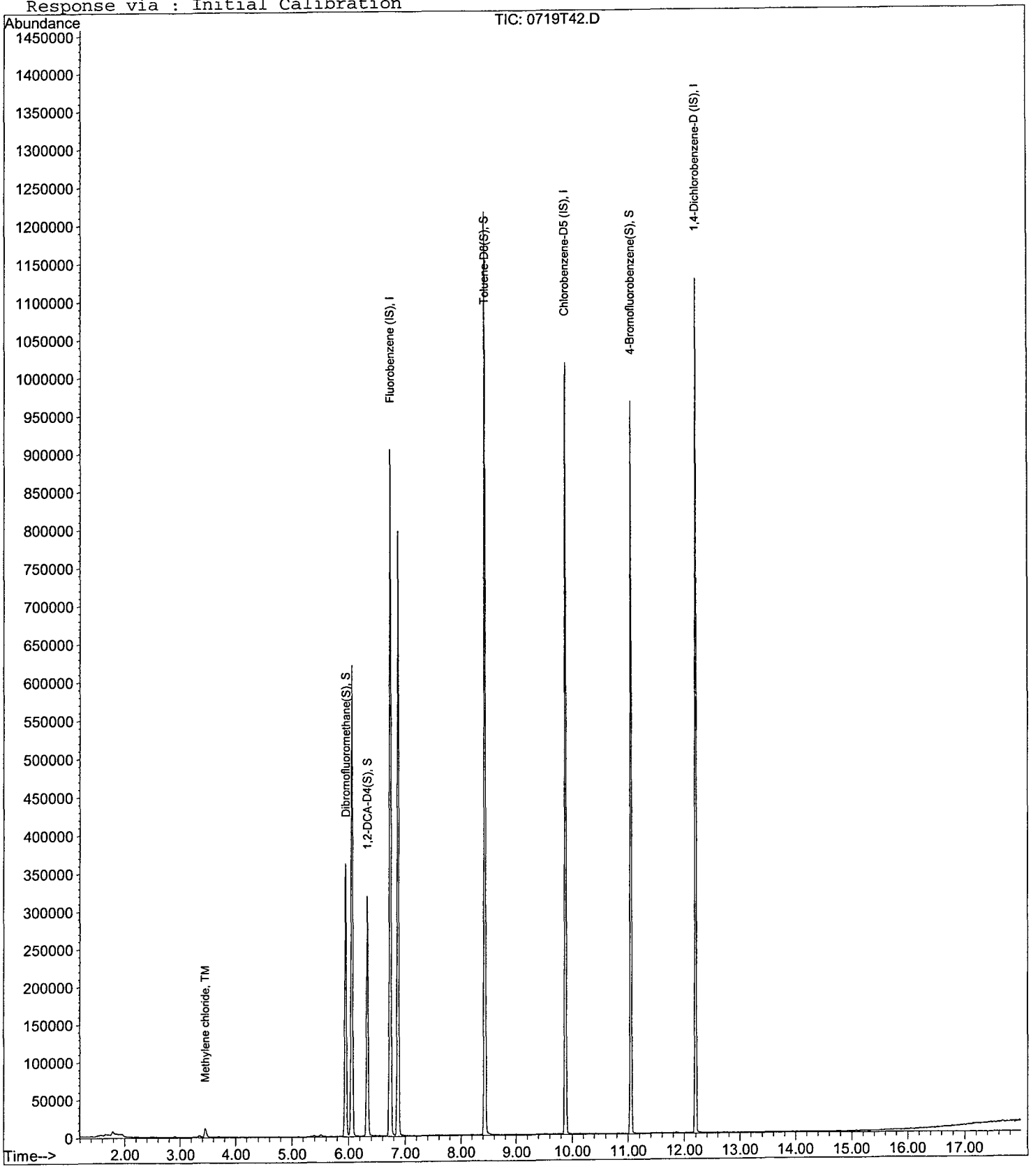
(#) = qualifier out of range (m) = manual integration

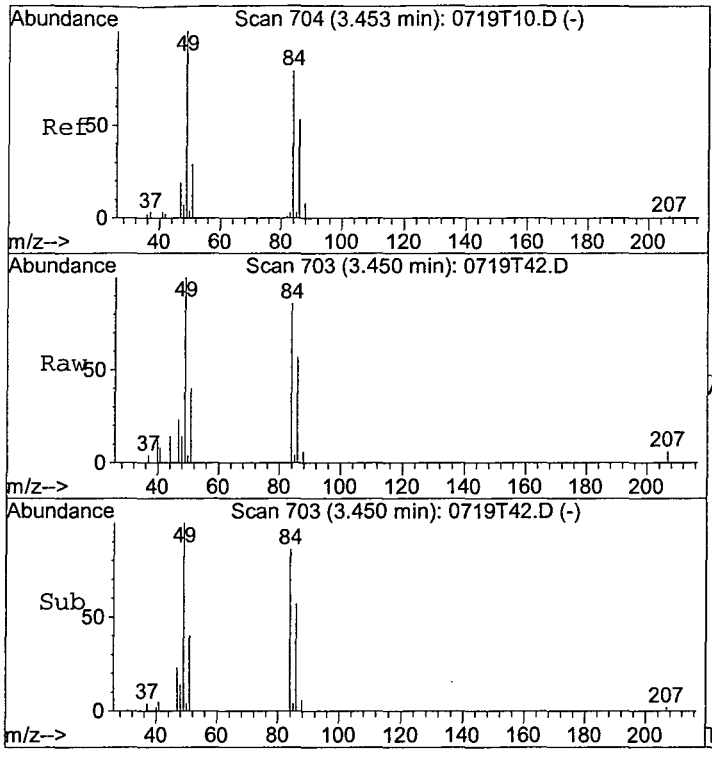
Data File : M:\THOR\DATA\T120719\0719T42.D
Acq On : 20 Jul 12 4:08
Sample : AY65114W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 42
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 12:13 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

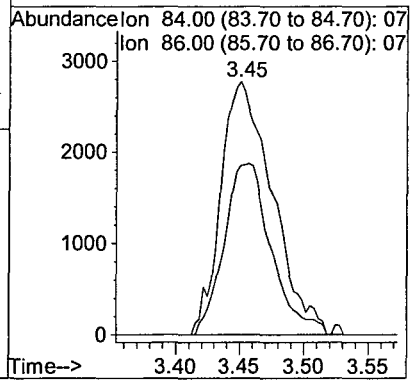




#18
Methylene chloride
Concen: 0.79676 ppb
RT: 3.45 min Scan# 703
Delta R.T. -0.00 min
Lab File: 0719T42.D
Acq: 20 Jul 12 4:08

Tgt Ion: 84 Resp: 2778

Ion	Ratio	Lower	Upper
84	100		
86	66.7	47.5	88.3



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T22.D Vial: 21
Acq On : 25 Jul 12 19:09 Operator: DG,RS,HW,ARS,SV
Sample : AY65114W02 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 8:10 2012 Quant Results File: TGAS.RES

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

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	780377	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	884072	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	988550	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10211299m	21.67195	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

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

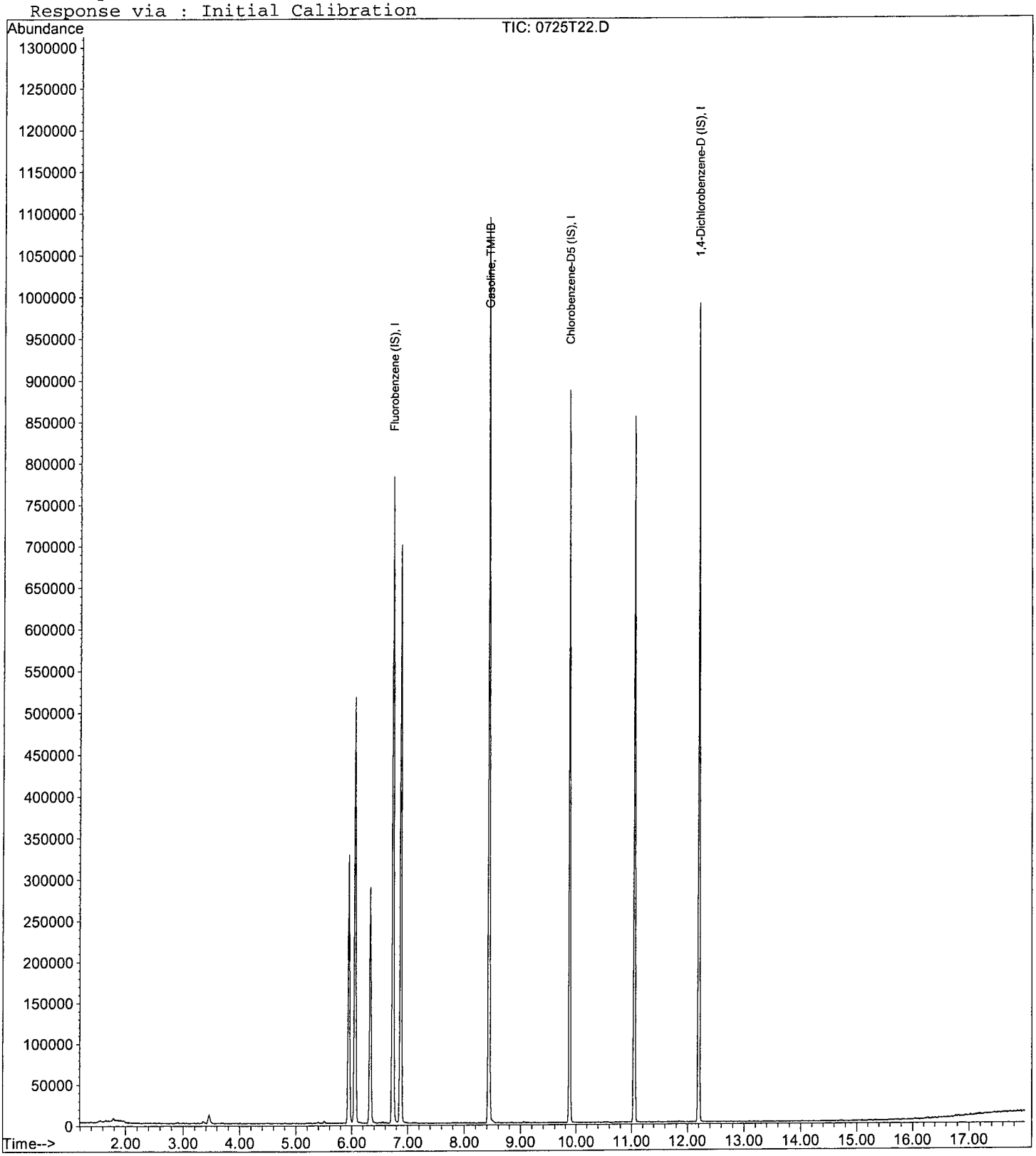
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T22.D
Acq On : 25 Jul 12 19:09
Sample : AY65114W02
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 21
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 8:10 2012 Quant Results File: TGAS.RES

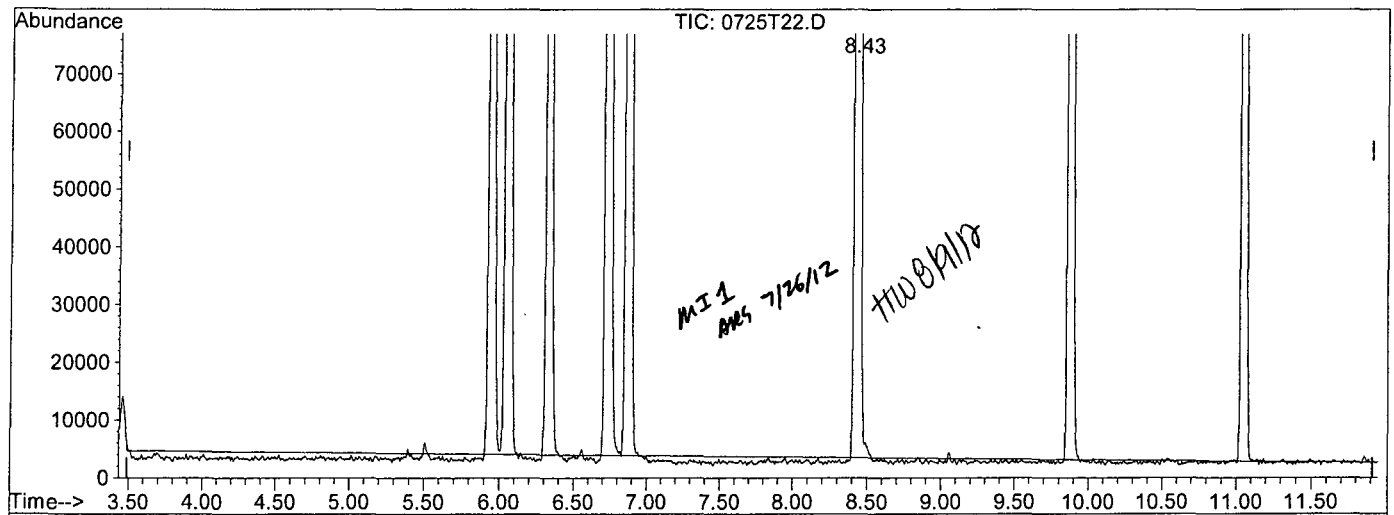
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

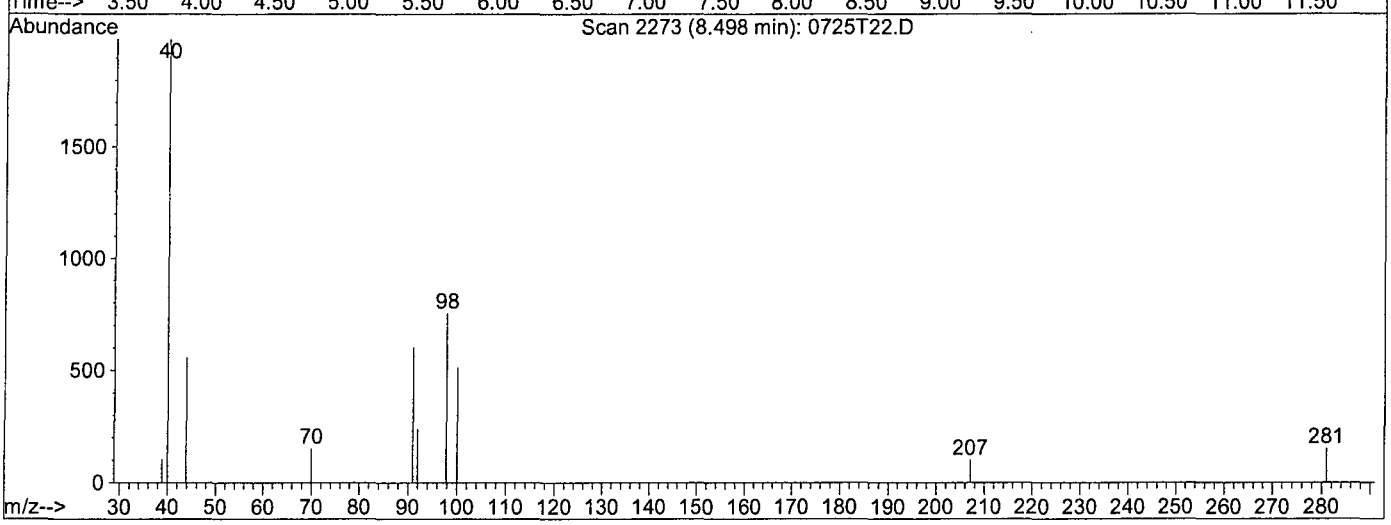


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T22.D Vial: 21
Acq On : 25 Jul 12 19:09 Operator: DG,RS,HW,ARS,SV
Sample : AY65114W02 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:09 2012 Quant Results File: temp.res

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





TIC: 0725T22.D

(2) Gasoline (TMHB)

8.50min -55.2119ppb m

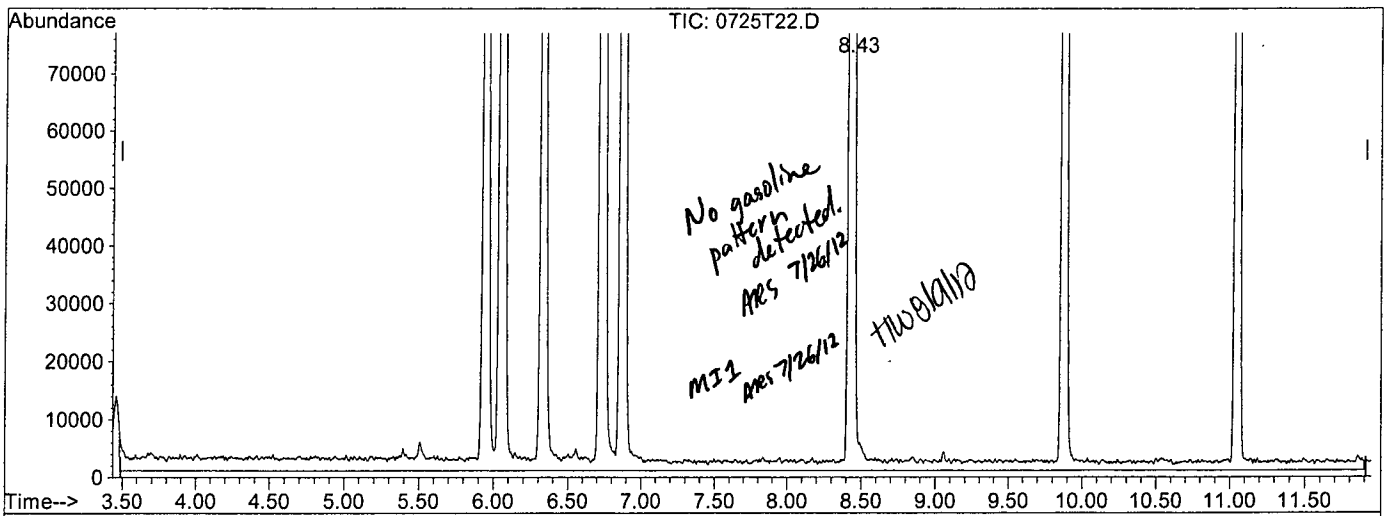
response 7596711

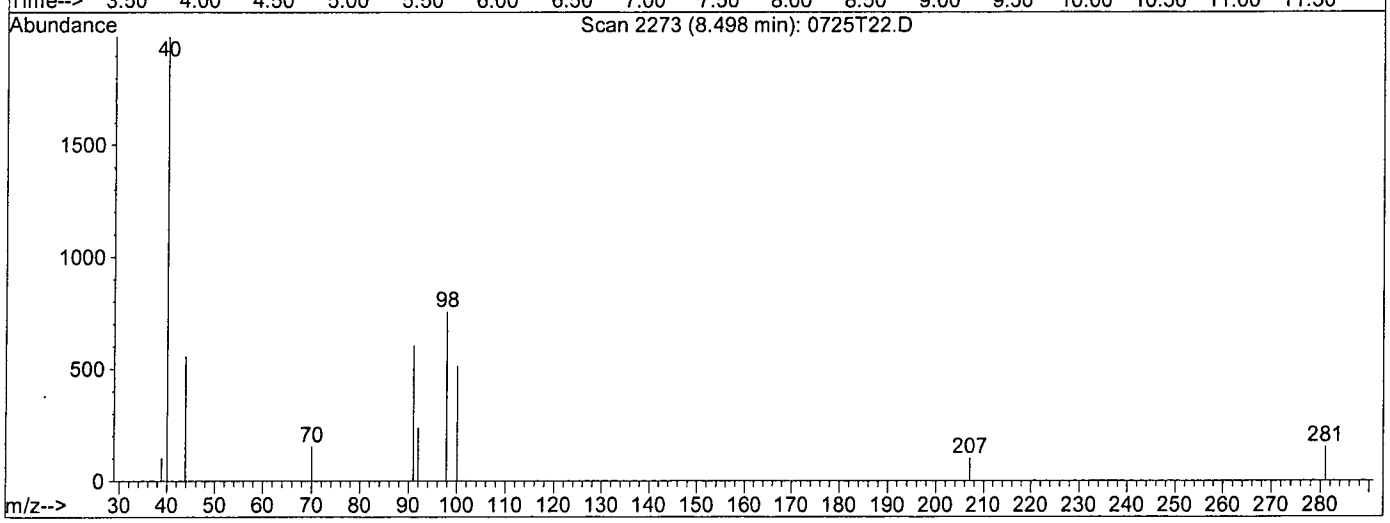
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.25#
0.00	0.00	3.64#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T22.D Vial: 21
Acq On : 25 Jul 12 19:09 Operator: DG,RS,HW,ARS,SV
Sample : AY65114W02 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:10 2012 Quant Results File: temp.res

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





TIC: 0725T22.D

(2) Gasoline (TMHB)

8.43min 21.6719ppb m

response 10211299

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.93#
0.00	0.00	2.71#
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. SDG No: 68258
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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	NT
11	TML	Acetone	0.3965	0.2944	0.1679	0.1468	0.1007	0.0866	0.0926	0.0801	0.0821		0.16	70	TML	0.999
12	TM	Freon-113	0.1778	0.1747	0.1931	0.2265	0.2246	0.2168	0.2084	0.2210	0.2060		0.21	9.5	TM	
13	TM*	1,1-DCE	0.3007	0.2729	0.2644	0.2720	0.2744	0.2696	0.2660	0.2835	0.2775		0.28	4.0	TM*	
14	TM	t-Butanol		0.0075	0.0074	0.0072	0.0076	0.0077	0.0092	0.0102			0.01	14	TM	
15	TML	Methyl Acetate	0.8726	0.6035	0.5101	0.4714	0.2802	0.2330	0.2248	0.2202	0.2132		0.40	57	TML	1.000
16	TM	Iodomethane	0.2492	0.2575	0.2660	0.2419	0.2622	0.2432	0.2408	0.2414	0.2418		0.25	4.0	TM	
17	TM	Acrylonitrile	0.0874	0.0549	0.0692	0.0728	0.0933	0.0806	0.0840	0.0846	0.0838		0.08	15	TM	
18	TML	Methylene chloride	0.3676	0.2647	0.1440	0.1292	0.1165	0.0964	0.0956	0.0949	0.0918		0.16	62	TML	1.000
19	TML	Carbon disulfide	0.0466	0.0453	0.0322	0.0318	0.0301	0.0270	0.0292	0.0278	0.0258		0.03	23	TML	0.999
20	TM	Methyl t-butyl ether (MtBE)	0.6119	0.5783	0.5229	0.5275	0.5662	0.5222	0.5070	0.4911	0.4631		0.53	8.6	TM	
21	TM	Trans-1,2-DCE	0.2297	0.2354	0.1695	0.1842	0.1947	0.1734	0.1779	0.1766	0.1709		0.19	13	TM	
22	TM	Diisopropyl Ether	0.1003	0.1361	0.1126	0.1164	0.1317	0.1212	0.1179	0.1198	0.1168		0.12	8.7	TM	
23	TM**	1,1-DCA	0.5526	0.4780	0.4682	0.4954	0.5506	0.5086	0.4958	0.5067	0.4843		0.50	5.9	TM**	
24	TM	Vinyl Acetate	0.2861	0.3189	0.2551	0.2716	0.3128	0.2787	0.2776	0.2848	0.2788		0.28	6.9	TM	
25	TM	Ethyl tert Butyl Ether	0.7356	0.6599	0.6680	0.6558	0.7593	0.6522	0.6460	0.6381	0.5738		0.67	8.2	TM	
26	TML	MEK (2-Butanone)	0.2041	0.1795	0.1594	0.1391	0.1113	0.1135	0.1203	0.1216	0.1272		0.14	23	TML	1.000
27	TM	Cis-1,2-DCE	0.3407	0.3327	0.3111	0.3113	0.3441	0.3184	0.3199	0.3183	0.3119		0.32	4.0	TM	
28	TM	2,2-Dichloropropane		0.2047	0.2143	0.2086	0.2158	0.2037	0.1976	0.1966	0.1845		0.20	5.0	TM	
29	TM*	Chloroform	0.7181	0.6349	0.6028	0.6230	0.6647	0.6037	0.5996	0.6037	0.5876		0.63	6.6	TM*	
30	TM	Bromochloromethane	0.1510	0.1457	0.1513	0.1633	0.1810	0.1595	0.1543	0.1538	0.1561		0.16	6.5	TM	
31	S	Dibromofluoromethane(S)	0.5051	0.3961	0.3766	0.3856	0.3635	0.3650	0.3693	0.3784	0.3815		0.39	11	S	
32	TM	1,1,1-TCA	0.4433	0.4047	0.3367	0.3737	0.3876	0.3695	0.3618	0.3671	0.3480		0.38	8.5	TM	
33	TM	Cyclohexane	0.1075	0.0984	0.0973	0.1087	0.1023	0.1026	0.0982	0.1080	0.0976		0.10	4.6	TM	
34	TM	1,1-Dichloropropene	0.2952	0.2623	0.2578	0.2666	0.2963	0.2712	0.2714	0.2756	0.2672		0.27	4.9	TM	
35	TM	2,2,4-Trimethylpentane	0.4193	0.3897	0.3643	0.3992	0.4174	0.3920	0.3860	0.4075	0.3655		0.39	5.1	TM	

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68258
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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)														

AMS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68258
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T05.D Vial: 5
Acq On : 19 Jul 12 11:01 Operator: DG,RS,HW,ARS,SV
Sample : 0.3ug/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)	6.74	96	427072	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	343424	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	202048	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	5177	0.77464 ppb		0.00
Spiked Amount 29.744			Recovery = 2.606%			
36) 1,2-DCA-D4(S)	6.33	65	4744	0.76381 ppb		0.00
Spiked Amount 29.083			Recovery = 2.627%			
56) Toluene-D8(S)	8.43	98	16030	0.78954 ppb		0.00
Spiked Amount 30.231			Recovery = 2.613%			
64) 4-Bromofluorobenzene(S)	11.05	95	7369	0.76748 ppb		0.00
Spiked Amount 28.321			Recovery = 2.708%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	615	0.27612 ppb		95
3) Freon 114	1.42	85	725	-0.13478 ppb	#	68
4) Chloromethane	1.45	50	2617	0.40957 ppb		87
5) Vinyl chloride	1.56	62	2565	0.30389 ppb		92
6) Bromomethane	1.87	94	2507	0.46469 ppb		98
7) Chloroethane	1.98	64	1408	0.28963 ppb		99
9) Trichlorofluoromethane	2.24	101	407	0.23329 ppb		93
11) Acetone	2.91	43	2032	0.21001 ppb	#	82
12) Freon-113	2.85	101	911	0.25960 ppb	#	62
13) 1,1-DCE	2.82	61	1541	0.32723 ppb	#	78
14) t-Butanol	3.69	59	2213	15.97947 ppb		92
15) Methyl Acetate	3.35	43	4472	-0.20827 ppb	#	84
16) Iodomethane	2.99	142	1277	0.29980 ppb	#	77
17) Acrylonitrile	3.84	52	448	0.33215 ppb	#	42
18) Methylene chloride	3.45	84	1884	0.26546 ppb		79
19) Carbon disulfide	3.07	76	239	-0.34303 ppb	#	65
20) Methyl t-butyl ether (MtBE	3.91	73	3136	0.34491 ppb	#	79
21) Trans-1,2-DCE	3.87	96	1177	0.36216 ppb	#	64
22) Diisopropyl Ether	4.71	59	514	0.25243 ppb	#	40
23) 1,1-DCA	4.51	63	2832	0.32862 ppb	#	79
24) Vinyl Acetate	4.71	87	1466	0.30118 ppb		75
25) Ethyl tert Butyl Ether	5.21	59	3770	0.33165 ppb		100
26) MEK (2-Butanone)	5.40	43	1046	0.82334 ppb		91
27) Cis-1,2-DCE	5.32	96	1746	0.31627 ppb		76
28) 2,2-Dichloropropane	5.32	77	1192	0.74979 ppb		93
29) Chloroform	5.76	83	3680	0.34387 ppb		87
30) Bromochloromethane	5.63	128	774	0.28796 ppb		75
32) 1,1,1-TCA	5.96	97	2272	0.35284 ppb		87
33) Cyclohexane	6.03	41	551	0.31531 ppb	#	6
34) 1,1-Dichloropropene	6.16	75	1513	0.32355 ppb	#	82
35) 2,2,4-Trimethylpentane	6.55	57	2149	0.31975 ppb		81
37) Carbon Tetrachloride	6.16	117	1836	0.30422 ppb		83
38) Tert Amyl Methyl Ether	6.59	73	4153	0.34325 ppb	#	92
39) 1,2-DCA	6.42	62	2269	0.32331 ppb	#	74
40) Benzene	6.40	78	6818	0.35570 ppb		94
41) TCE	7.14	95	1650	0.31670 ppb		90
42) 2-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

Data File : M:\THOR\DATA\T120719\0719T05.D Vial: 5
Acq On : 19 Jul 12 11:01 Operator: DG,RS,HW,ARS,SV
Sample : 0.3ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

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

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

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
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

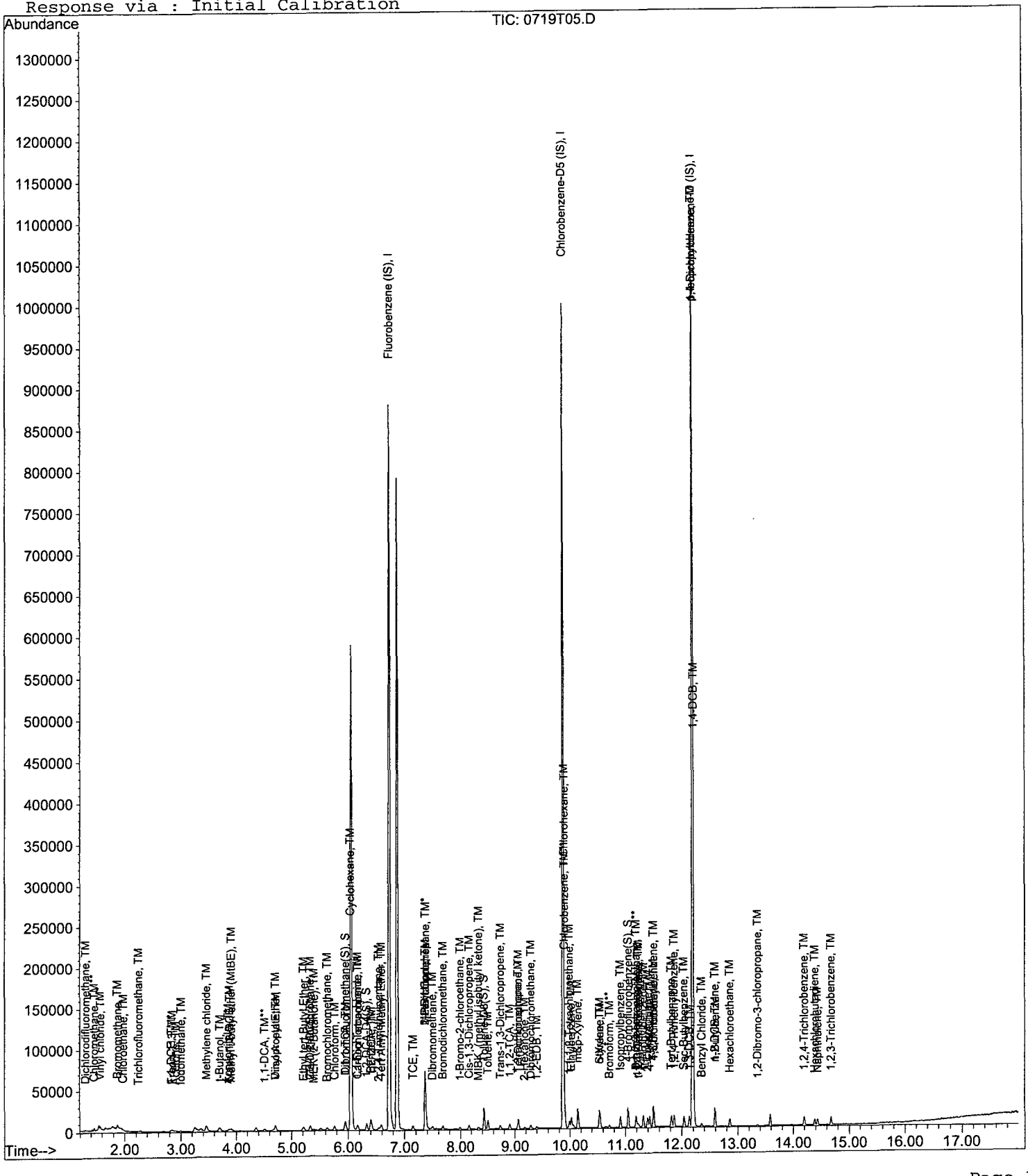
(#) = qualifier out of range (m) = manual integration

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



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Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T06.D Vial: 6
Acq On : 19 Jul 12 11:29 Operator: DG,RS,HW,ARS,SV
Sample : 0.5ug/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	440576	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	363776	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	205952	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	6980	1.01241 ppb		0.00
Spiked Amount 29.744			Recovery =	3.402%		
36) 1,2-DCA-D4(S)	6.33	65	7179	1.12044 ppb		0.00
Spiked Amount 29.083			Recovery =	3.851%		
56) Toluene-D8(S)	8.43	98	22596	1.05068 ppb		0.00
Spiked Amount 30.231			Recovery =	3.477%		
64) 4-Bromofluorobenzene(S)	11.05	95	10075	0.99060 ppb		0.00
Spiked Amount 28.321			Recovery =	3.499%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	1093	0.47570 ppb		85
3) Freon 114	1.42	85	922	-0.07628 ppb		90
4) Chloromethane	1.45	50	4079	0.61881 ppb		92
5) Vinyl chloride	1.56	62	4275	0.49095 ppb		97
6) Bromomethane	1.87	94	3318	0.59617 ppb		96
7) Chloroethane	1.98	64	2744	0.54714 ppb		97
8) Dichlorofluoromethane	2.18	67	178	0.48209 ppb	#	41
9) Trichlorofluoromethane	2.24	101	742	0.41227 ppb		86
11) Acetone	2.90	43	2594	0.55965 ppb		96
12) Freon-113	2.86	101	1539	0.42512 ppb	#	88
13) 1,1-DCE	2.82	61	2405	0.49505 ppb		96
14) t-Butanol	3.69	59	3316	23.21003 ppb		95
16) Iodomethane	2.98	142	2269	0.51637 ppb	#	76
17) Acrylonitrile	3.82	52	484	0.34784 ppb	#	38
18) Methylene chloride	3.46	84	2332	0.50714 ppb		95
20) Methyl t-butyl ether (MtBE	3.91	73	5096	0.54331 ppb	#	93
21) Trans-1,2-DCE	3.86	96	2074	0.61860 ppb	#	74
22) Diisopropyl Ether	4.70	59	1199	0.57079 ppb	#	86
23) 1,1-DCA	4.51	63	4212	0.47377 ppb	#	92
24) Vinyl Acetate	4.70	87	2810	0.55961 ppb		62
25) Ethyl tert Butyl Ether	5.21	59	5815	0.49588 ppb		97
26) MEK (2-Butanone)	5.39	43	1582	1.04859 ppb	#	79
27) Cis-1,2-DCE	5.33	96	2932	0.51483 ppb		90
28) 2,2-Dichloropropane	5.32	77	1804	1.09997 ppb		93
29) Chloroform	5.76	83	5594	0.50670 ppb		93
30) Bromochloromethane	5.62	128	1284	0.46305 ppb		86
32) 1,1,1-TCA	5.96	97	3566	0.53682 ppb		84
33) Cyclohexane	6.03	41	867	0.48093 ppb	#	20
34) 1,1-Dichloropropene	6.16	75	2311	0.47905 ppb	#	87
35) 2,2,4-Trimethylpentane	6.55	57	3434	0.49528 ppb		94
37) Carbon Tetrachloride	6.17	117	3159	0.50739 ppb		79
38) Tert Amyl Methyl Ether	6.59	73	6331	0.50723 ppb	#	88
39) 1,2-DCA	6.42	62	3515	0.48550 ppb	#	91
40) Benzene	6.40	78	10831	0.54774 ppb		95
41) TCE	7.14	95	2816	0.52393 ppb		86
42) 2-Pentanone	7.36	43	96700	22.83691 ppb		100
43) 1,2-Dichloropropane	7.37	63	3334	0.51674 ppb	#	85
44) Bromodichloromethane	7.68	83	4425	0.49576 ppb	#	92
45) Methyl Cyclohexane	7.36	83	1985	0.51726 ppb		81
46) Dibromomethane	7.50	93	1649	0.46985 ppb		78
48) MIBK (methyl isobutyl ket	8.33	43	1720	0.56481 ppb	#	91

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

Data File : M:\THOR\DATA\T120719\0719T06.D Vial: 6
Acq On : 19 Jul 12 11:29 Operator: DG,RS,HW,ARS,SV
Sample : 0.5ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

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

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

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
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

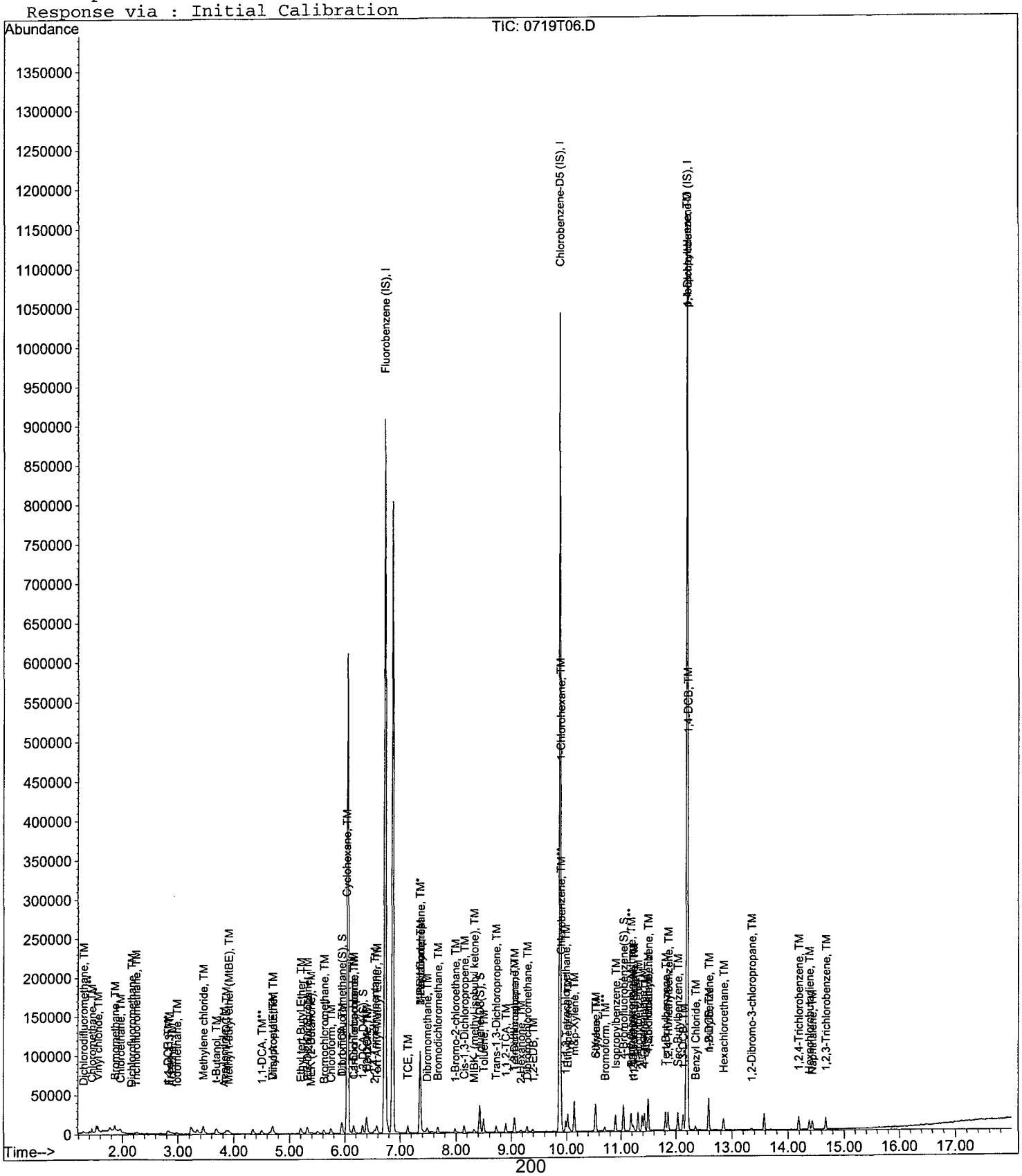
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T06.D Vial: 6
Acq On : 19 Jul 12 11:29 Operator: DG,RS,HW,ARS,SV
Sample : 0.5ug/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

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



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T07.D Vial: 7
Acq On : 19 Jul 12 11:57 Operator: DG,RS,HW,ARS,SV
Sample : 1.0ug/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)	6.74	96	442240	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	361536	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	203840	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	13324	1.92530 ppb		0.00
Spiked Amount 29.744			Recovery =	6.472%		
36) 1,2-DCA-D4(S)	6.33	65	12530	1.94822 ppb		0.00
Spiked Amount 29.083			Recovery =	6.698%		
56) Toluene-D8(S)	8.43	98	40197	1.88068 ppb		0.00
Spiked Amount 30.231			Recovery =	6.222%		
64) 4-Bromofluorobenzene(S)	11.05	95	19479	1.92710 ppb		0.00
Spiked Amount 28.321			Recovery =	6.804%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.31	85	2509	1.08786 ppb		90
3) Freon 114	1.42	85	2408	0.42008 ppb		95
4) Chloromethane	1.45	50	7357	1.11191 ppb		88
5) Vinyl chloride	1.56	62	8016	0.91712 ppb		91
6) Bromomethane	1.87	94	6361	1.13863 ppb		87
7) Chloroethane	1.98	64	5042	1.00157 ppb		95
8) Dichlorofluoromethane	2.18	67	223	0.65944 ppb	#	41
9) Trichlorofluoromethane	2.24	101	1709	0.94597 ppb		98
11) Acetone	2.90	43	2970	0.81592 ppb		89
12) Freon-113	2.86	101	3415	0.93978 ppb	#	73
13) 1,1-DCE	2.83	61	4677	0.95909 ppb		93
14) t-Butanol	3.69	59	6579	45.87583 ppb		98
15) Methyl Acetate	3.35	43	9023	0.97185 ppb		97
16) Iodomethane	2.98	142	4706	1.06694 ppb		95
17) Acrylonitrile	3.83	52	1224	0.87635 ppb	#	55
18) Methylene chloride	3.46	84	2548	0.63556 ppb		95
19) Carbon disulfide	3.07	76	570	0.36158 ppb	#	65
20) Methyl t-butyl ether (MtBE	3.91	73	9249	0.98236 ppb	#	88
21) Trans-1,2-DCE	3.87	96	2998	0.89083 ppb		94
22) Diisopropyl Ether	4.70	59	1992	0.94474 ppb		97
23) 1,1-DCA	4.51	63	8283	0.92818 ppb	#	90
24) Vinyl Acetate	4.70	87	4513	0.89537 ppb		98
25) Ethyl tert Butyl Ether	5.21	59	11816	1.00382 ppb		97
26) MEK (2-Butanone)	5.39	43	2819	1.59789 ppb		87
27) Cis-1,2-DCE	5.33	96	5504	0.96281 ppb		89
28) 2,2-Dichloropropane	5.32	77	3790	2.30222 ppb		89
29) Chloroform	5.76	83	10664	0.96229 ppb		98
30) Bromochloromethane	5.62	128	2677	0.96179 ppb		97
32) 1,1,1-TCA	5.96	97	5956	0.89324 ppb		87
33) Cyclohexane	6.03	41	1722	0.95160 ppb	#	36
34) 1,1-Dichloropropene	6.17	75	4561	0.94189 ppb		89
35) 2,2,4-Trimethylpentane	6.56	57	6445	0.92606 ppb		83
37) Carbon Tetrachloride	6.16	117	5937	0.95000 ppb		98
38) Tert Amyl Methyl Ether	6.59	73	12173	0.97161 ppb	#	90
39) 1,2-DCA	6.42	62	7205	0.99143 ppb		93
40) Benzene	6.40	78	18340	0.92399 ppb		97
41) TCE	7.15	95	5307	0.98367 ppb		92
42) 2-Pentanone	7.36	43	207854	48.90262 ppb		98
43) 1,2-Dichloropropane	7.37	63	6147	0.94914 ppb		99
44) Bromodichloromethane	7.68	83	8505	0.94929 ppb		94
45) Methyl Cyclohexane	7.36	83	3516	0.91277 ppb	#	49

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

Data File : M:\THOR\DATA\T120719\0719T07.D Vial: 7
Acq On : 19 Jul 12 11:57 Operator: DG,RS,HW,ARS,SV
Sample : 1.0ug/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

	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

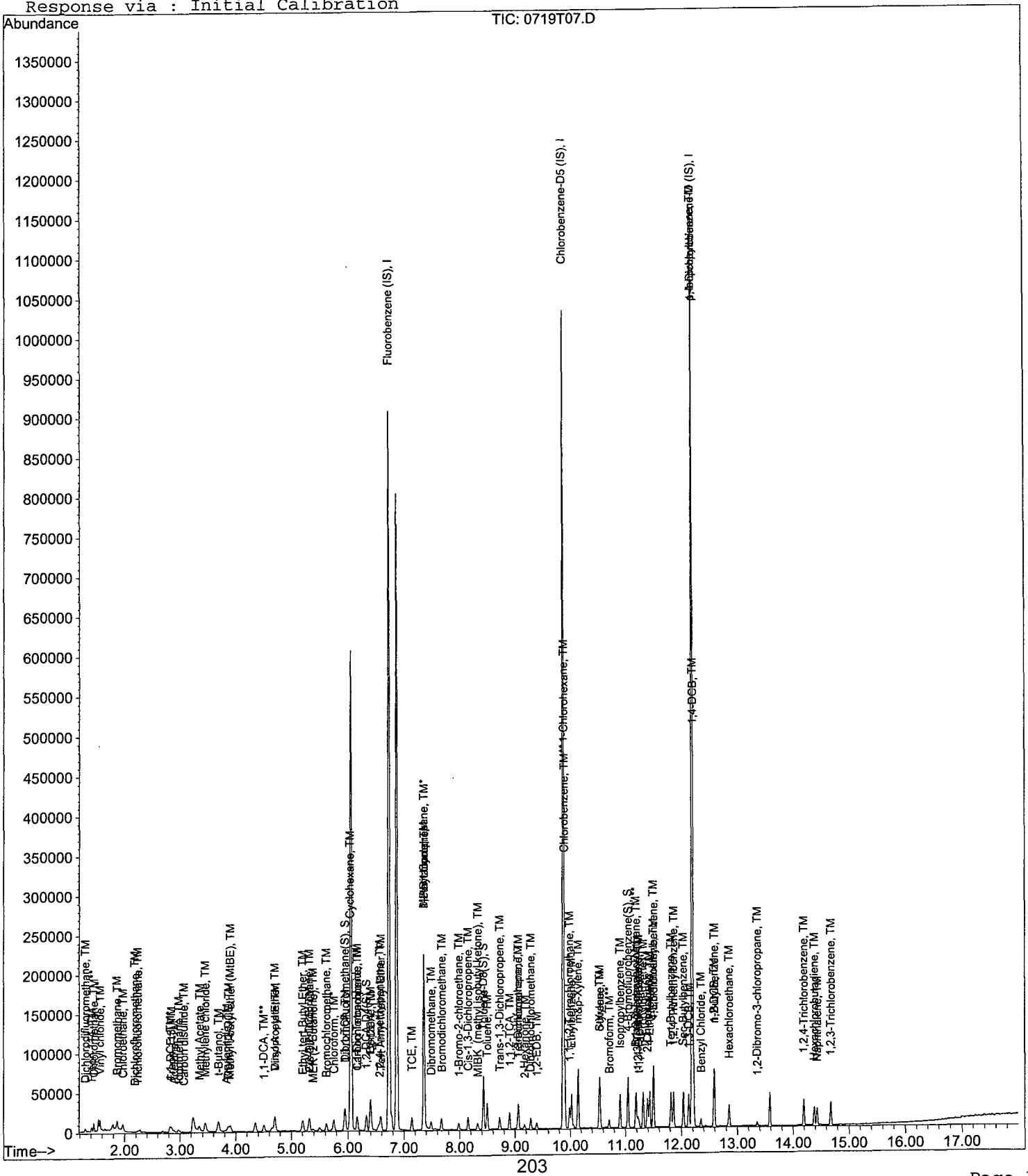
(#) = qualifier out of range (m) = manual integration

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



Quantitation Report (Not Reviewed)

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

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

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

	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

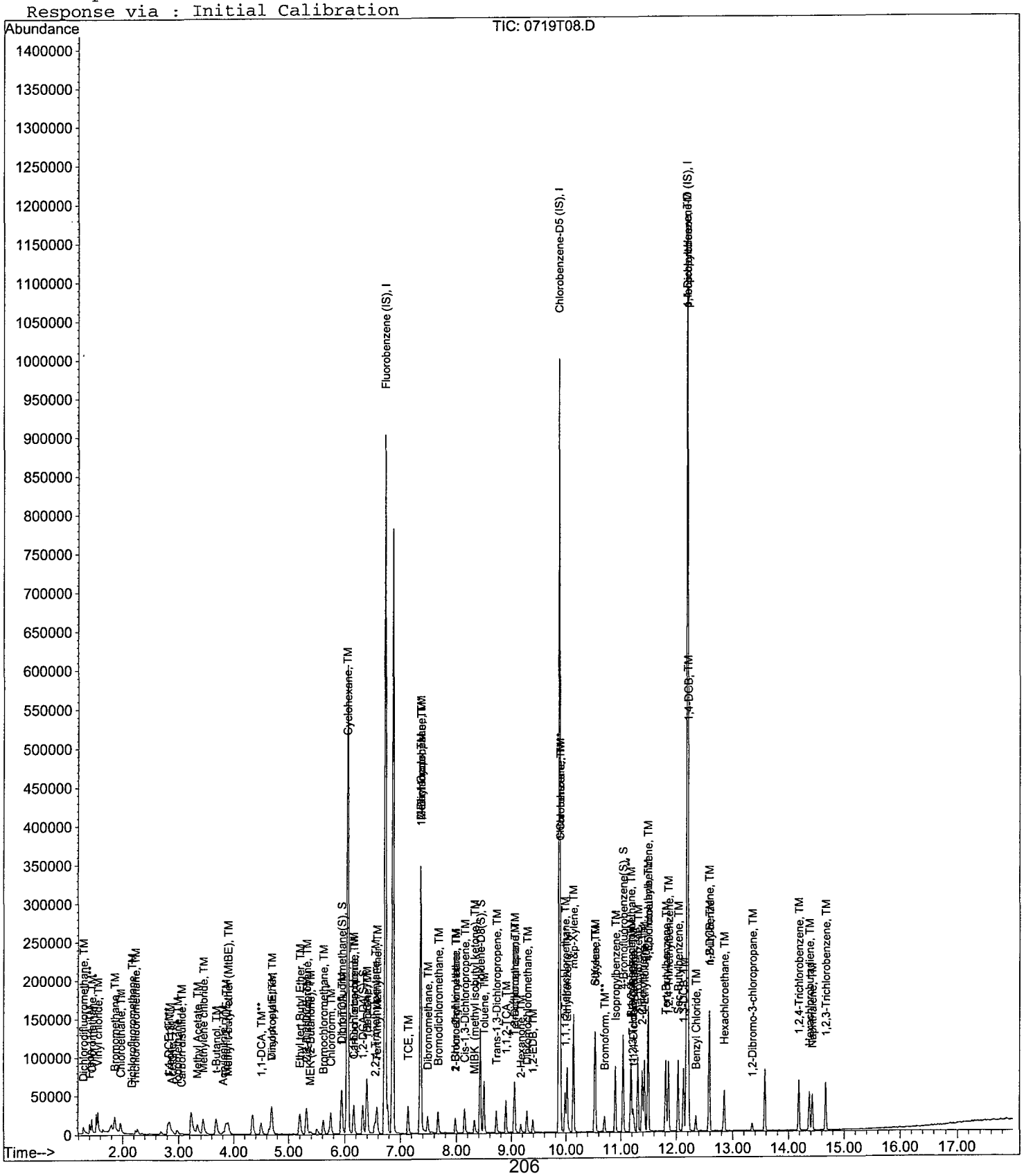
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T09.D Vial: 9
Acq On : 19 Jul 12 12:53 Operator: DG,RS,HW,ARS,SV
Sample : 5.0ug/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	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						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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T09.D Vial: 9
Acq On : 19 Jul 12 12:53 Operator: DG,RS,HW,ARS,SV
Sample : 5.0ug/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

	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

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

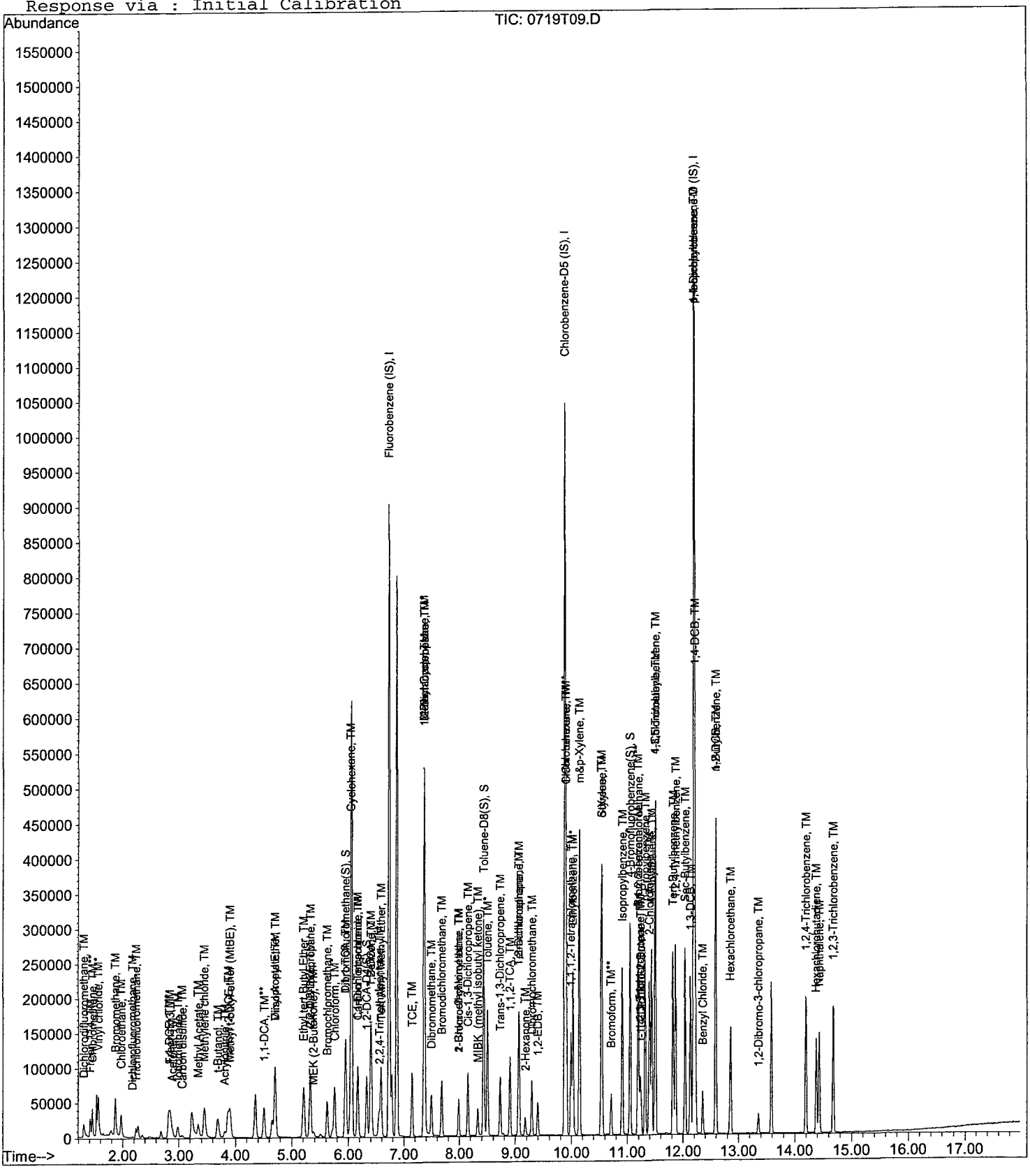
Quantitation Report

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

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

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

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



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Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T10.D Vial: 10
Acq On : 19 Jul 12 13:20 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/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)	6.74	96	461760	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	382656	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	222464	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	168520	23.32155 ppb	0.00
Spiked Amount 29.744			Recovery = 78.409%		
36) 1,2-DCA-D4(S)	6.33	65	155567	23.16569 ppb	0.00
Spiked Amount 29.083			Recovery = 79.654%		
56) Toluene-D8(S)	8.43	98	509225	22.50992 ppb	0.00
Spiked Amount 30.231			Recovery = 74.460%		
64) 4-Bromofluorobenzene(S)	11.05	95	243014	22.71494 ppb	0.00
Spiked Amount 28.321			Recovery = 80.206%		
Target Compounds					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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T10.D Vial: 10
Acq On : 19 Jul 12 13:20 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

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

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

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Dibromomethane	7.49	93	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

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

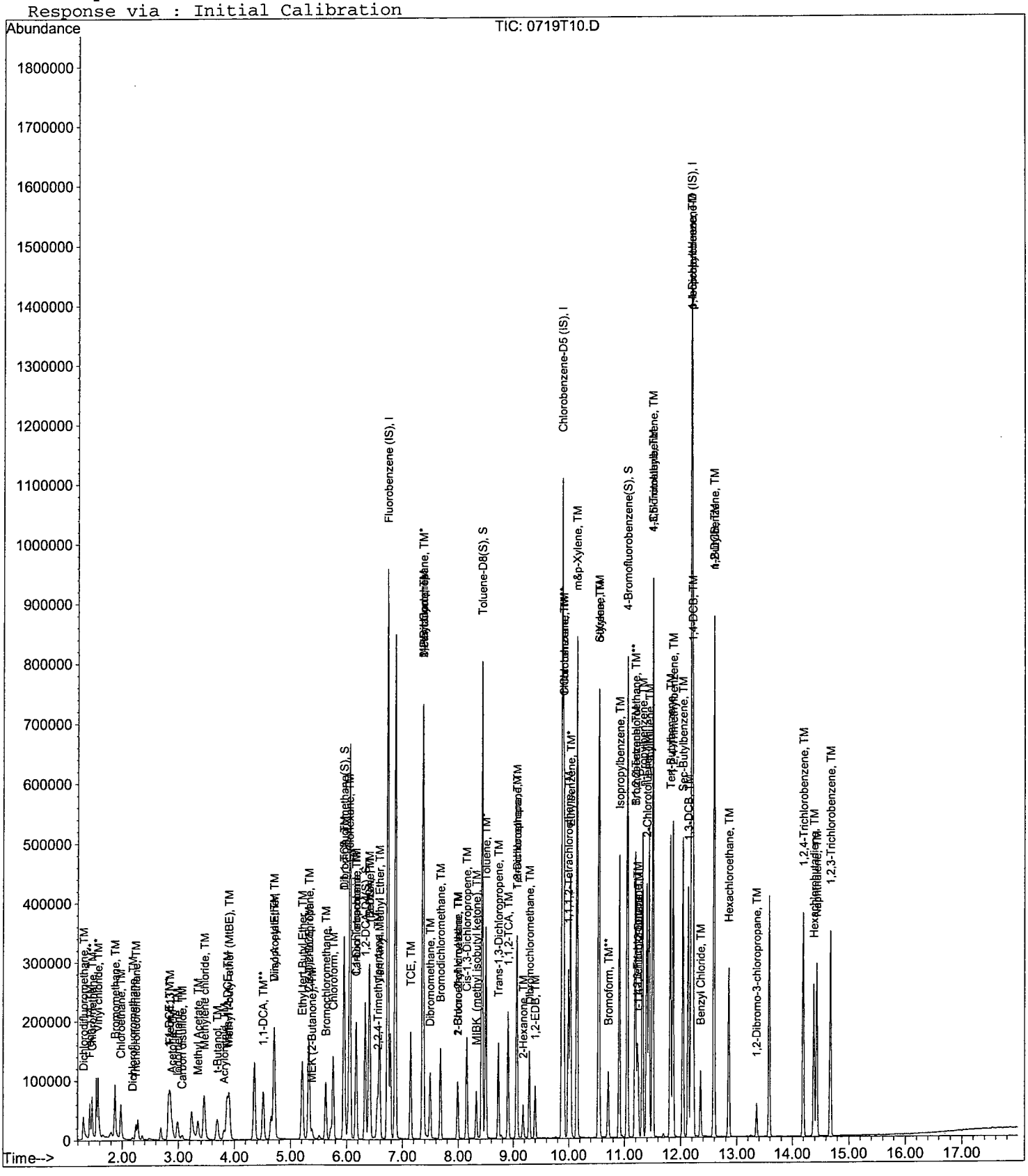
Quantitation Report

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

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

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

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



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Quantitation Report (Not Reviewed)

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						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

Quantitation Report (Not Reviewed)

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

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

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

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

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

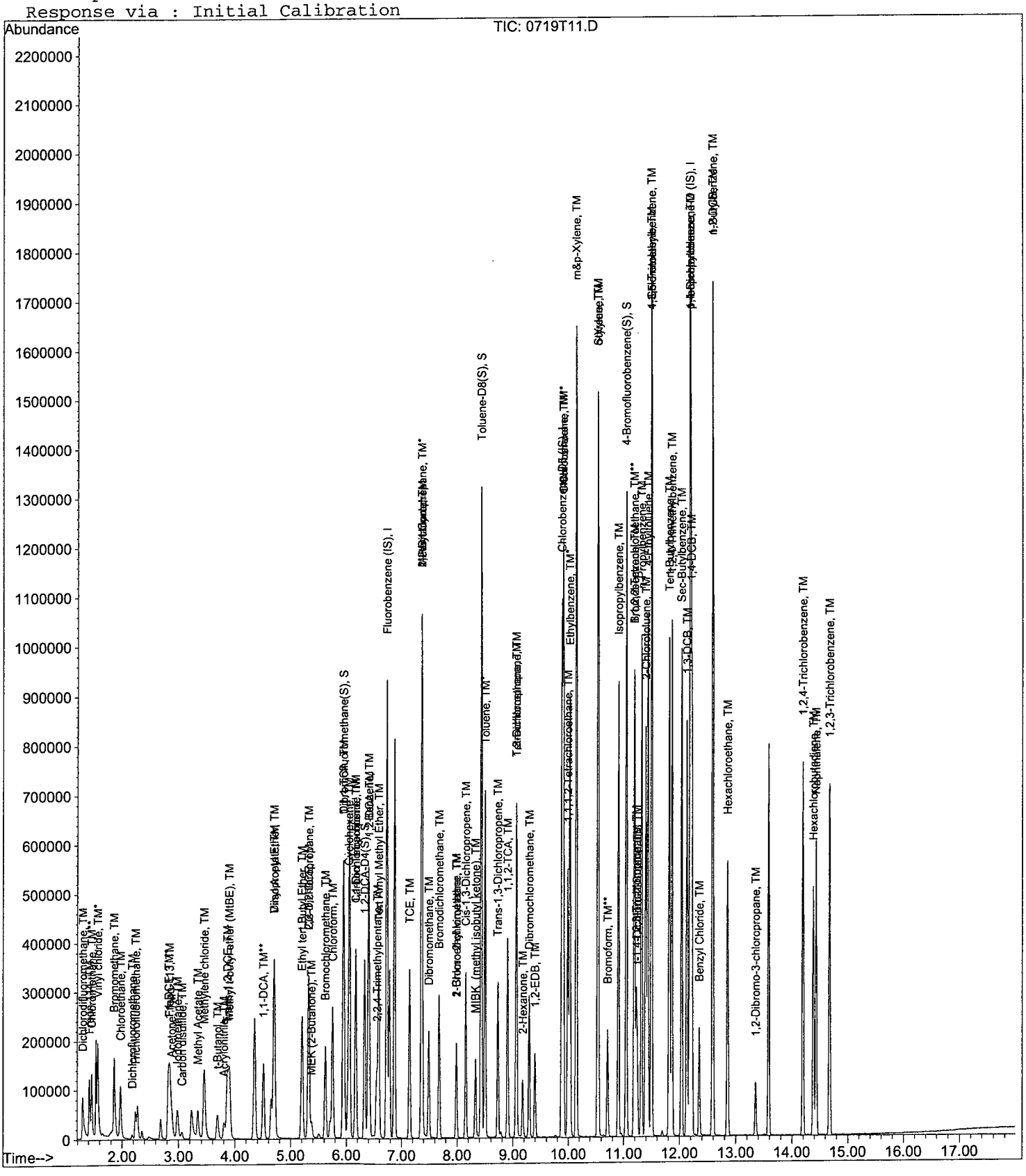
Quantitation Report

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

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

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

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



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Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T12.D Vial: 12
Acq On : 19 Jul 12 14:16 Operator: DG,RS,HW,ARS,SV
Sample : 40ug/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	450048	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	369920	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	219712	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	544884	77.36909 ppb		0.00
Spiked Amount 29.744			Recovery = 260.117%			
36) 1,2-DCA-D4(S)	6.33	65	488560	74.64543 ppb		0.00
Spiked Amount 29.083			Recovery = 256.659%			
56) Toluene-D8(S)	8.43	98	1669961	76.36095 ppb		0.00
Spiked Amount 30.231			Recovery = 252.593%			
64) 4-Bromofluorobenzene(S)	11.05	95	804405	77.77781 ppb		0.00
Spiked Amount 28.321			Recovery = 274.630%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	101464	43.22988 ppb		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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T12.D Vial: 12
Acq On : 19 Jul 12 14:16 Operator: DG,RS,HW,ARS,SV
Sample : 40ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

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

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

Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46) Dibromomethane	7.49	93	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

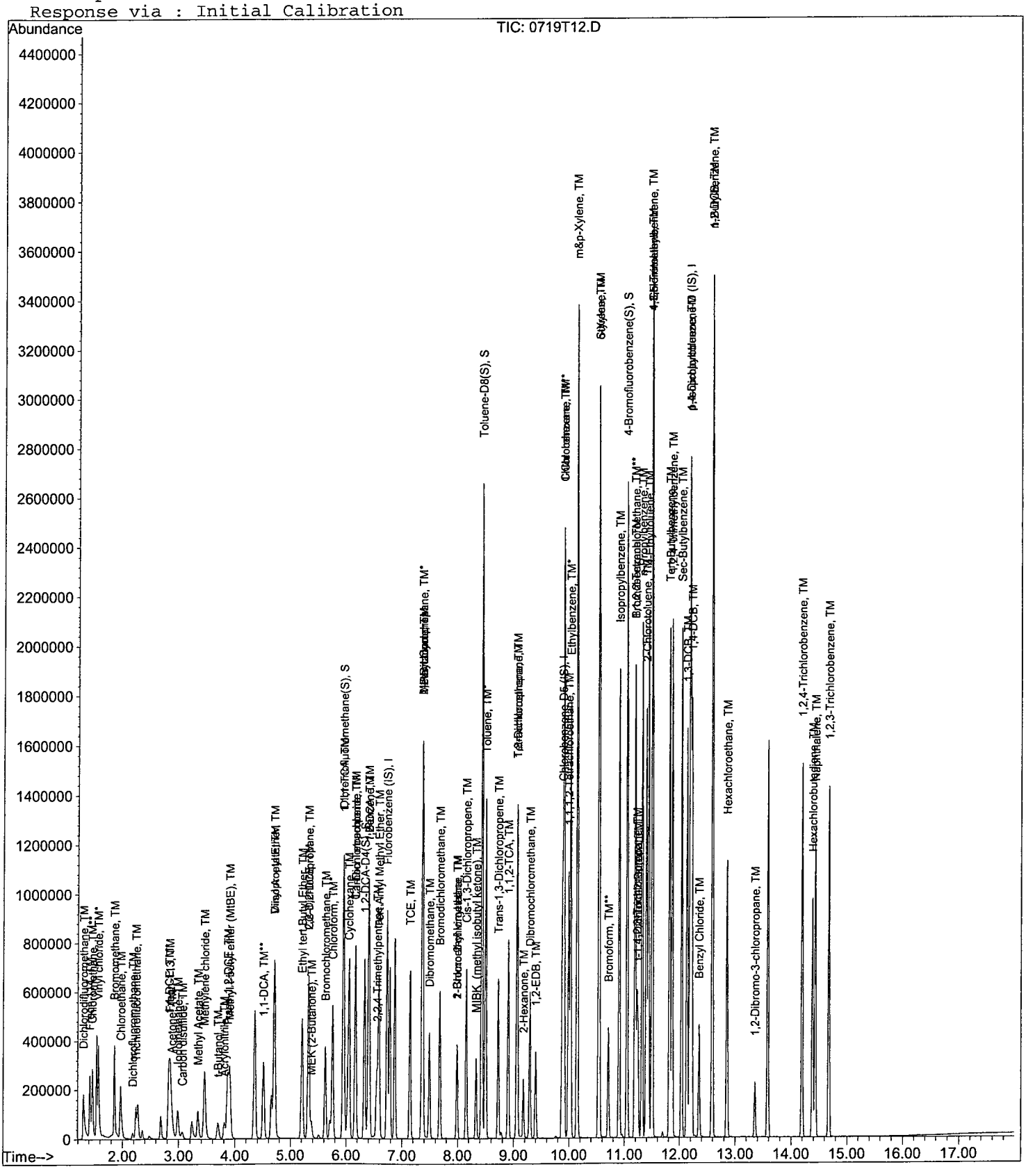
(#) = qualifier out of range (m) = manual integration

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



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Quantitation Report (Not Reviewed)

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

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

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

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

Quantitation Report (Not Reviewed)

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

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

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

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

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

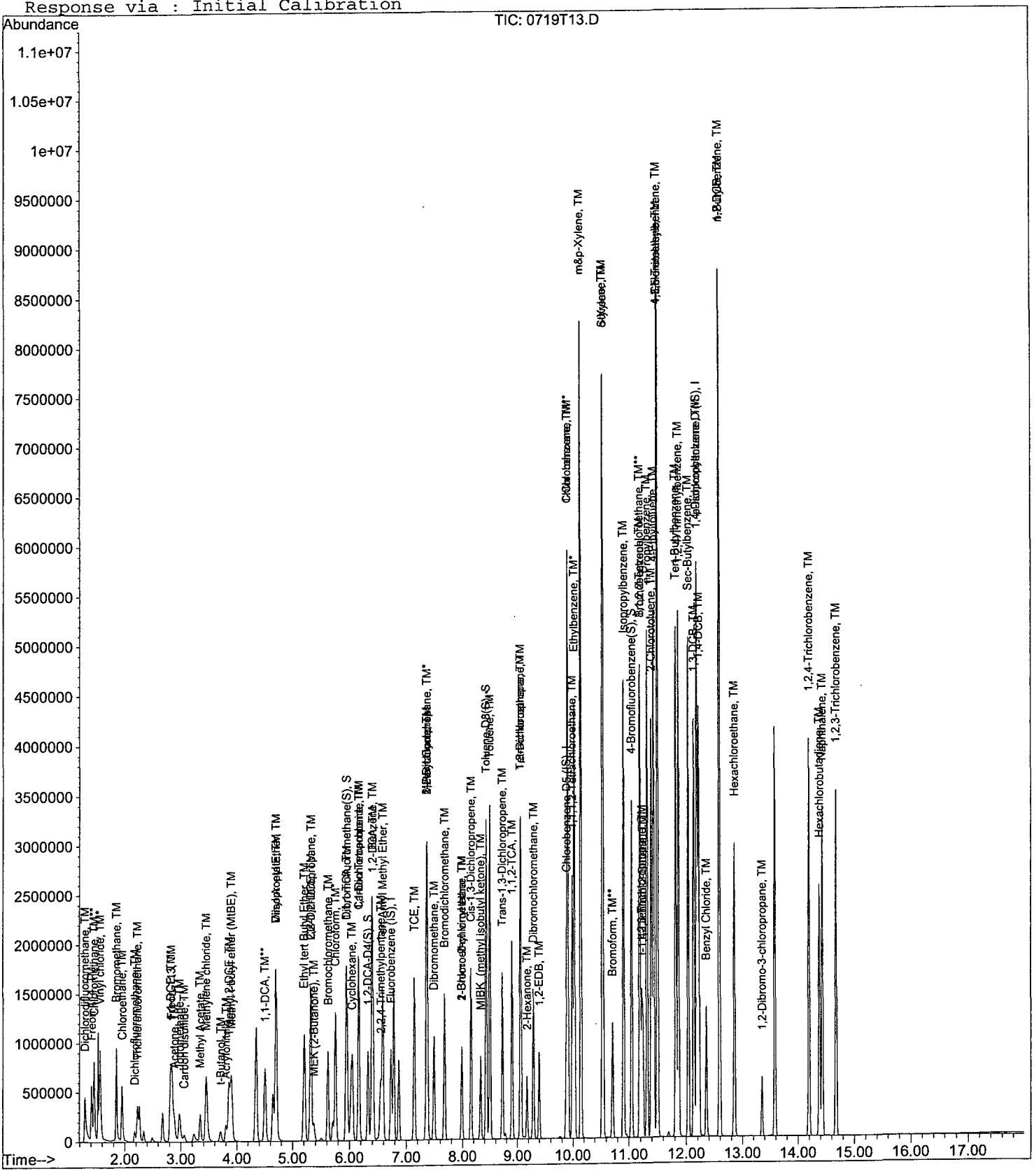
Quantitation Report

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



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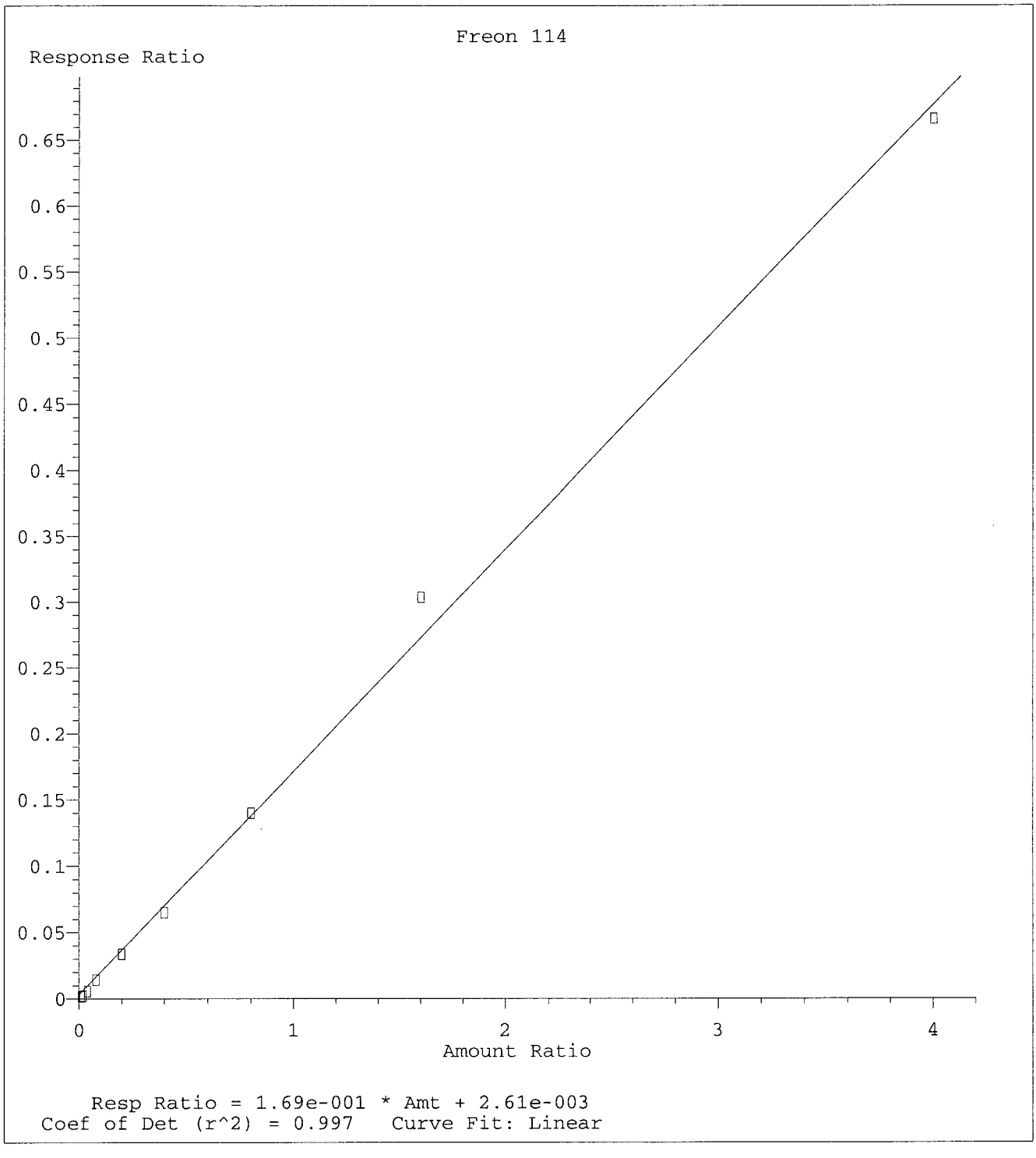
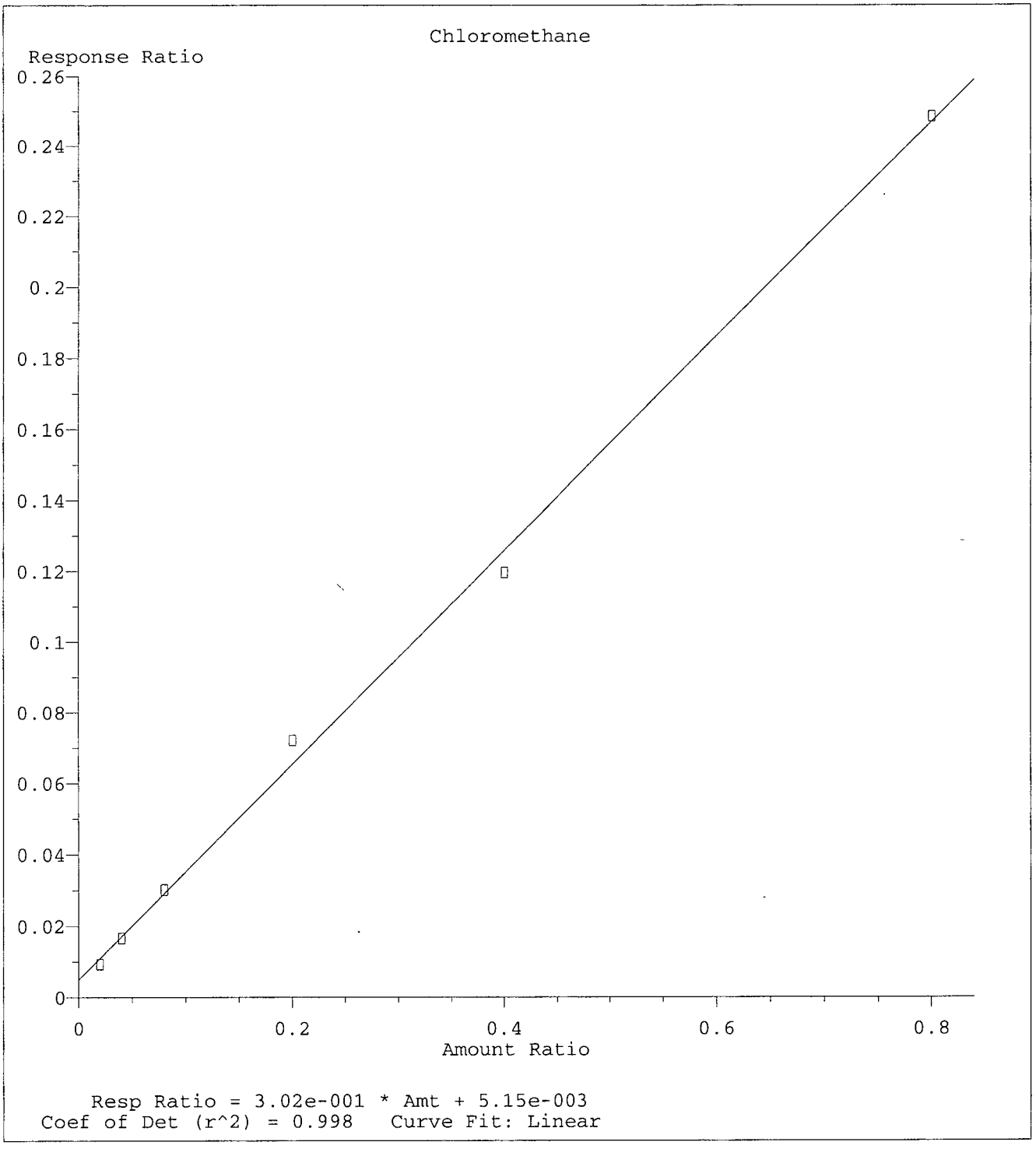
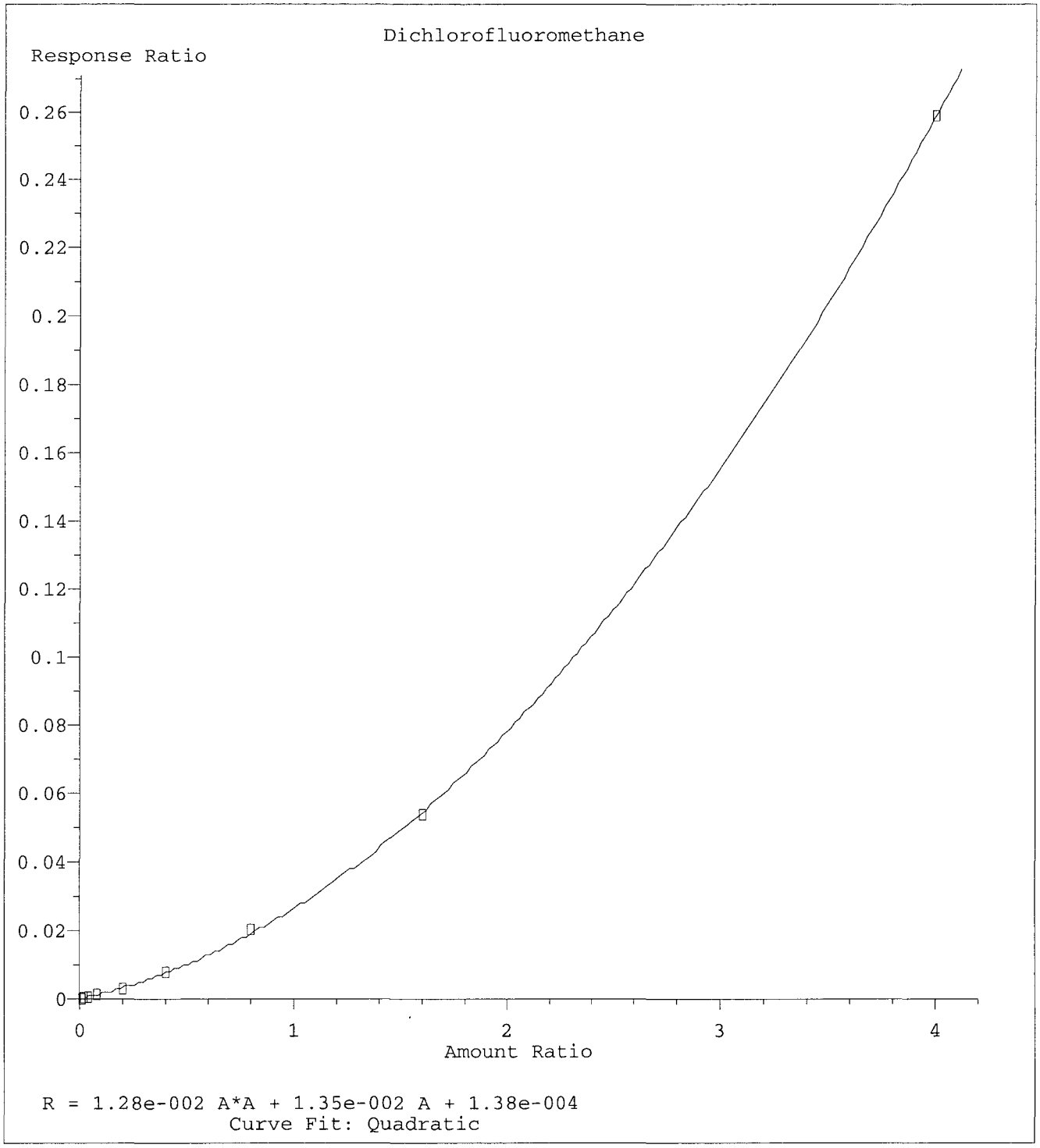


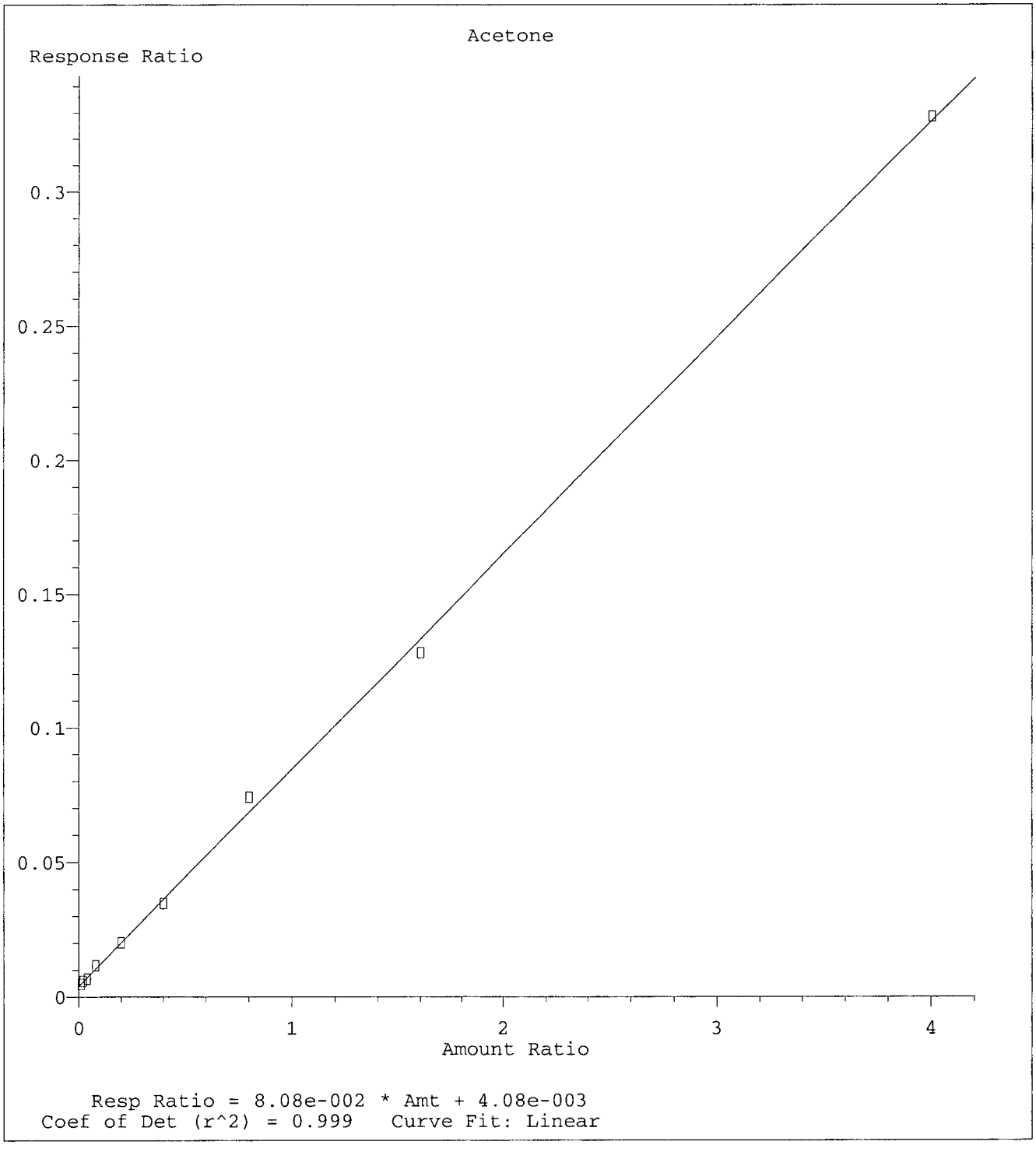
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



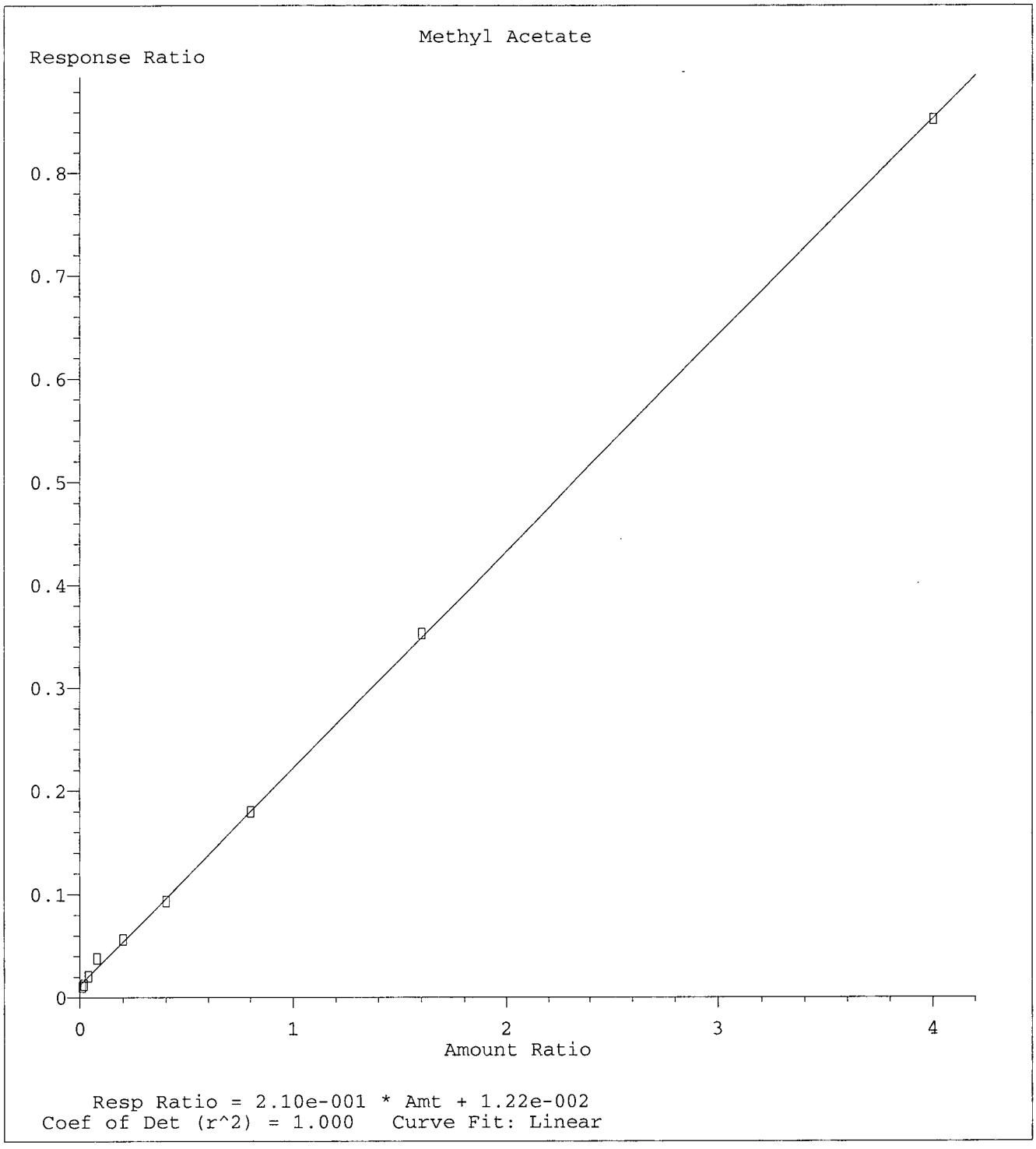
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



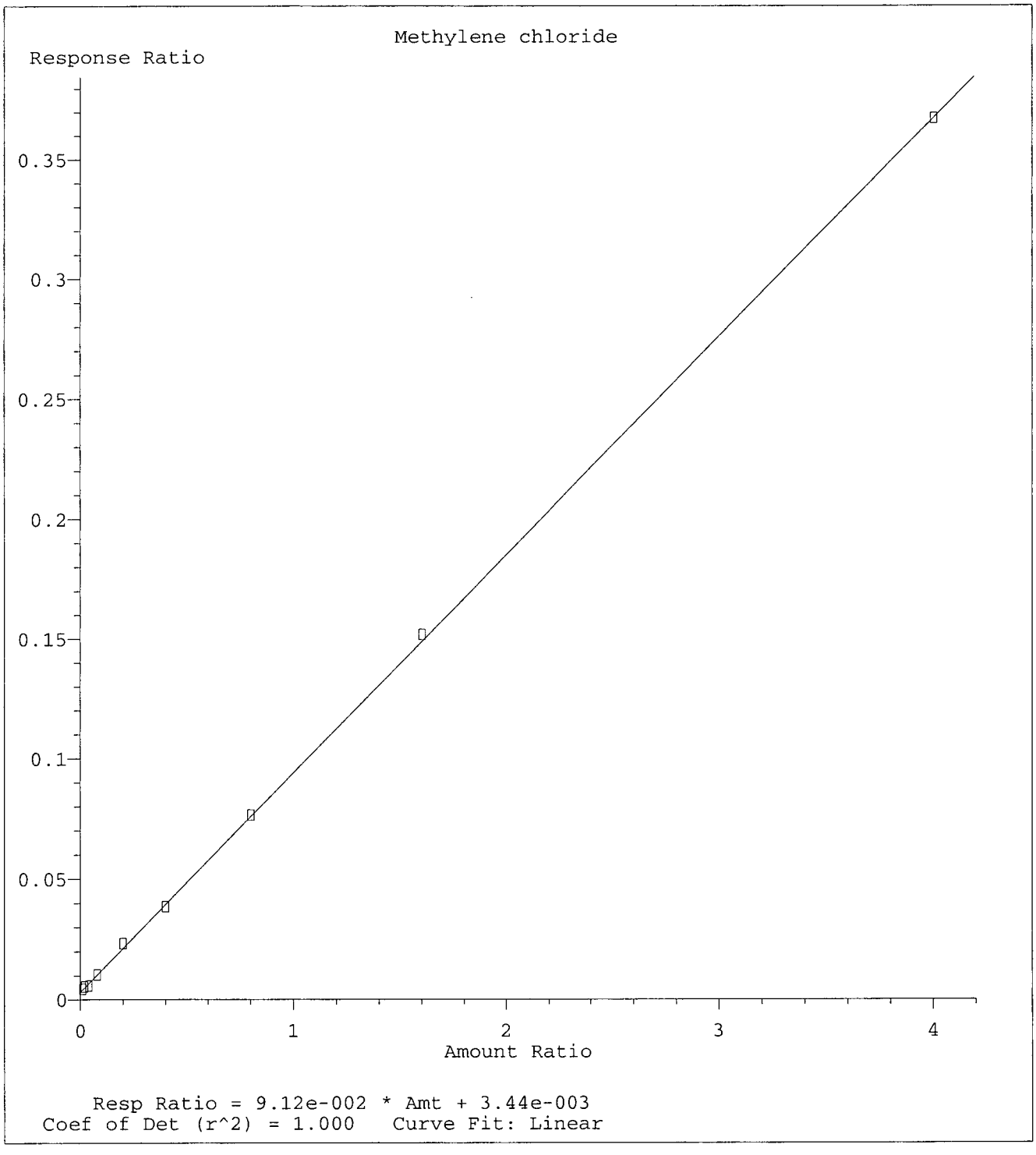
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



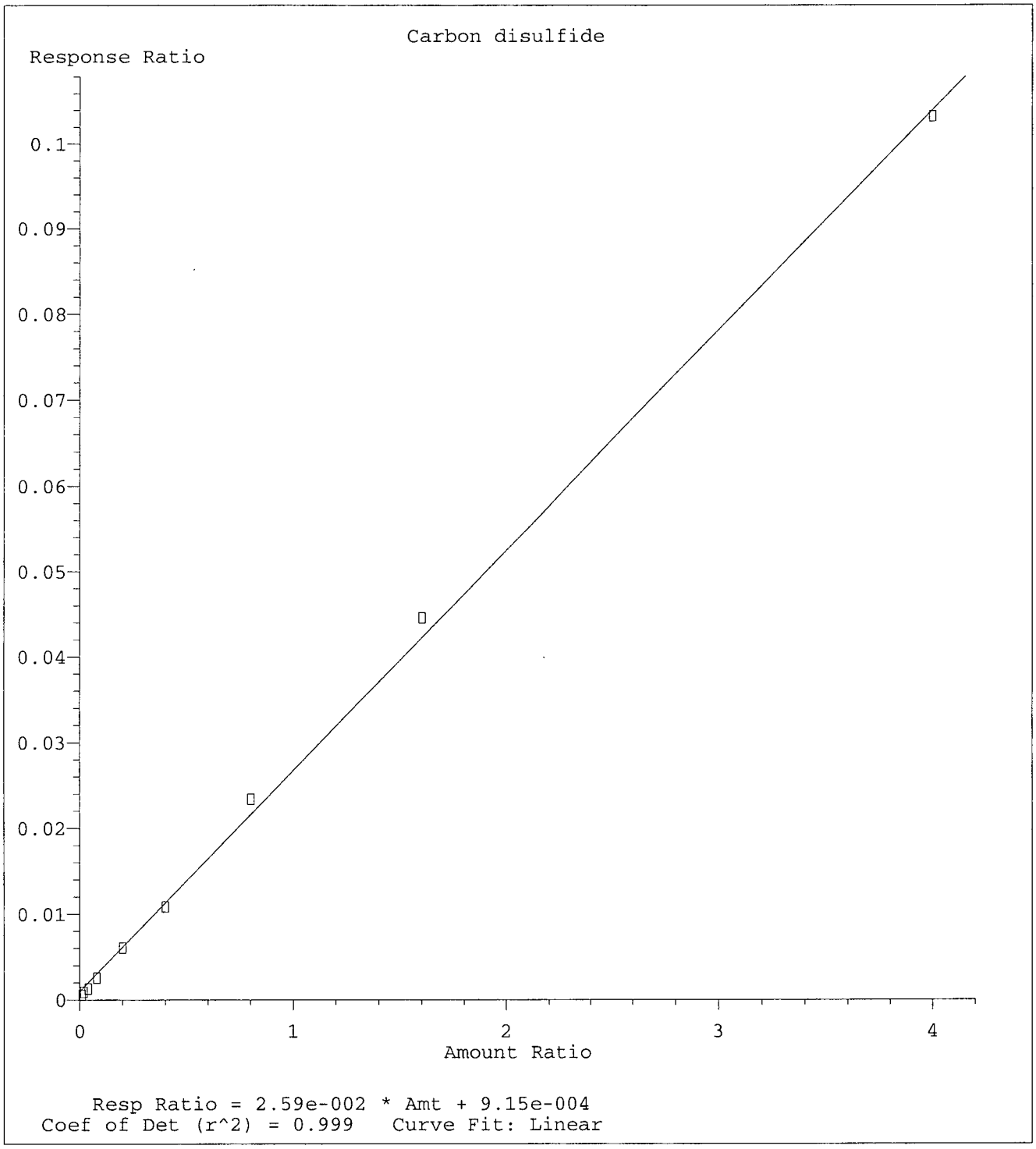
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



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



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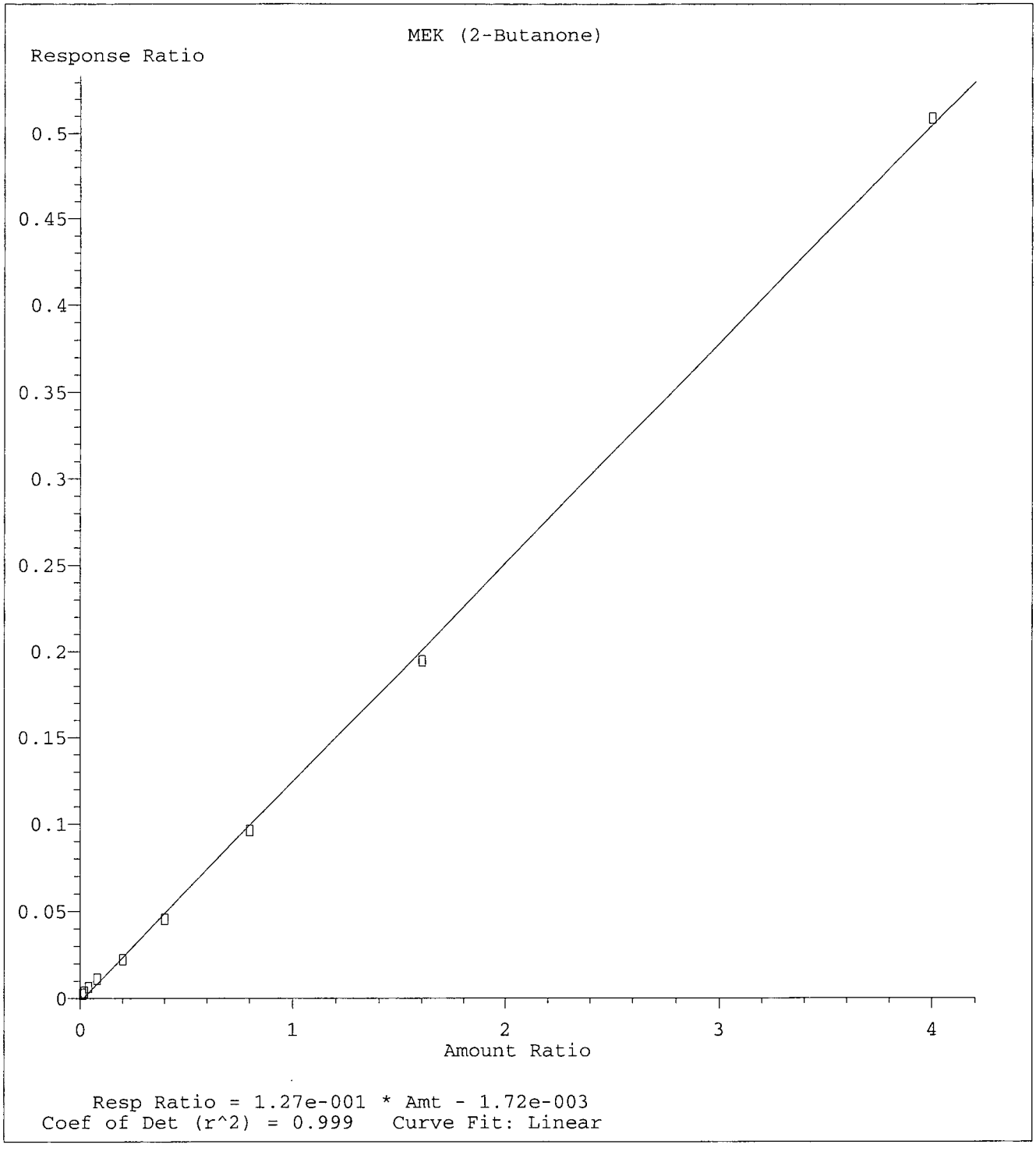
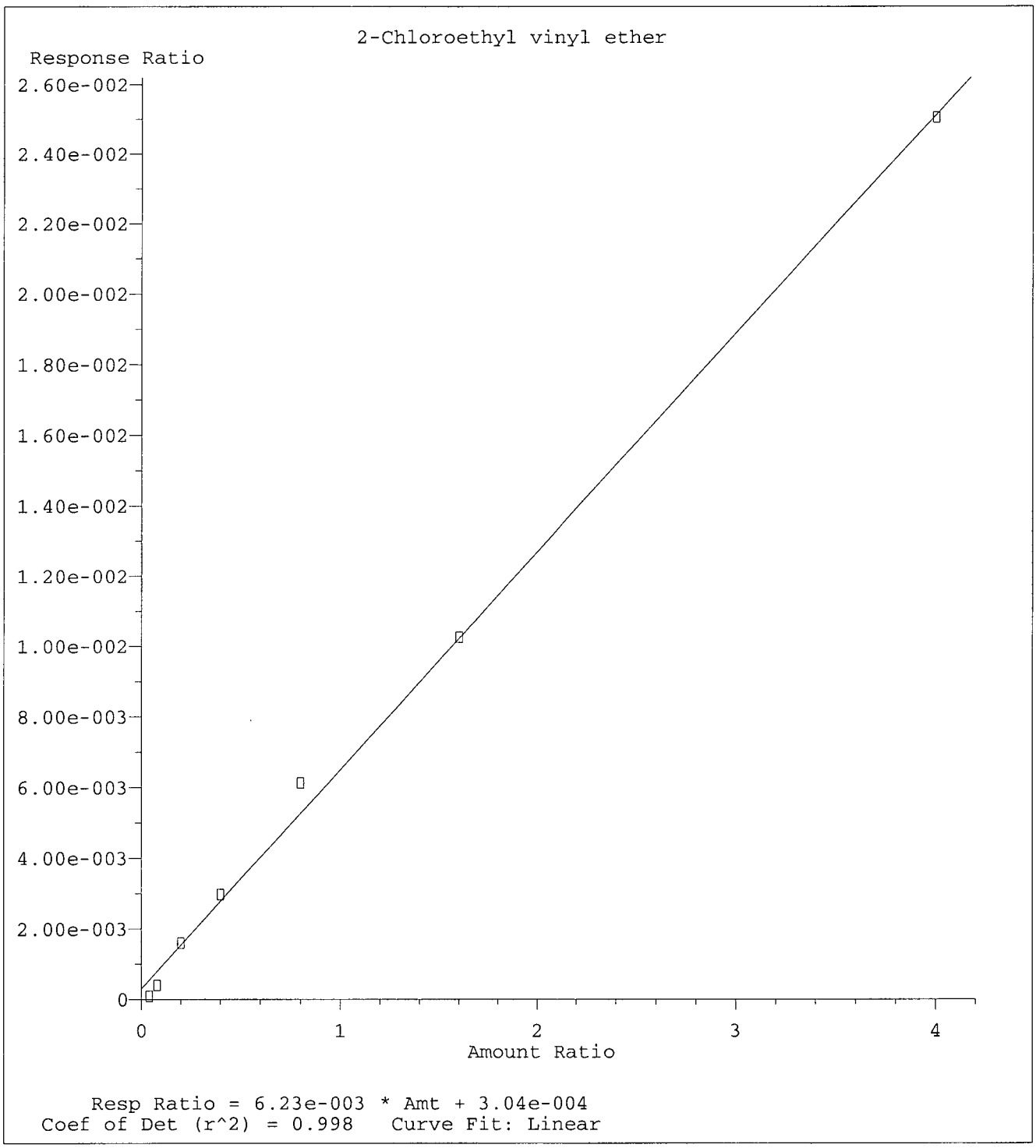
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



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



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

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68258
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		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68258
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		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68258
Date Analyzed: 07/19/12
Instrument: Thor
Cal. Date: 07/19/12
Data File: 0719T31.D

		Compound	MEAN	CCRF	%D	%Drift		
81	TM	Tert-Butylbenzene	2.745	2.818	2.7	TM		
82	TM	1,2,4-Trimethylbenzene	3.100	3.213	3.6	TM		
83	TM	Sec-Butylbenzene	3.664	3.850	5.1	TM		
84	TM	p-Isopropyltoluene	3.096	3.241	4.7	TM		
85	TM	Benzyl Chloride	0.9252	0.6126	34	TM		*NT
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		
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			5.2			

KRS 7/27/12

Quantitation Report (Not Reviewed)

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

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	459584	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	371008	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	216768	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	225058	31.29333 ppb		0.00
Spiked Amount 31.881			Recovery = 98.155%			
36) 1,2-DCA-D4(S)	6.33	65	220138	32.93626 ppb		0.00
Spiked Amount 33.647			Recovery = 97.888%			
56) Toluene-D8(S)	8.43	98	802051	36.56718 ppb		0.00
Spiked Amount 37.345			Recovery = 97.917%			
64) 4-Bromofluorobenzene(S)	11.05	95	313456	30.21914 ppb		0.00
Spiked Amount 29.515			Recovery = 102.384%			
Target Compounds						Qvalue
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: $\frac{(91788)(25)}{(459584)(0.4941)}$ CI = 10.10522903 ✓ ARS 7/27/12

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

Quantitation Report (Not Reviewed)

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

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	Bromodichloromethane	7.68	83	89098	9.56942	ppb		98
45)	Methyl Cyclohexane	7.36	83	38326	9.57410	ppb		95
46)	Dibromomethane	7.49	93	36747	10.03731	ppb		99
47)	2-Chloroethyl vinyl ether	7.99	106	1154	8.86120	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	32328	10.17680	ppb		97
49)	1-Bromo-2-chloroethane	7.99	63	45864	9.79426	ppb		99
50)	Cis-1,3-Dichloropropene	8.15	75	86842	9.42535	ppb		98
51)	Toluene	8.50	91	246468	10.12718	ppb		98
52)	Trans-1,3-Dichloropropene	8.72	75	75443	9.28657	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

ARS 7/27/12

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

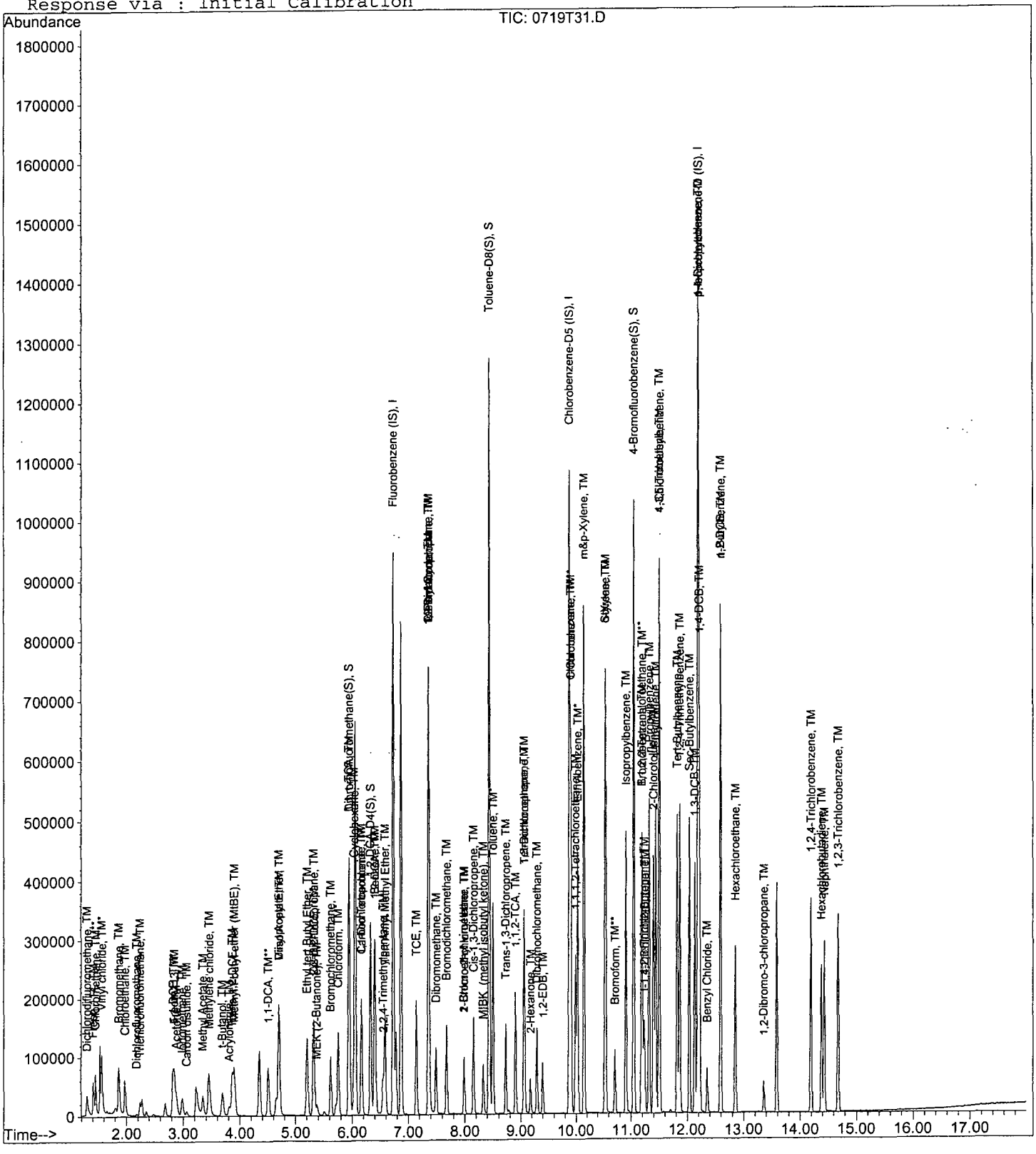
Quantitation Report

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

Vial: 31
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

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

SDG No: 68258
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		*NT
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

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

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

SDG No: 68258
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		

AR 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

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

SDG No: 68258
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		*NT
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		
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			6.9			

ARS 7/27/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T30.D Vial: 30
Acq On : 19 Jul 12 22:35 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/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 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						
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						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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T30.D Vial: 30
Acq On : 19 Jul 12 22:35 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/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 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

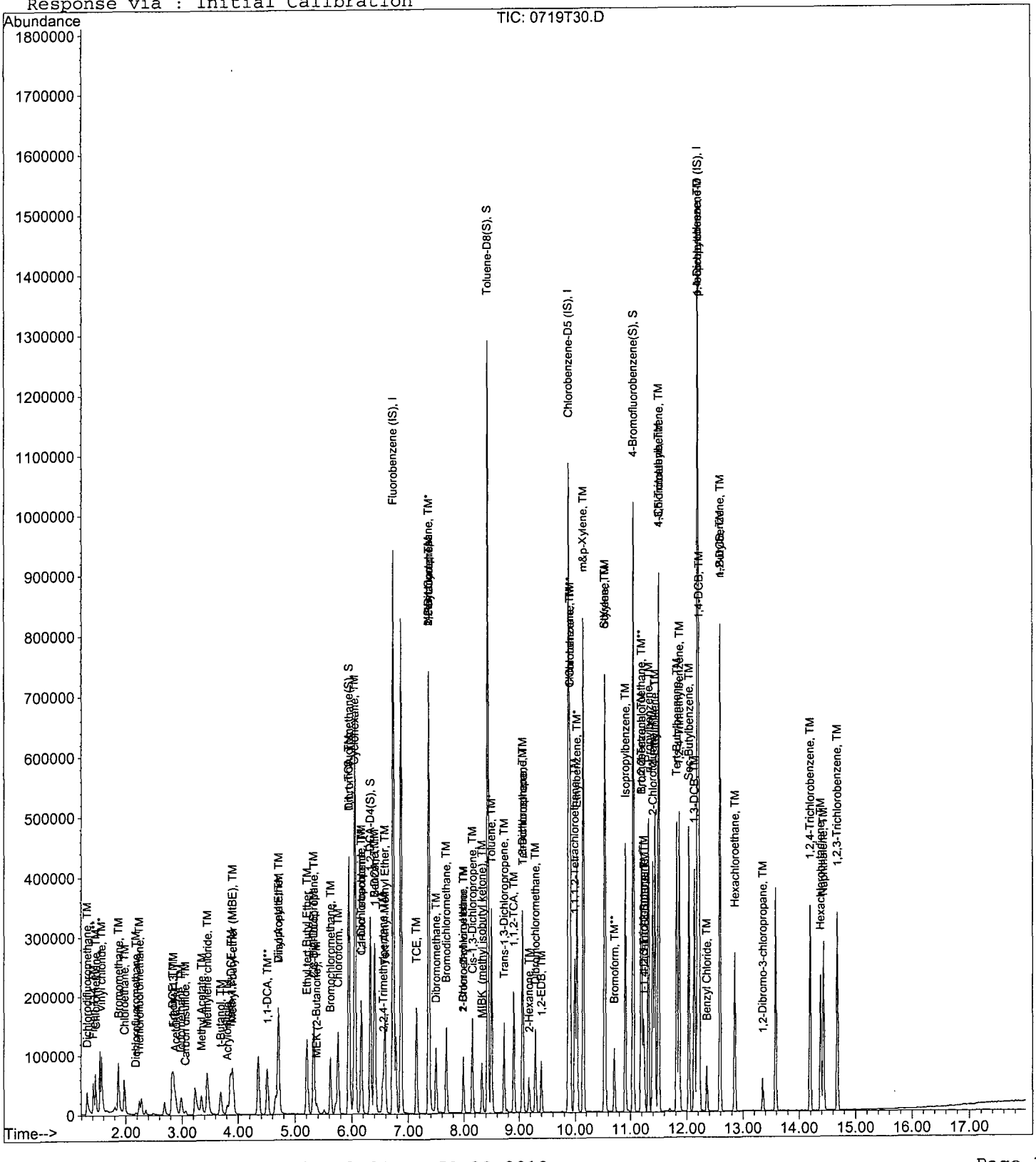
Quantitation Report

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



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68258

Case No: Initial Cal. Date: 07/19/12

Matrix: Water Instrument: Thor (TGAS.M)

Initials:

0719T18.D 0719T19.D 0719T20.D 0719T21.D 0719T22.D 0719T23.D 0719T24.D

		Compound	20	50	100	300	600	800	1000				Avg	%RSD		r2
1	I	Fluorobenzene (IS)														
2	TMHBL	Gasoline	10.2	4.491	2.752	1.655	1.327	1.282	1.266				3.3	100	TMHBL	0.999
3	I	Chlorobenzene-D5 (IS)														
4	I	1,4-Dichlorobenzene-D (IS)														
5																
6																
7																
8																
9																
10																
11																
12																
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35																

ARS 7/26/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T17.D Vial: 17
Acq On : 19 Jul 12 16:35 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 15:56 2012 Quant Results File: TALLW.RES

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

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.72	96	449600	25.00000 ppb		-0.01
55) Chlorobenzene-D5 (IS)	9.87	117	364480	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	212096	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	6.05	111	829	0.11783 ppb		0.10
Spiked Amount 31.881			Recovery = 0.370%			
36) 1,2-DCA-D4(S)	6.32	65	1100	0.16823 ppb		-0.01
Spiked Amount 33.647			Recovery = 0.499%			
56) Toluene-D8(S)	8.43	98	4329	0.20090 ppb		0.00
Spiked Amount 37.345			Recovery = 0.538%			
64) 4-Bromofluorobenzene(S)	11.05	95	3105	0.30470 ppb		0.00
Spiked Amount 29.515			Recovery = 1.033%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.26	85	175	0.07684 ppb	#	43
3) Freon 114	1.39	85	73	-0.36210 ppb		89
4) Chloromethane	1.42	50	408	-0.35112 ppb		90
11) Acetone	2.87	43	1560	-0.18868 ppb	#	82
14) t-Butanol	3.67	59	137	0.93967 ppb	#	72
15) Methyl Acetate	3.49	43	392147	102.18783 ppb	#	52
18) Methylene chloride	3.41	84	352	-0.72918 ppb		84
19) Carbon disulfide	3.03	76	116	-0.63444 ppb	#	65
26) MEK (2-Butanone)	5.37	43	934	0.74996 ppb	#	46
34) 1,1-Dichloropropene	6.04	75	26930	5.47025 ppb	#	49
35) 2,2,4-Trimethylpentane	6.53	57	915	0.12932 ppb	#	80
37) Carbon Tetrachloride	6.04	117	36940	5.81415 ppb	#	14
38) Tert Amyl Methyl Ether	6.72	73	10154	0.79719 ppb	#	27
39) 1,2-DCA	6.39	62	8679	1.17471 ppb	#	74
40) Benzene	6.39	78	1047885	51.92920 ppb		98
45) Methyl Cyclohexane	7.35	83	655	0.16726 ppb		76
51) Toluene	8.49	91	1111309	46.67683 ppb		100
58) Tetrachloroethene	9.06	166	449	0.07267 ppb	#	39
59) 1-Chlorohexane	10.03	91	1239543	168.53186 ppb	#	17
61) m&p-Xylene	10.14	106	972156	86.32704 ppb		99
62) o-Xylene	10.53	106	481637	41.34437 ppb		95
63) Styrene	10.54	104	24726	1.24922 ppb	#	1
68) Ethylbenzene	10.03	91	1239770	41.84303 ppb		99
79) 1,3,5-Trimethylbenzene	11.49	105	5894	0.23188 ppb		98
80) 4-Chlorotoluene	11.50	91	1859	0.07376 ppb	#	80
81) Tert-Butylbenzene	11.86	119	127152	5.46052 ppb	#	70
82) 1,2,4-Trimethylbenzene	11.86	105	1005826	38.24110 ppb		99
83) Sec-Butylbenzene	11.86	105	976689	31.41682 ppb	#	55
88) n-Butylbenzene	12.59	91	2153	0.09144 ppb		91
92) 1,2,4-Trichlorobenzene	14.20	180	890	0.11587 ppb	#	76
93) Hexachlorobutadiene	14.39	223	372	0.11593 ppb	#	54
94) Naphthalene	14.43	128	825392	38.48401 ppb		100
95) 1,2,3-Trichlorobenzene	14.67	180	875	0.07995 ppb		96

ARS 7/26/12

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

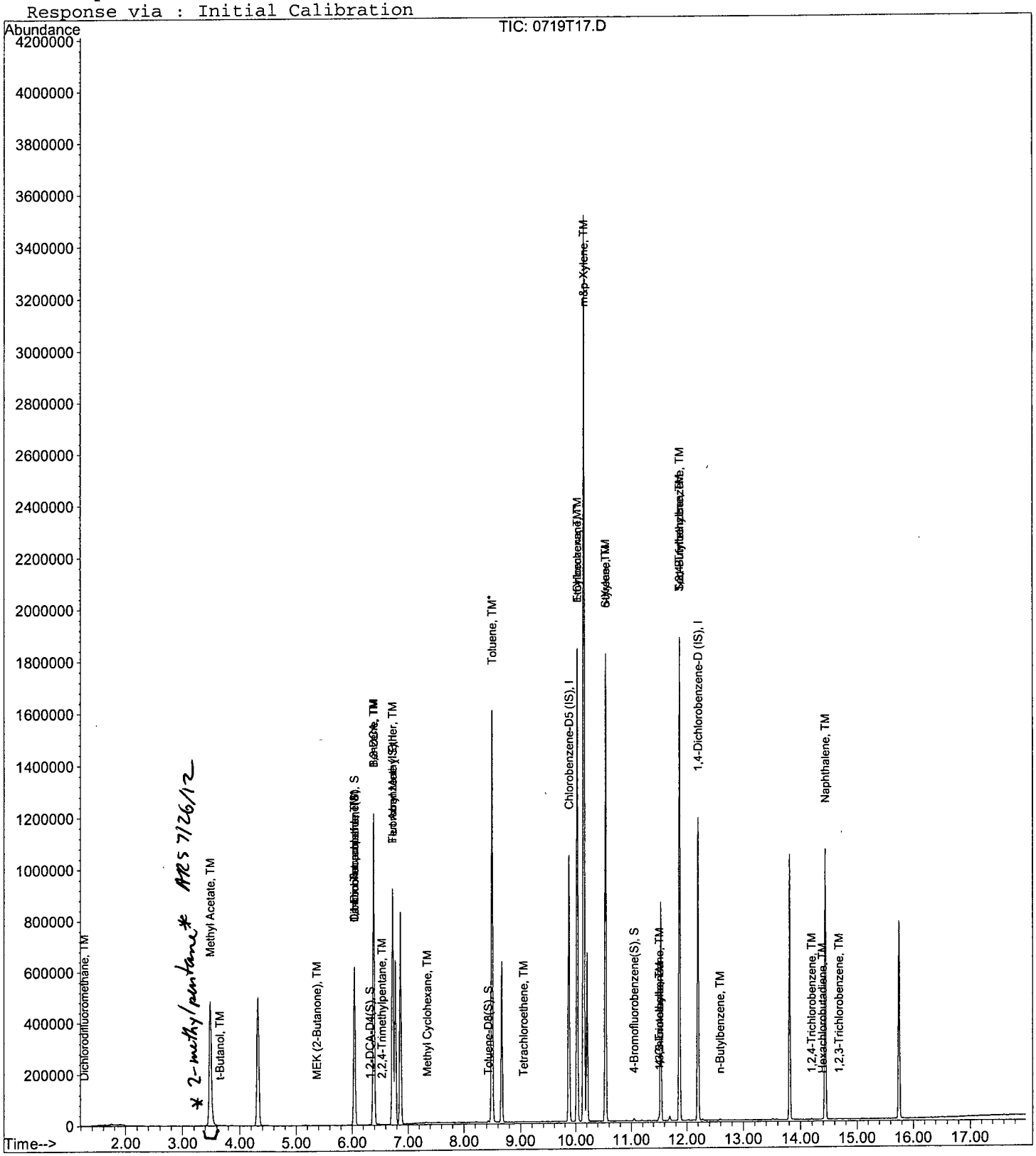
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T17.D
Acq On : 19 Jul 12 16:35
Sample : VOC MIX MARKER
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 17
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 15:56 2012 Quant Results File: TALLW.RES

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



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T18.D Vial: 18
Acq On : 19 Jul 12 17:02 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 13:30 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 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	863157	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	980787	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1107225	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	9.88	TIC	7045985m	24.82016	ppb	100

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

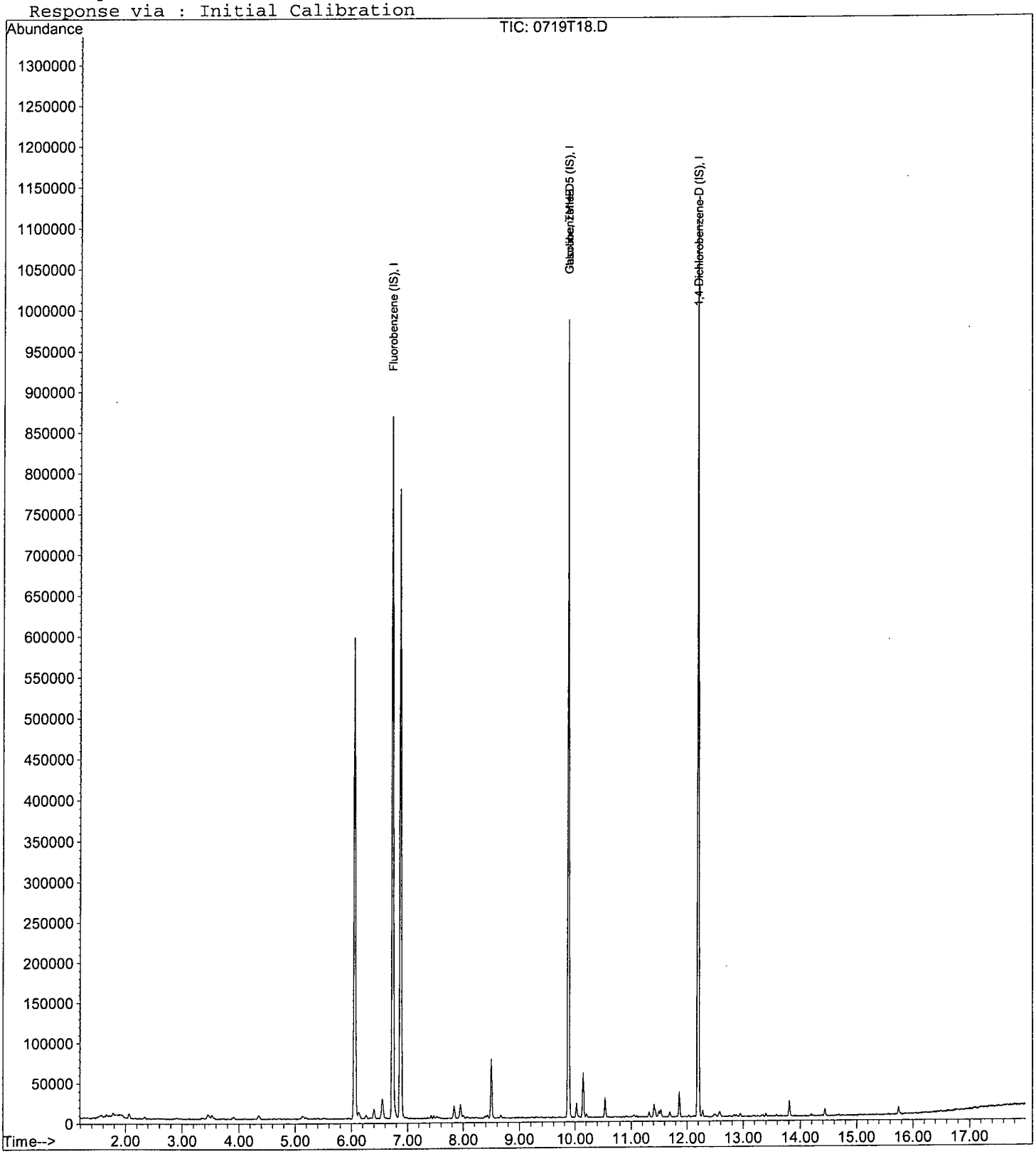
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T18.D
Acq On : 19 Jul 12 17:02
Sample : 20ug/LVol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 18
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:30 2012 Quant Results File: TGAS.RES

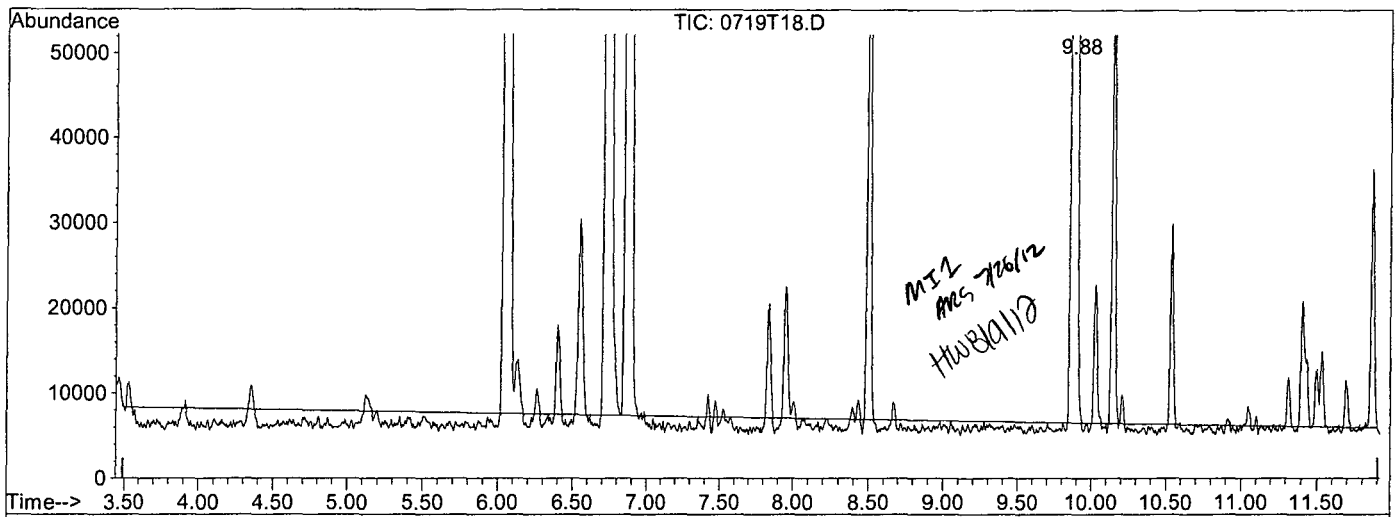
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

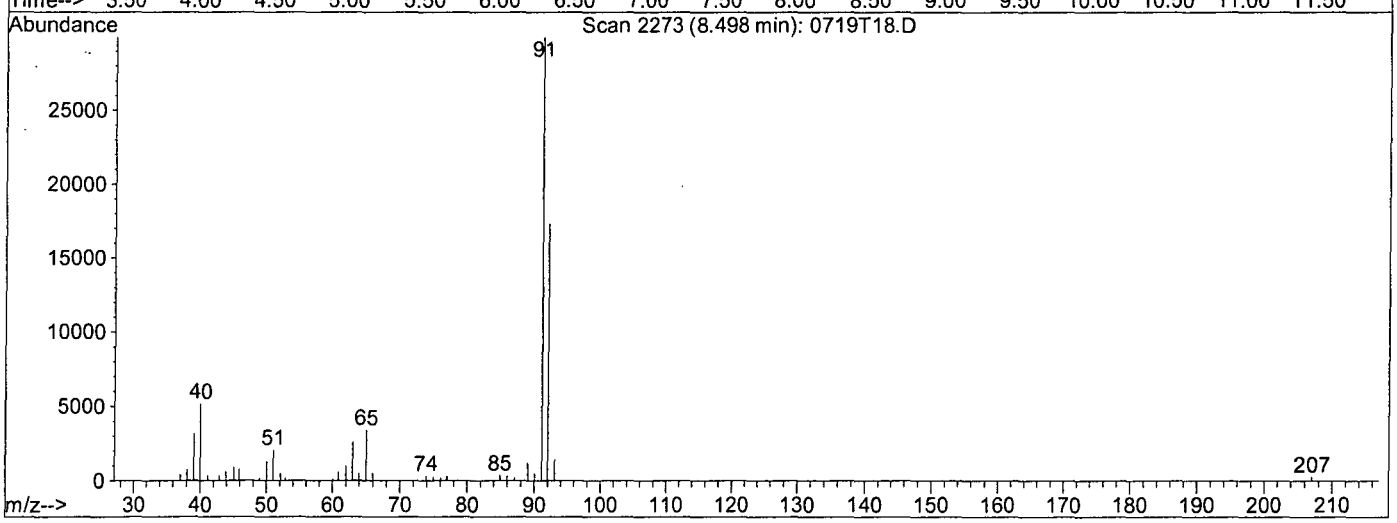


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T18.D Vial: 18
Acq On : 19 Jul 12 17:02 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T18.D

(2) Gasoline (TMHB)

8.50min -49.5217ppb m

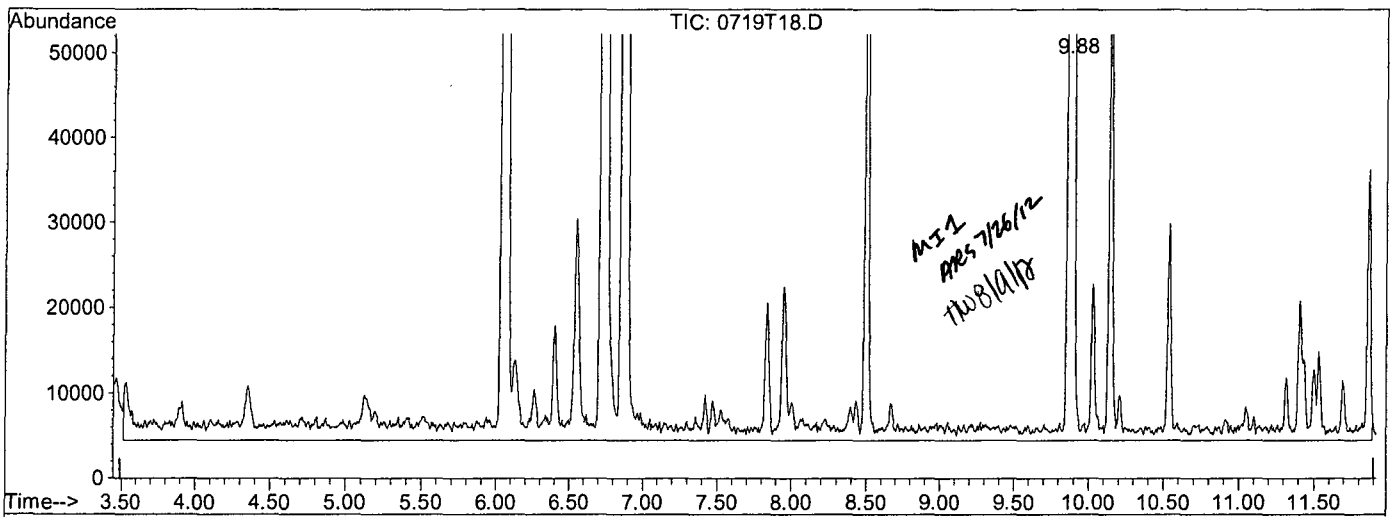
response 4305439

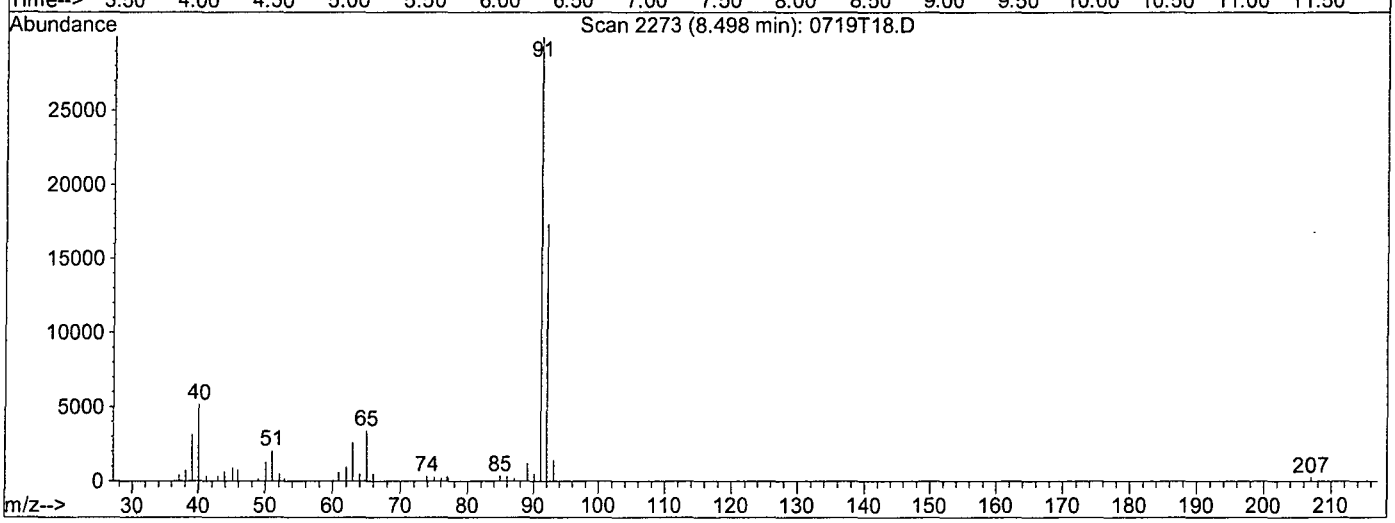
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	2.48#
0.00	1.80	7.19#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T18.D Vial: 18
Acq On : 19 Jul 12 17:02 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:30 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T18.D

(2) Gasoline (TMHB)

9.88min 24.8202ppb m

response 7045985

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.52#
0.00	1.80	4.39#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T19.D Vial: 19
Acq On : 19 Jul 12 17:30 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 13:29 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 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	931554	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	1035987	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1151281	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	9.88	TIC	8367373m	43.99965	ppb	100

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

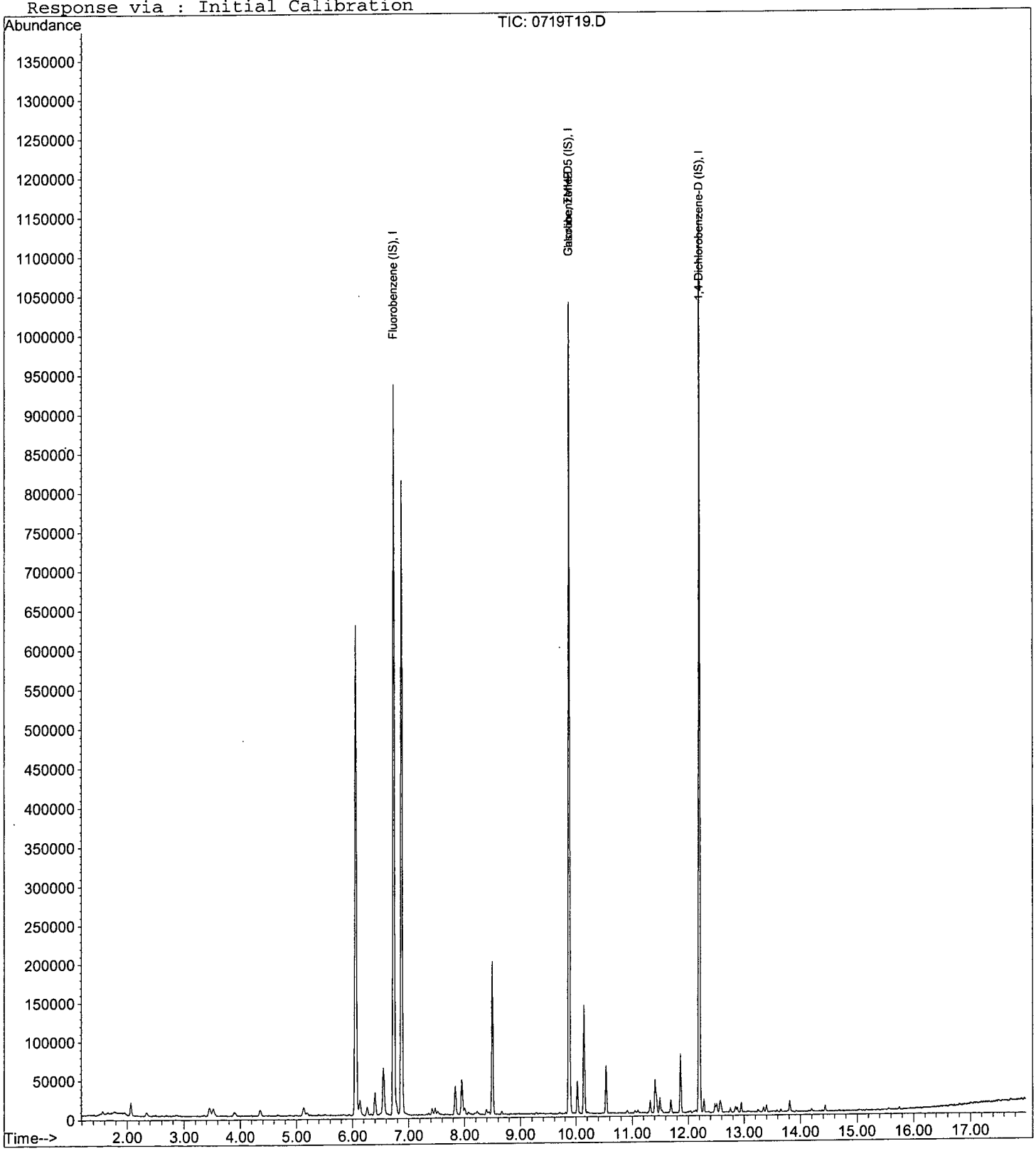
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T19.D
Acq On : 19 Jul 12 17:30
Sample : 50ug/LVol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 19
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:29 2012 Quant Results File: TGAS.RES

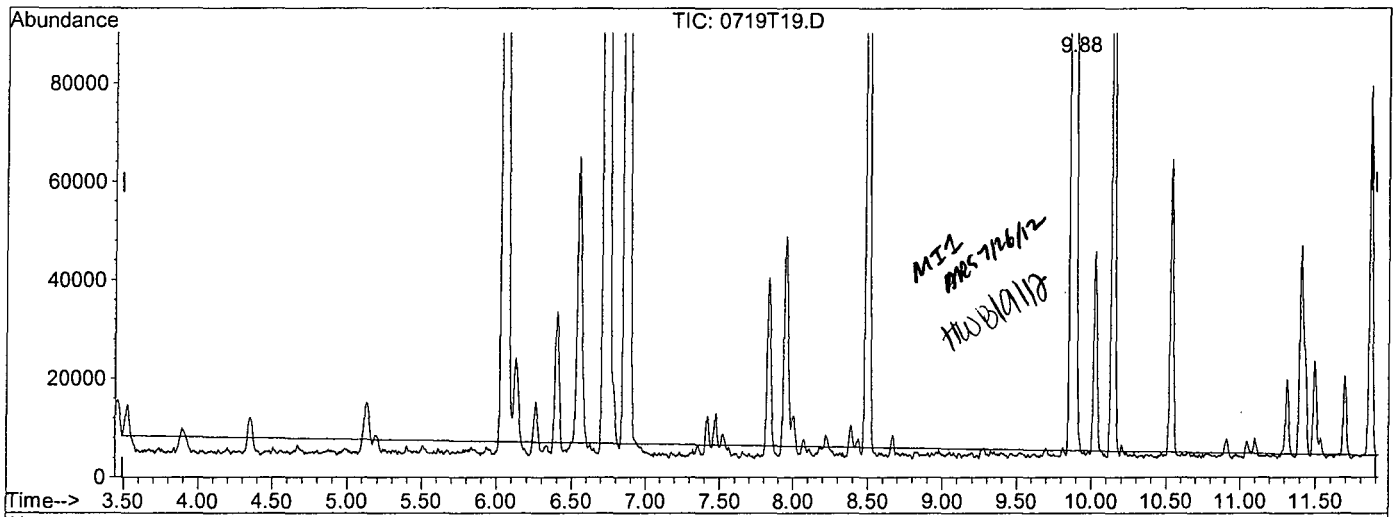
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

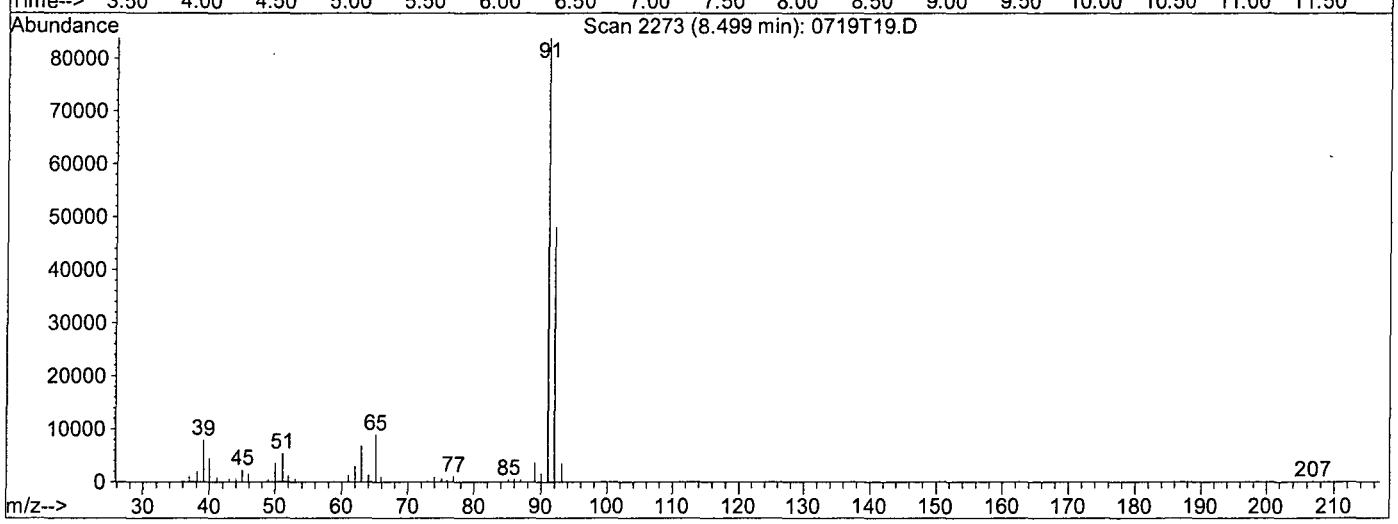


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T19.D Vial: 19
Acq On : 19 Jul 12 17:30 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T19.D

(2) Gasoline (TMHB)

8.50min -28.6219ppb m

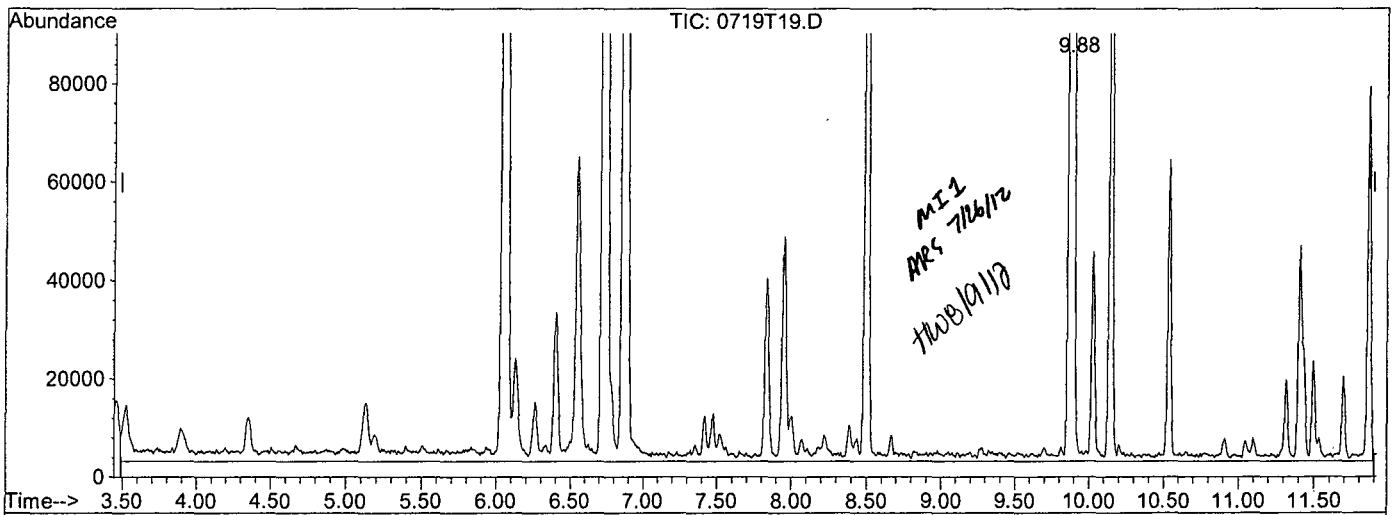
response 5478107

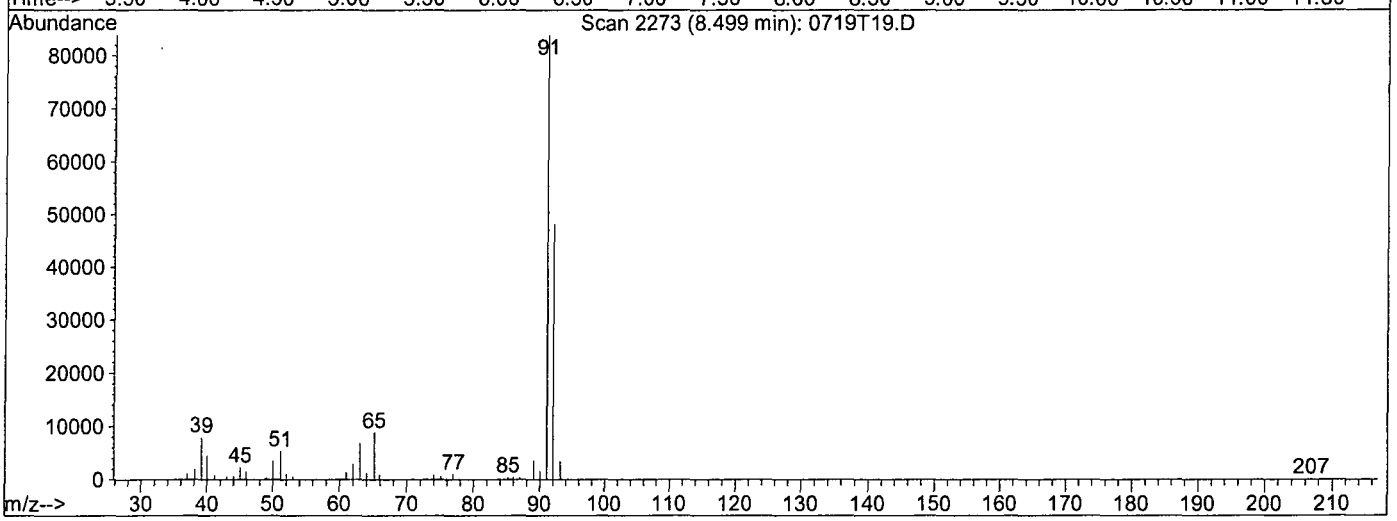
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	2.05#
0.00	1.80	5.90#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T19.D Vial: 19
Acq On : 19 Jul 12 17:30 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:29 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T19.D

(2) Gasoline (TMHB)

9.88min 43.9996ppb m

response 8367373

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.34#
0.00	1.80	3.86#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T20.D Vial: 20
Acq On : 19 Jul 12 17:58 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 13:28 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 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	913405	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	1040970	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1159278	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline	9.88	TIC	10053011m	91.38877	ppb	100

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

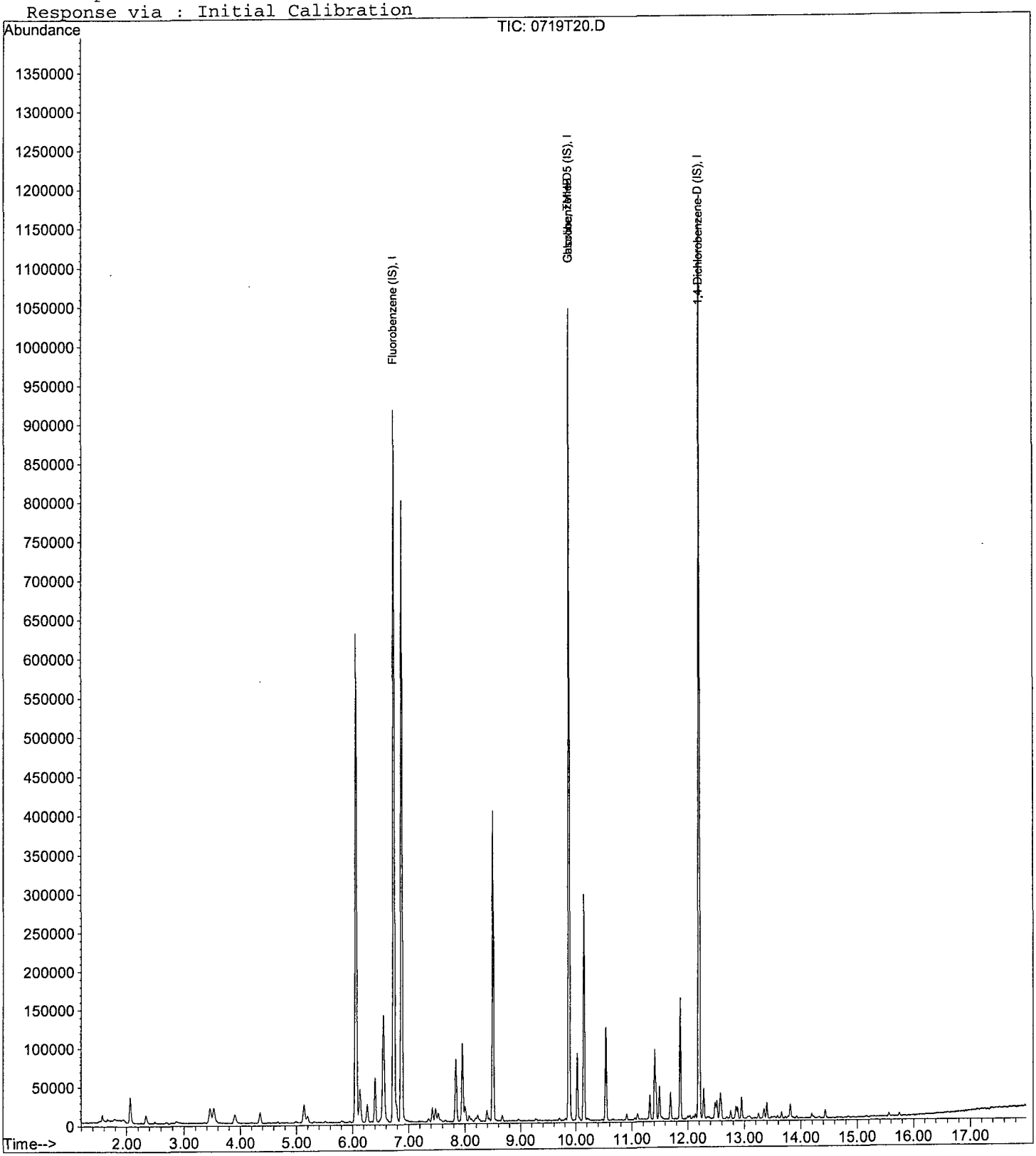
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T20.D
Acq On : 19 Jul 12 17:58
Sample : 100ug/LVol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 20
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:28 2012 Quant Results File: TGAS.RES

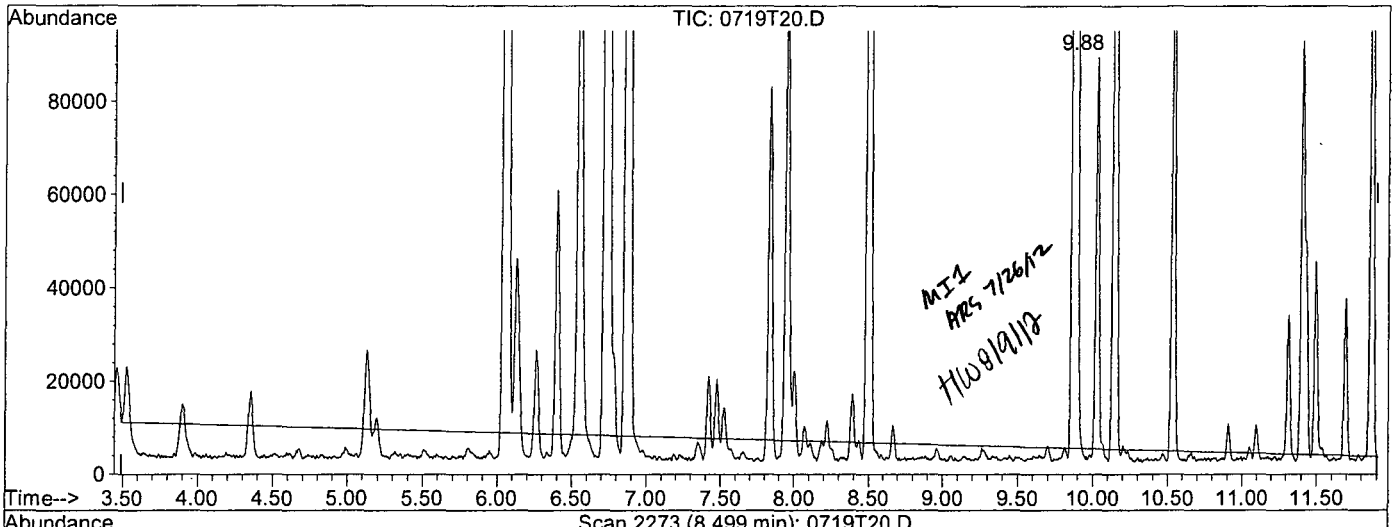
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

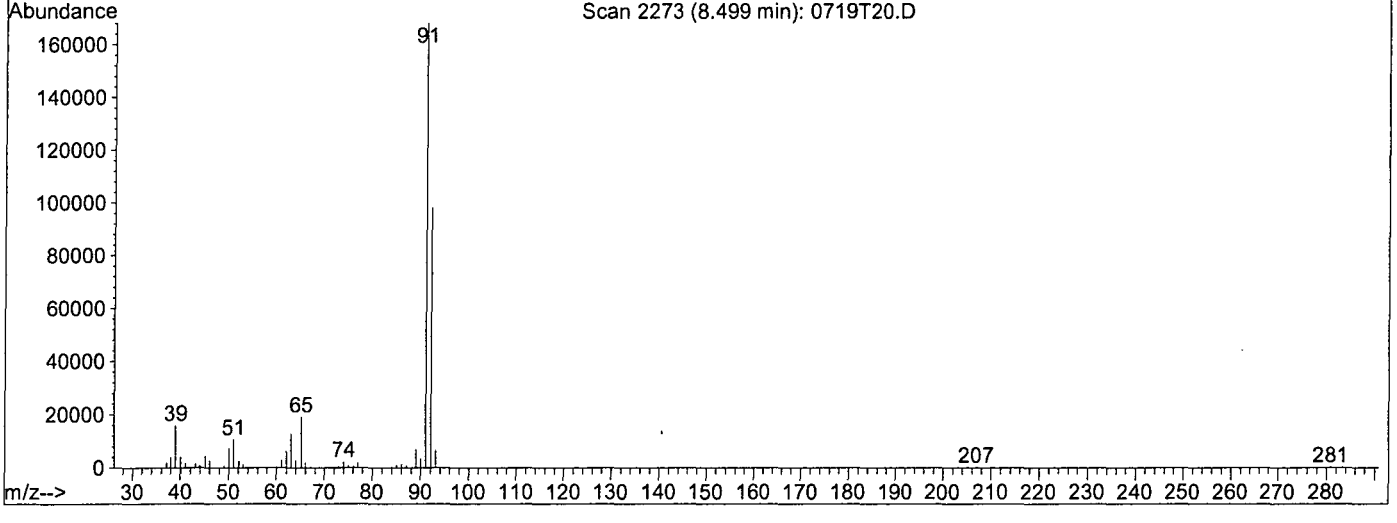


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T20.D Vial: 20
Acq On : 19 Jul 12 17:58 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T20.D

(2) Gasoline (TMHB)

8.50min 18.9965ppb m

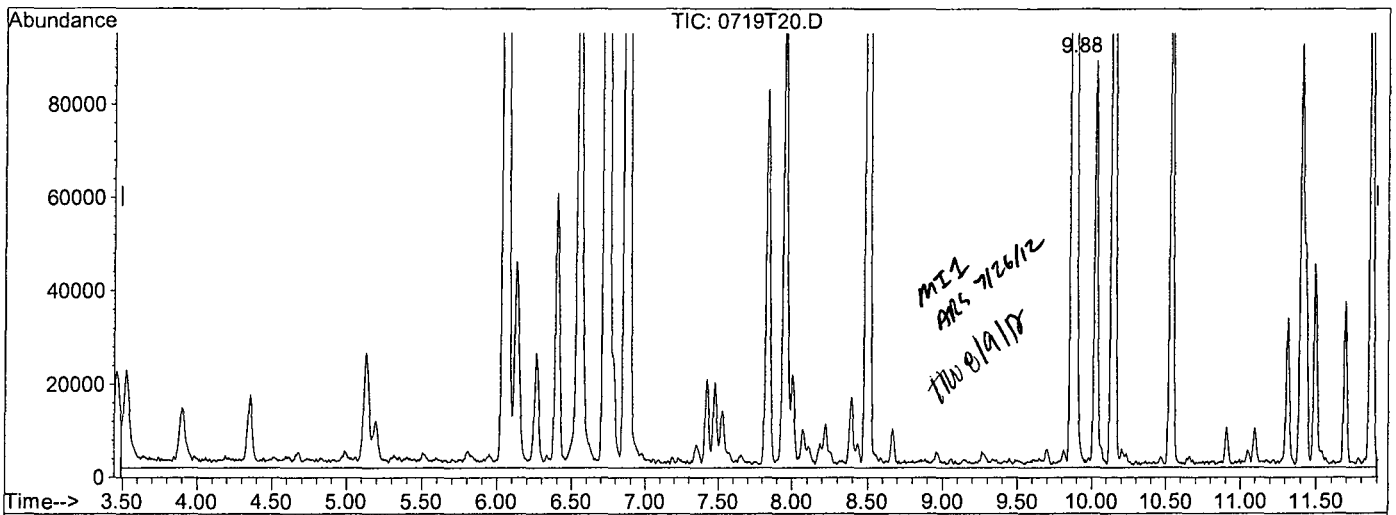
response 7228978

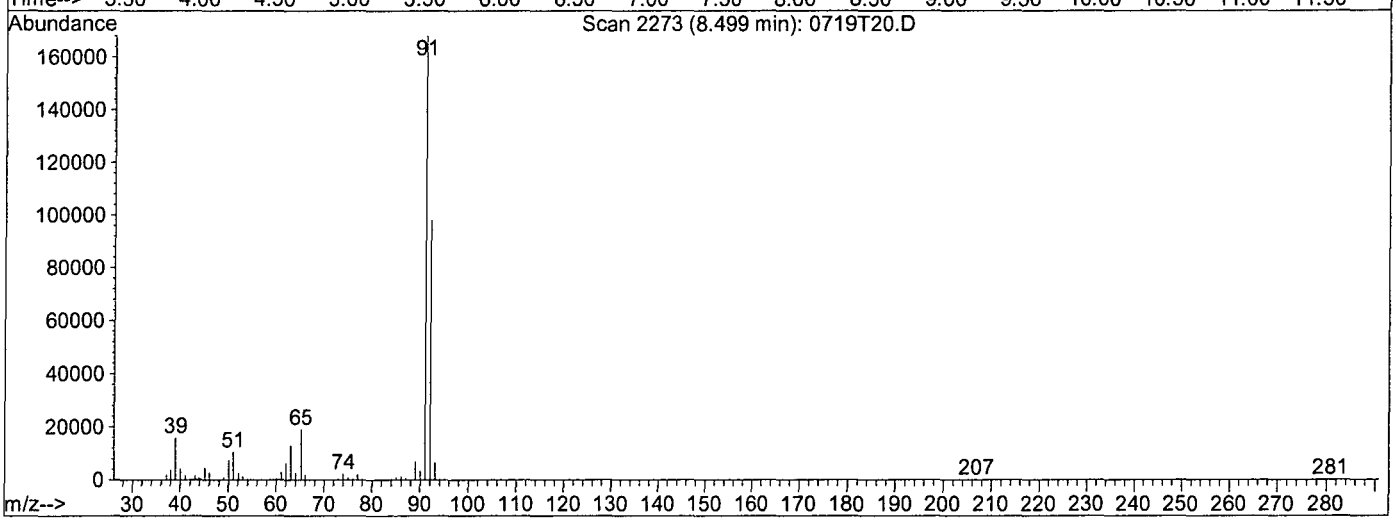
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.56#
0.00	1.80	4.52#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T20.D Vial: 20
Acq On : 19 Jul 12 17:58 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:28 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T20.D

(2) Gasoline (TMHB)

9.88min 91.3888ppb m

response 10053011

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.12#
0.00	1.80	3.25#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T21.D Vial: 21
Acq On : 19 Jul 12 18:26 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 13:27 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 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	908946	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	1020089	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1167558	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	18049652m	298.64746	ppb	100

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

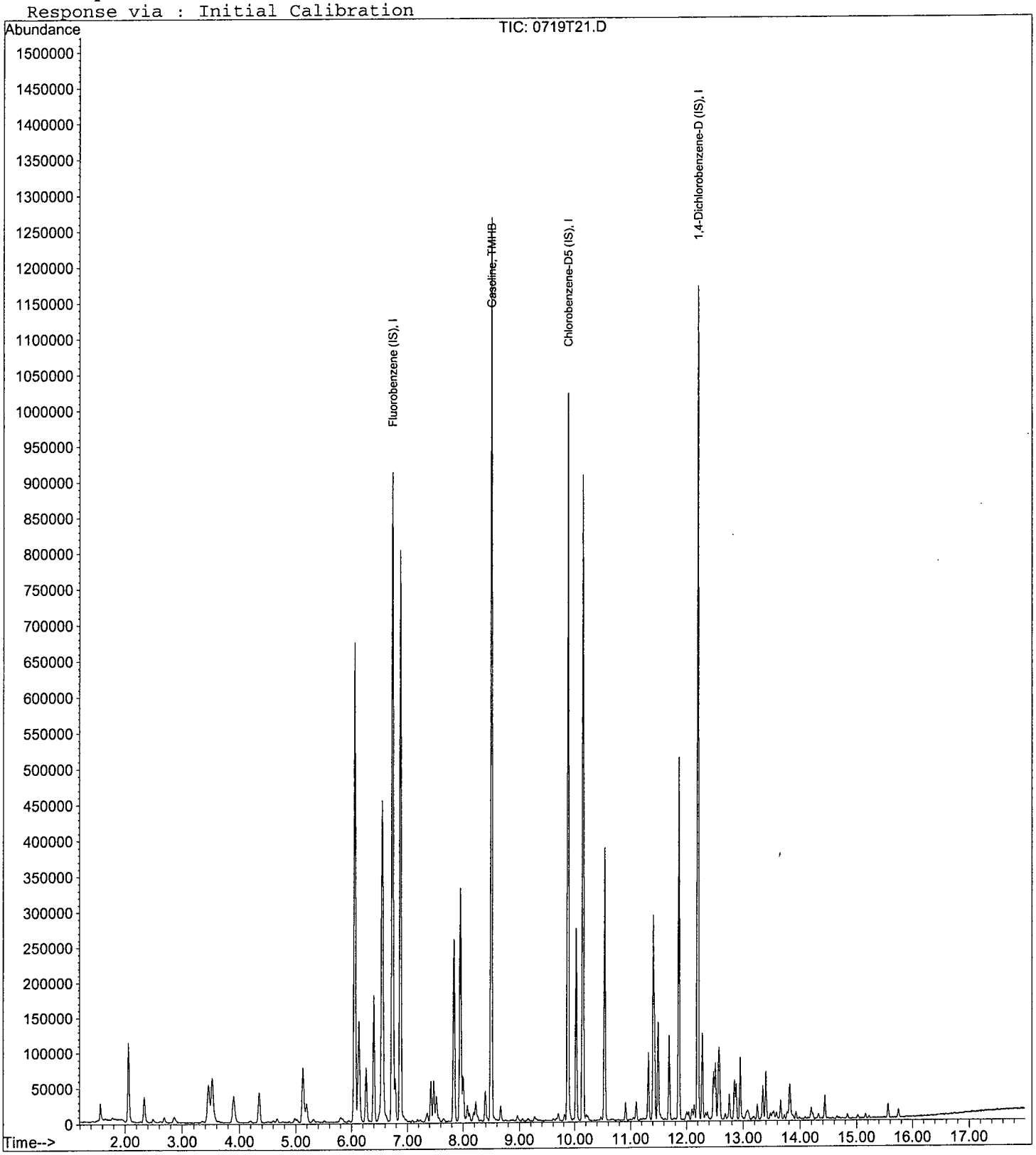
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T21.D
Acq On : 19 Jul 12 18:26
Sample : 300ug/LVol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 21
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:27 2012 Quant Results File: TGAS.RES

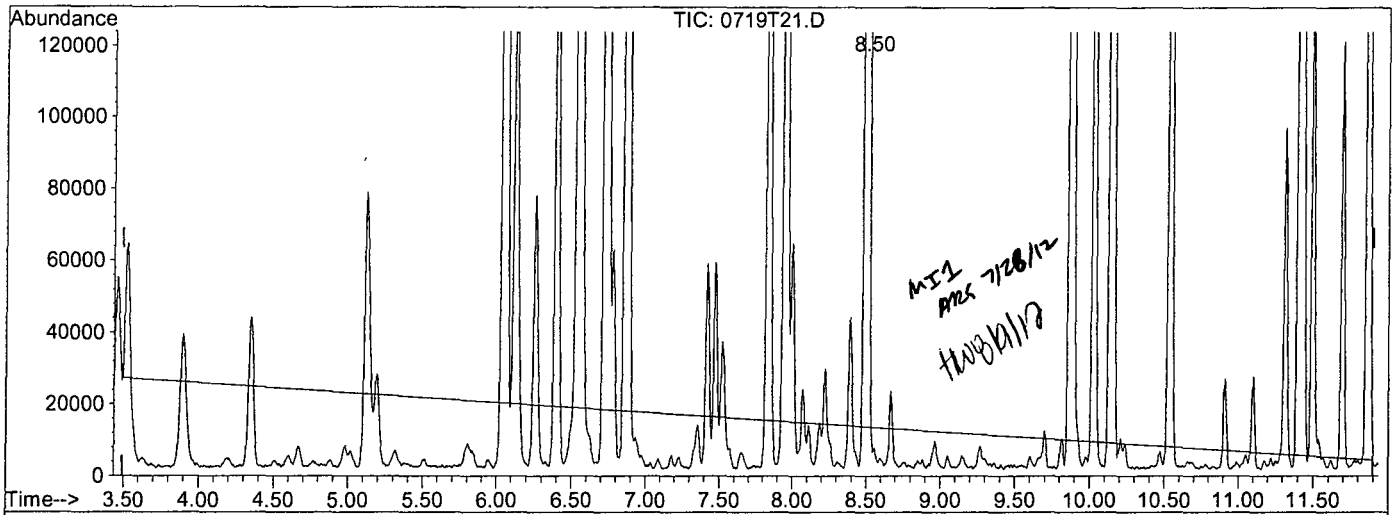
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

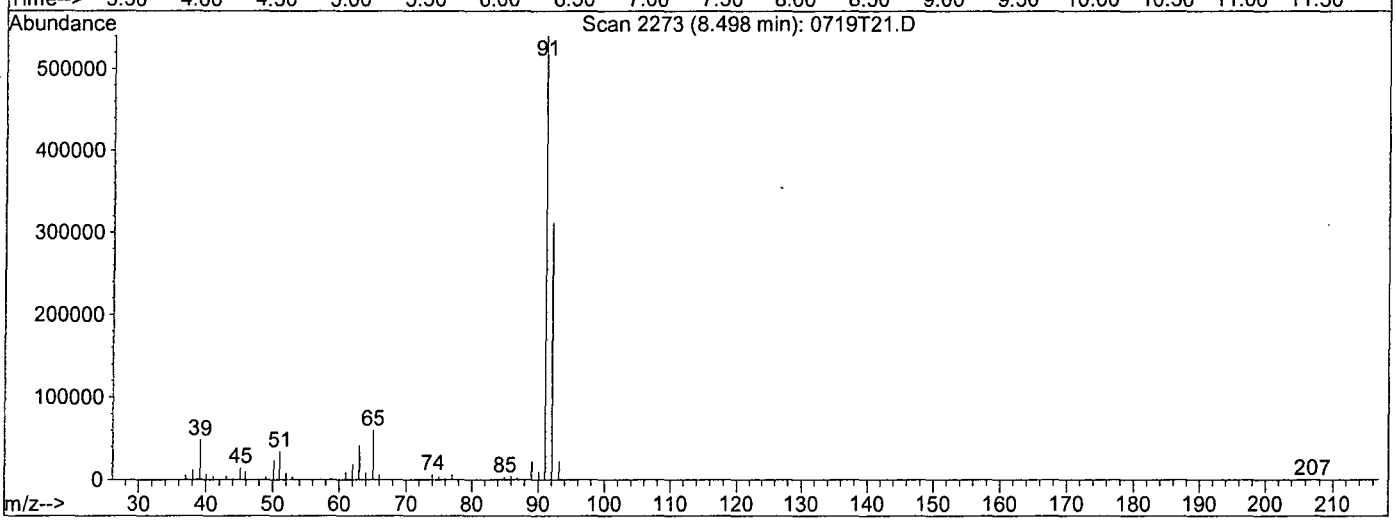


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T21.D Vial: 21
Acq On : 19 Jul 12 18:26 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:25 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T21.D

(2) Gasoline (TMHB)

8.50min 216.2049ppb m

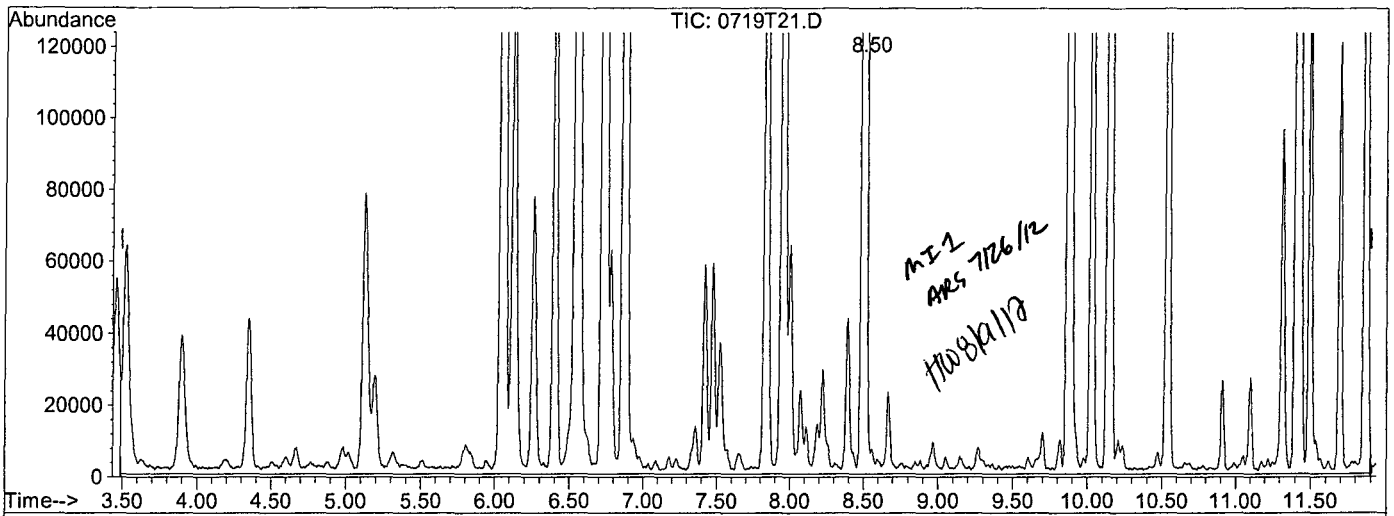
response 14849259

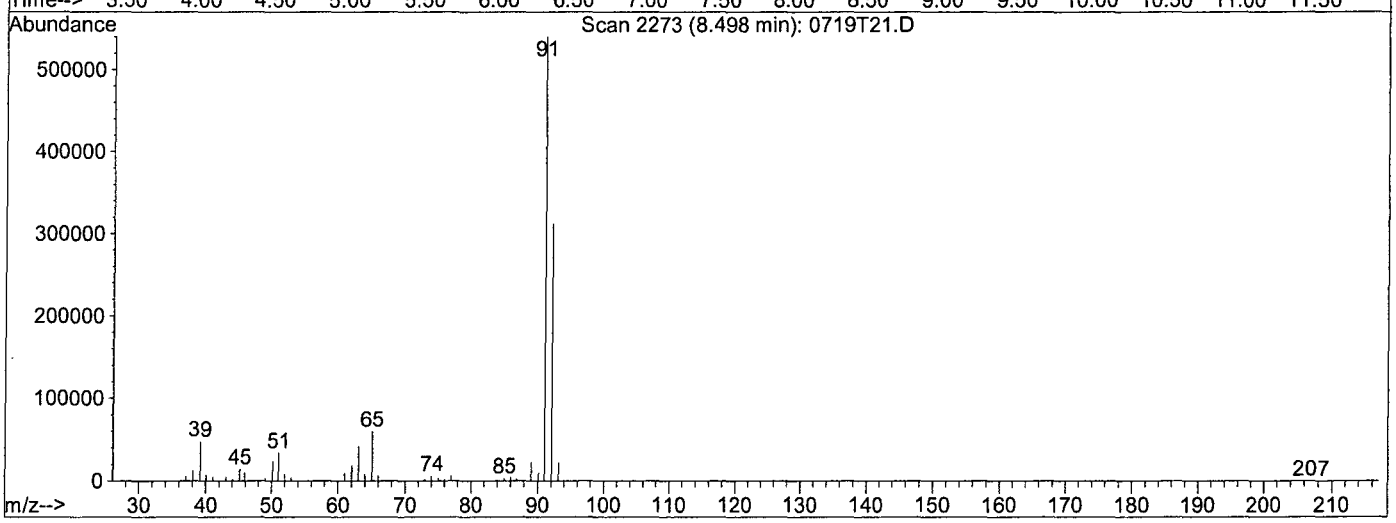
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.75#
0.00	1.80	2.19#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T21.D Vial: 21
Acq On : 19 Jul 12 18:26 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:27 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T21.D

(2) Gasoline (TMHB)

8.50min 298.6475ppb m

response 18049652

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.61#
0.00	1.80	1.80#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T22.D Vial: 22
Acq On : 19 Jul 12 18:54 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 13:25 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 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	961687	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	1052445	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1221581	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline	8.50	TIC	30636947m	579.61570	ppb	100

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

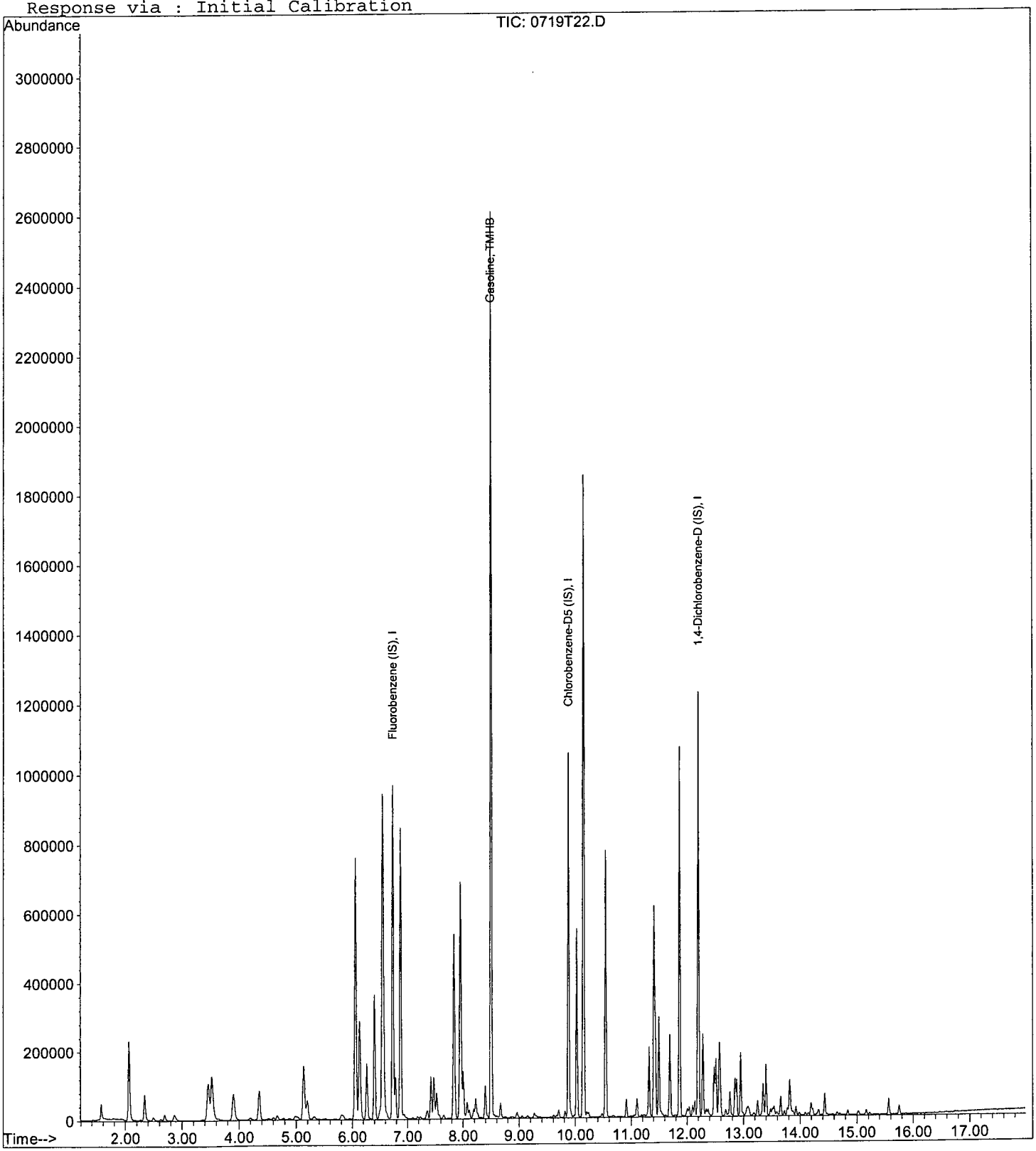
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T22.D
Acq On : 19 Jul 12 18:54
Sample : 600ug/LVol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 22
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:25 2012 Quant Results File: TGAS.RES

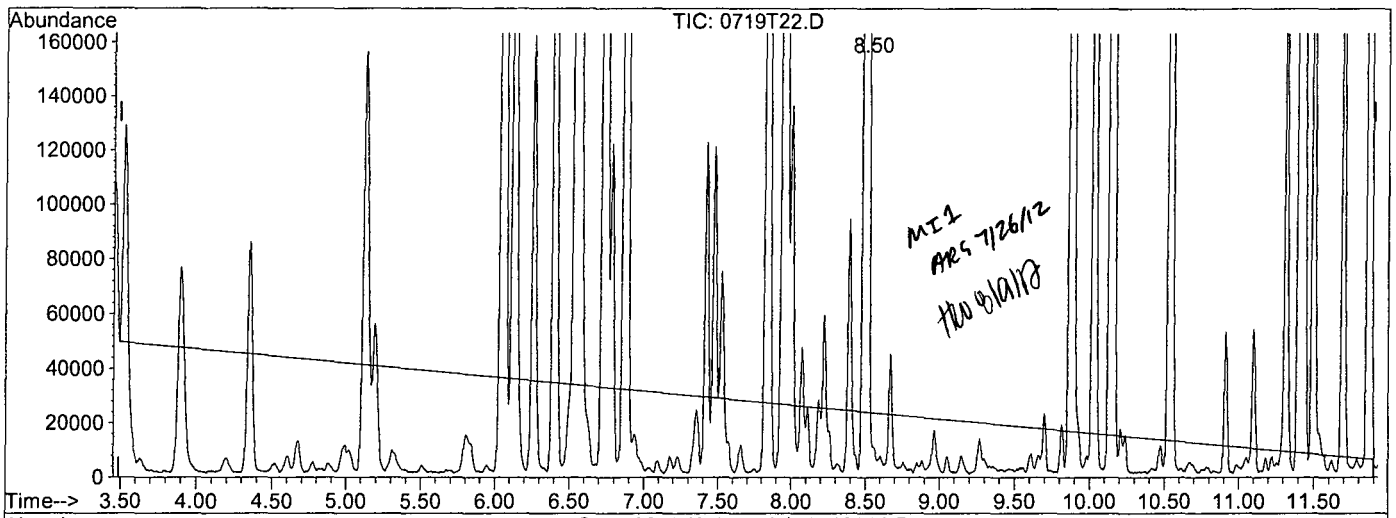
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

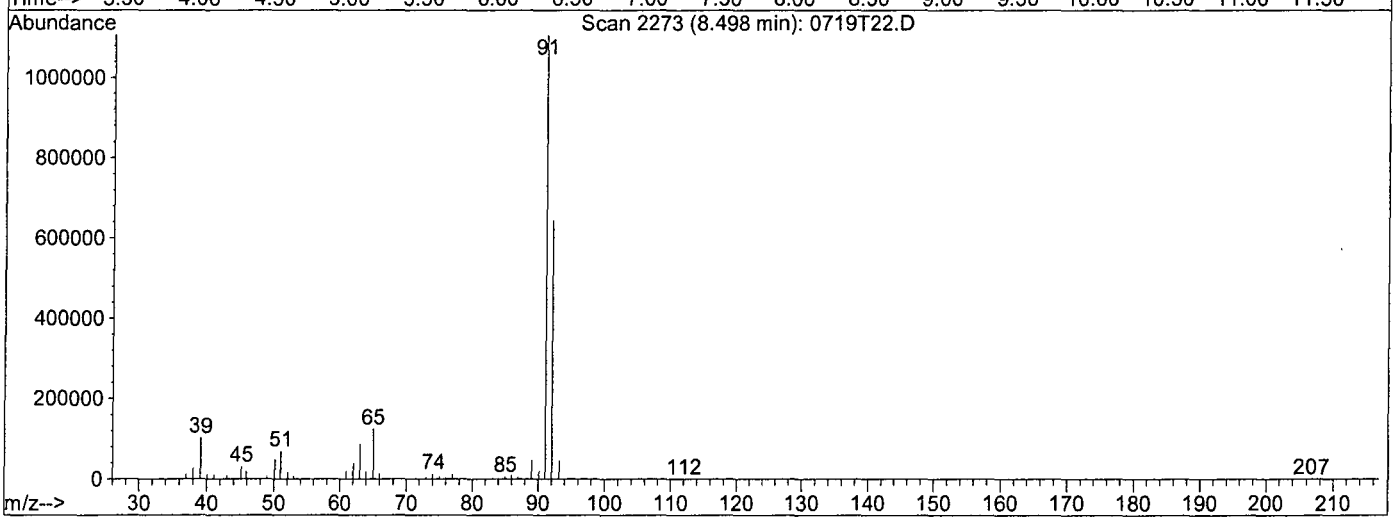


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T22.D Vial: 22
Acq On : 19 Jul 12 18:54 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T22.D

(2) Gasoline (TMHB)

8.50min 476.3926ppb m

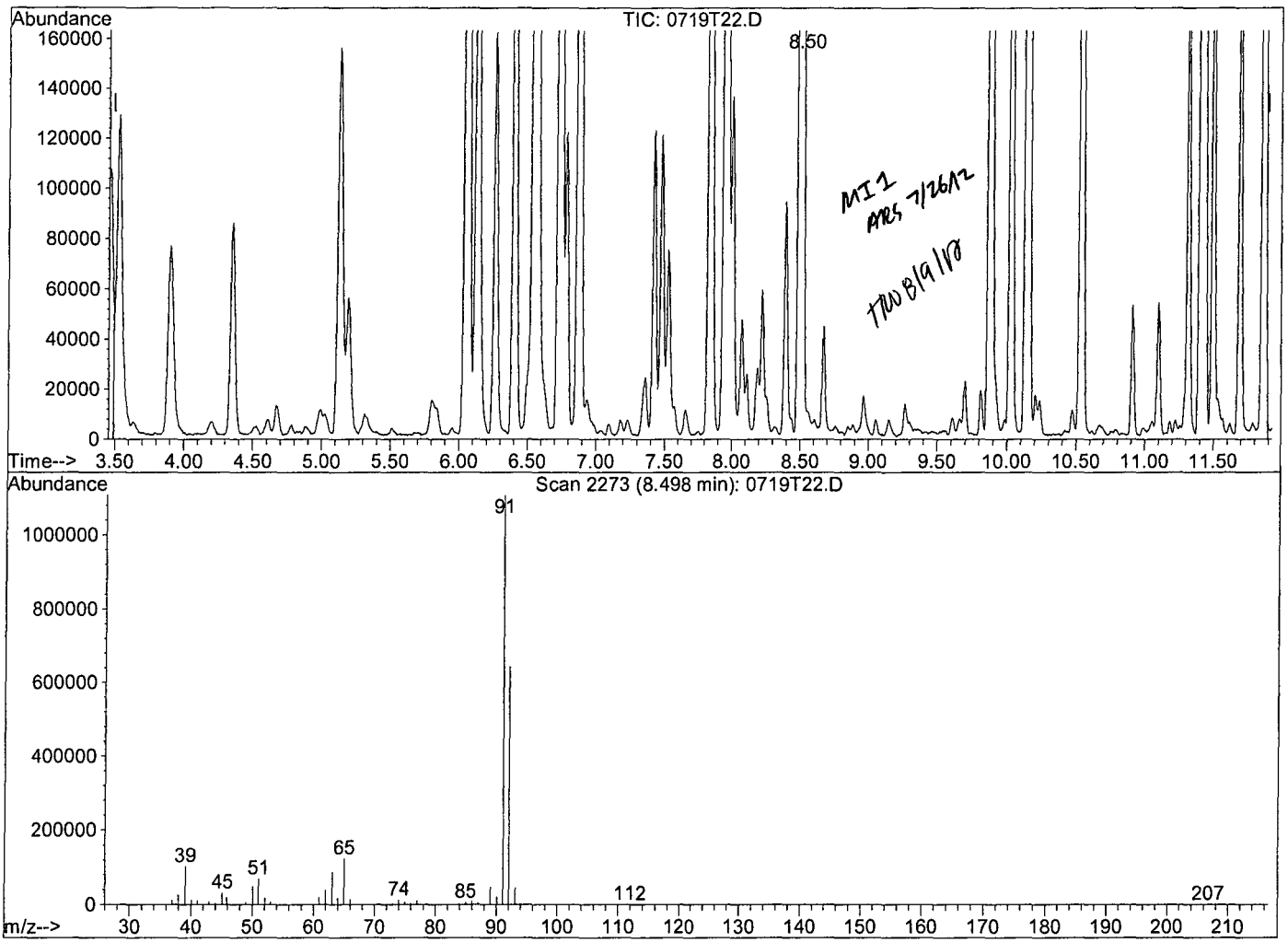
response 26397348

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.44#
0.00	1.80	1.29#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T22.D Vial: 22
Acq On : 19 Jul 12 18:54 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:25 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration



TIC: 0719T22.D

(2) Gasoline (TMHB)

8.50min 579.6157ppb m

response 30636947

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.38#
0.00	1.80	1.11#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T23.D Vial: 23
Acq On : 19 Jul 12 19:21 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 13:24 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 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	935153	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	1058737	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1213057	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	38356495m	794.06441	ppb	100

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

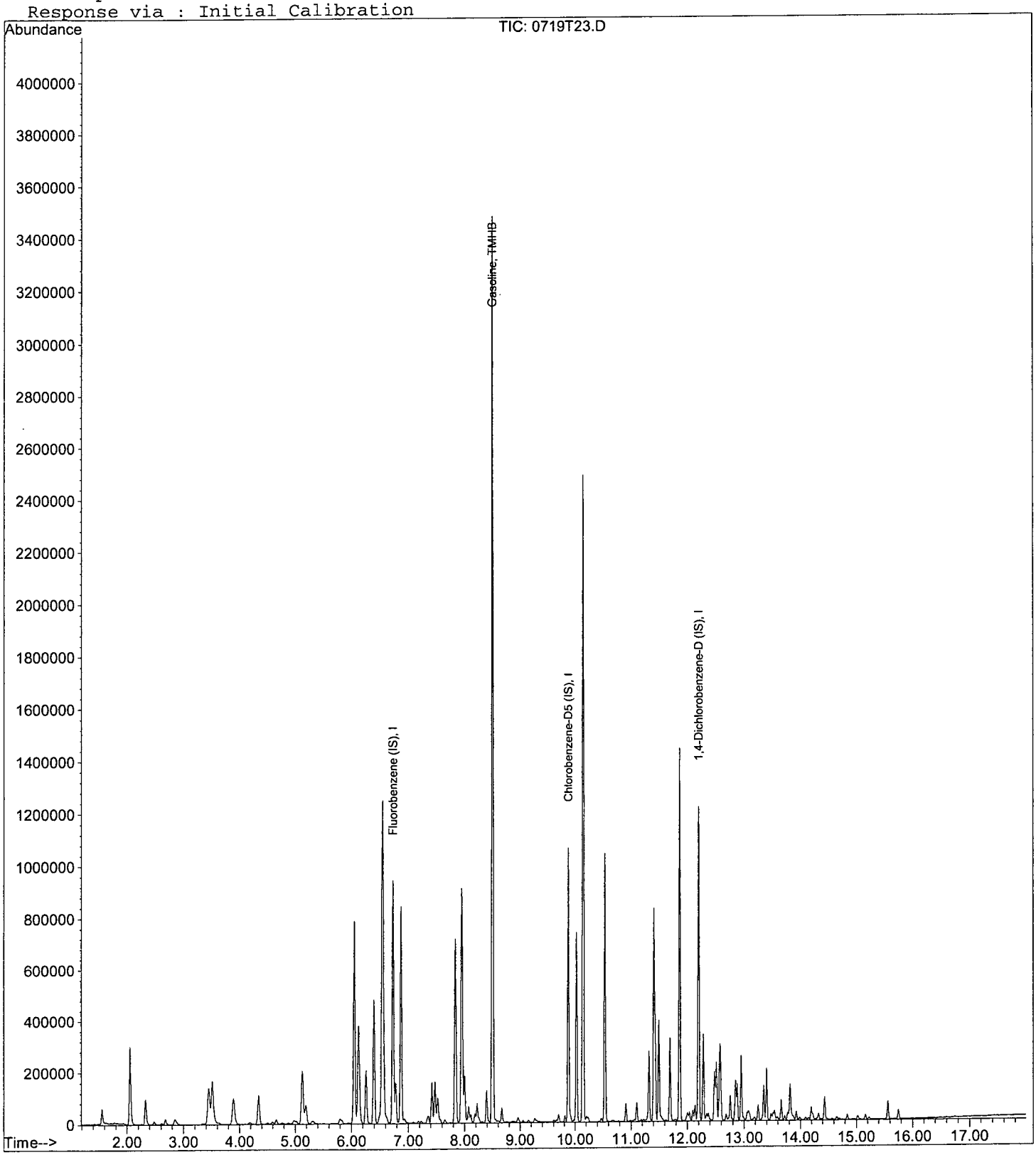
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T23.D
Acq On : 19 Jul 12 19:21
Sample : 800ug/LVol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 23
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:24 2012 Quant Results File: TGAS.RES

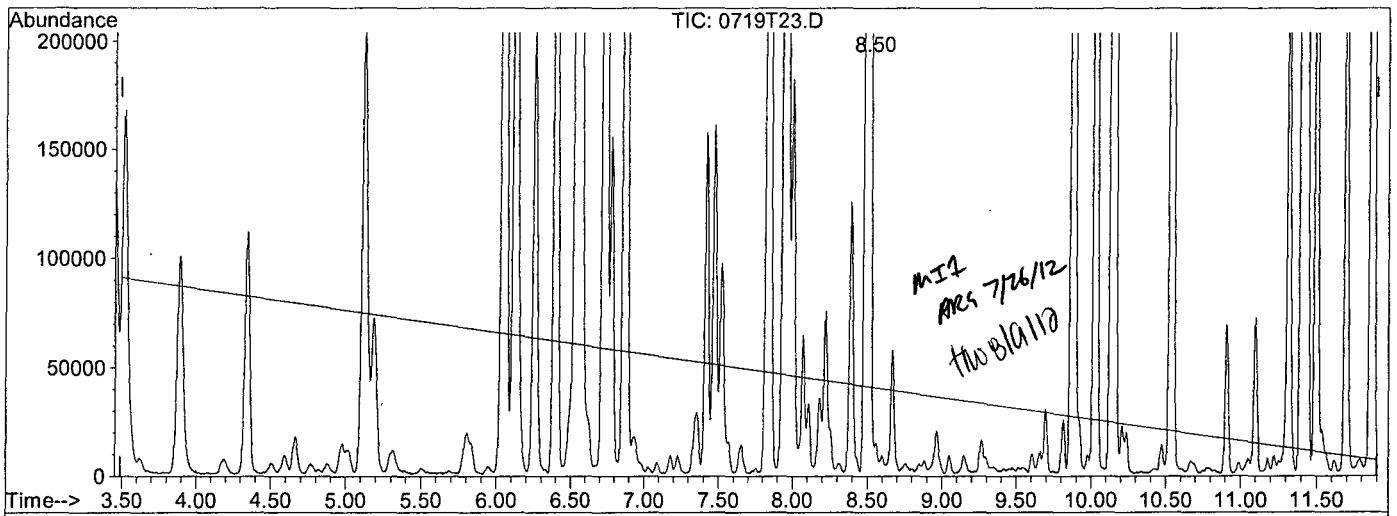
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

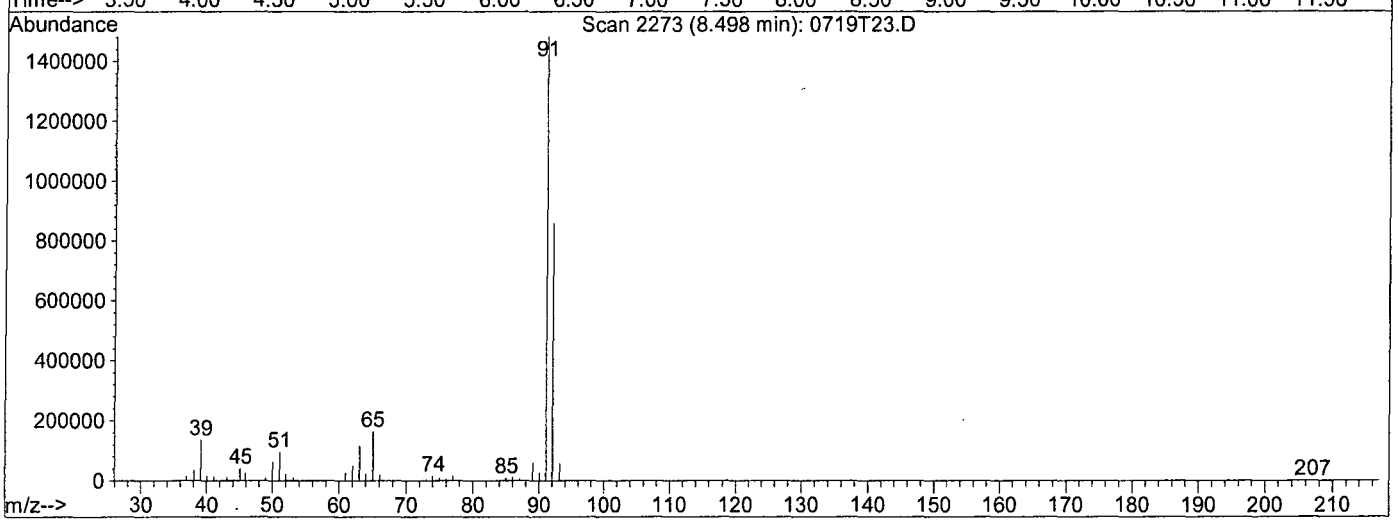


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T23.D Vial: 23
Acq On : 19 Jul 12 19:21 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T23.D

(2) Gasoline (TMHB)

8.50min 688.9101ppb m

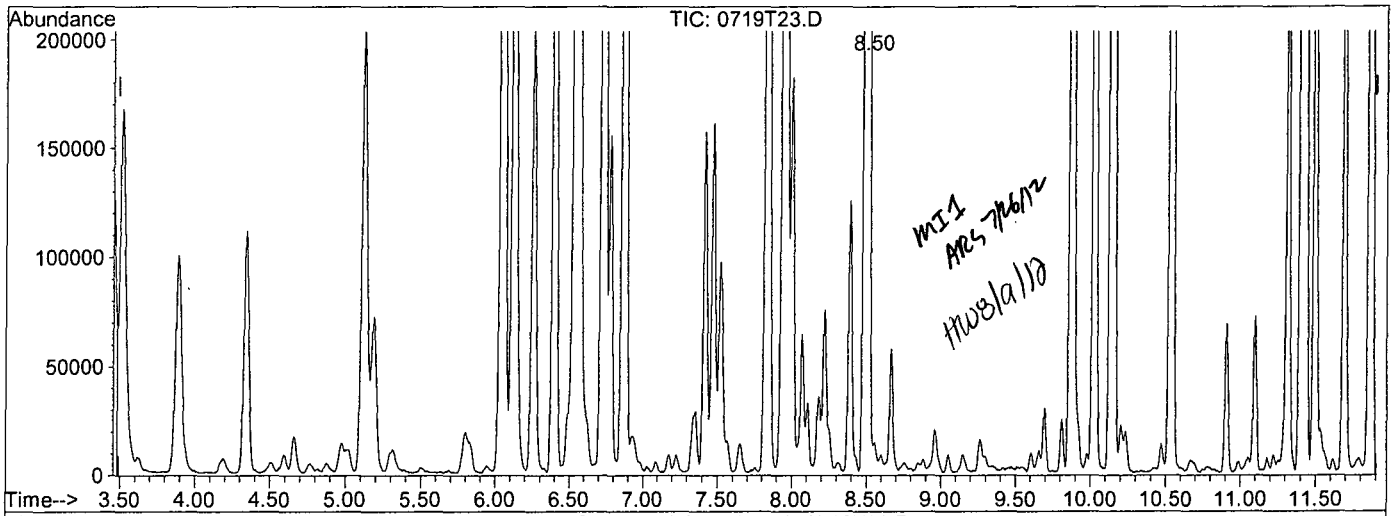
response 34156743

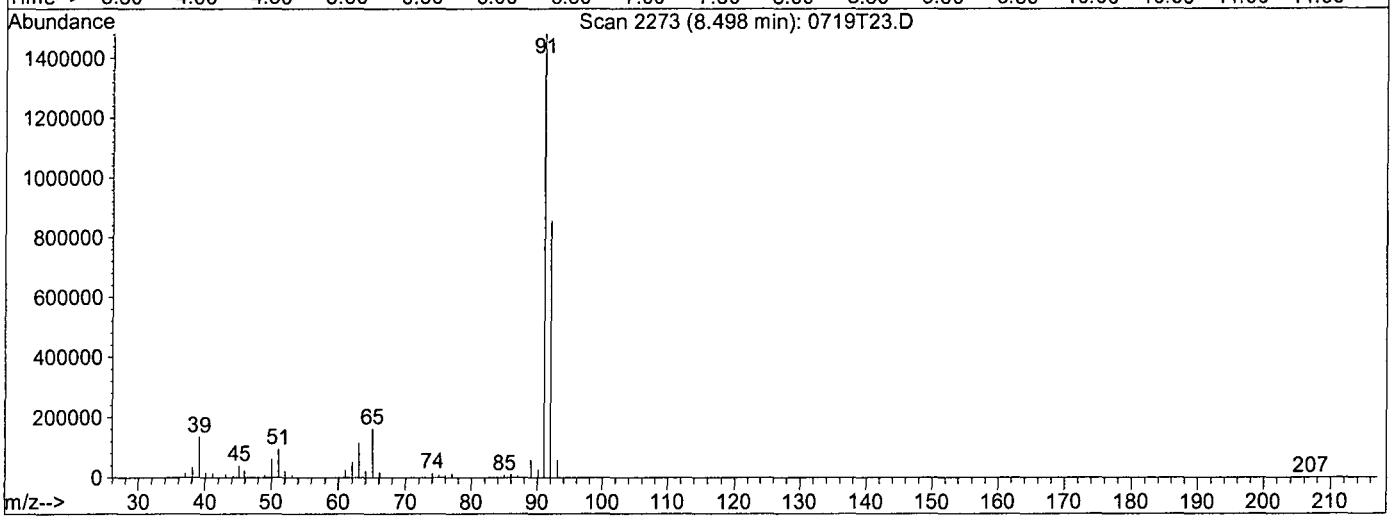
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.35#
0.00	1.80	0.99#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T23.D Vial: 23
Acq On : 19 Jul 12 19:21 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:24 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T23.D

(2) Gasoline (TMHB)

8.50min 794.0644ppb m

response 38356495

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.31#
0.00	1.80	0.88#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T24.D Vial: 24
Acq On : 19 Jul 12 19:49 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 13:24 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 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	909093	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	1037932	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1187621	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	46029569m	1019.22195	ppb	100

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

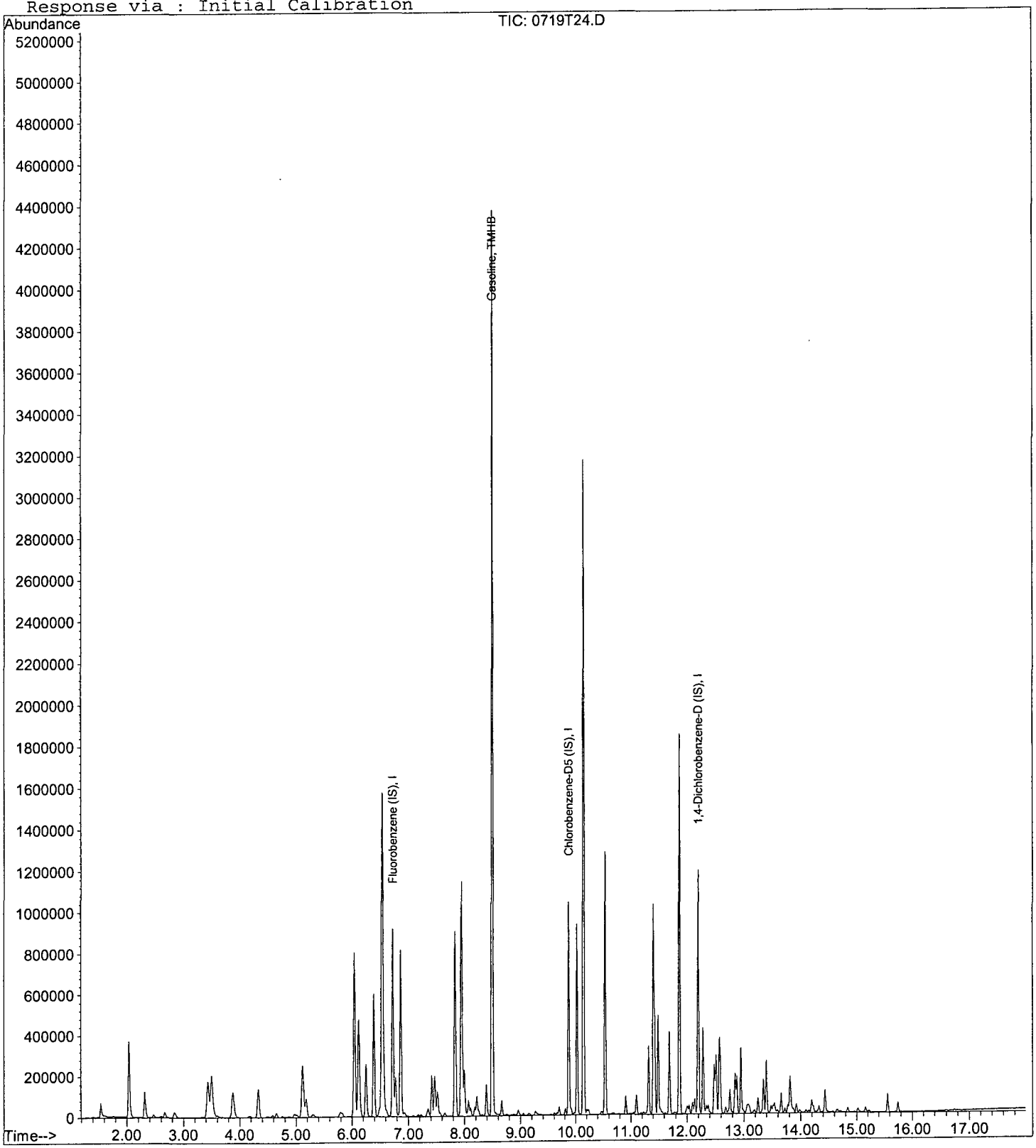
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T24.D
Acq On : 19 Jul 12 19:49
Sample : 1000ug/LVol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 24
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:24 2012 Quant Results File: TGAS.RES

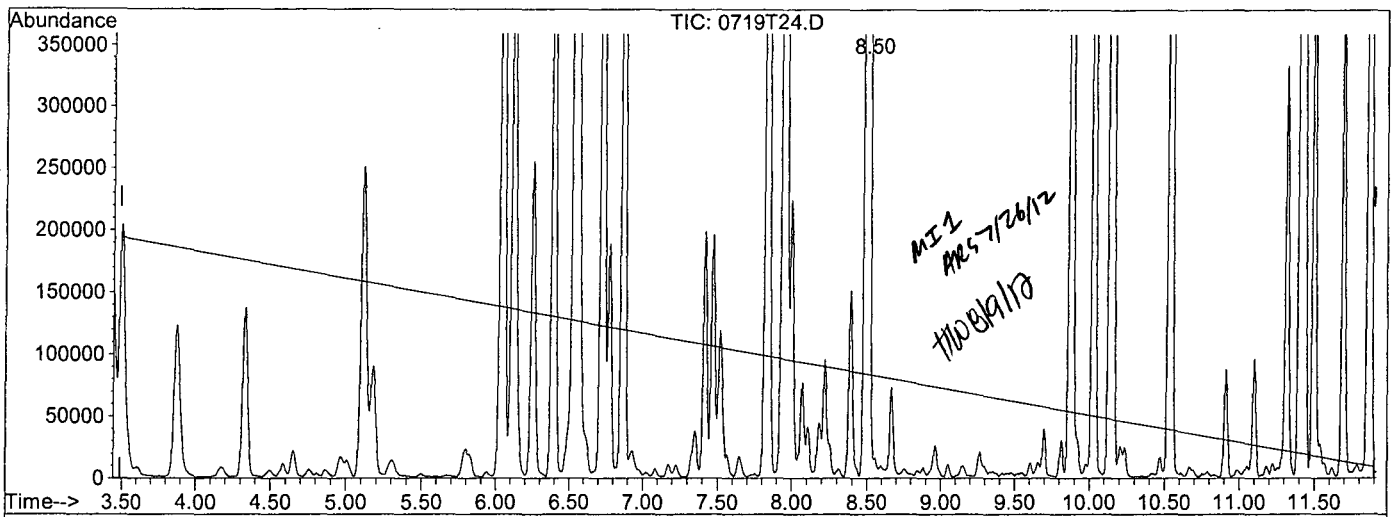
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

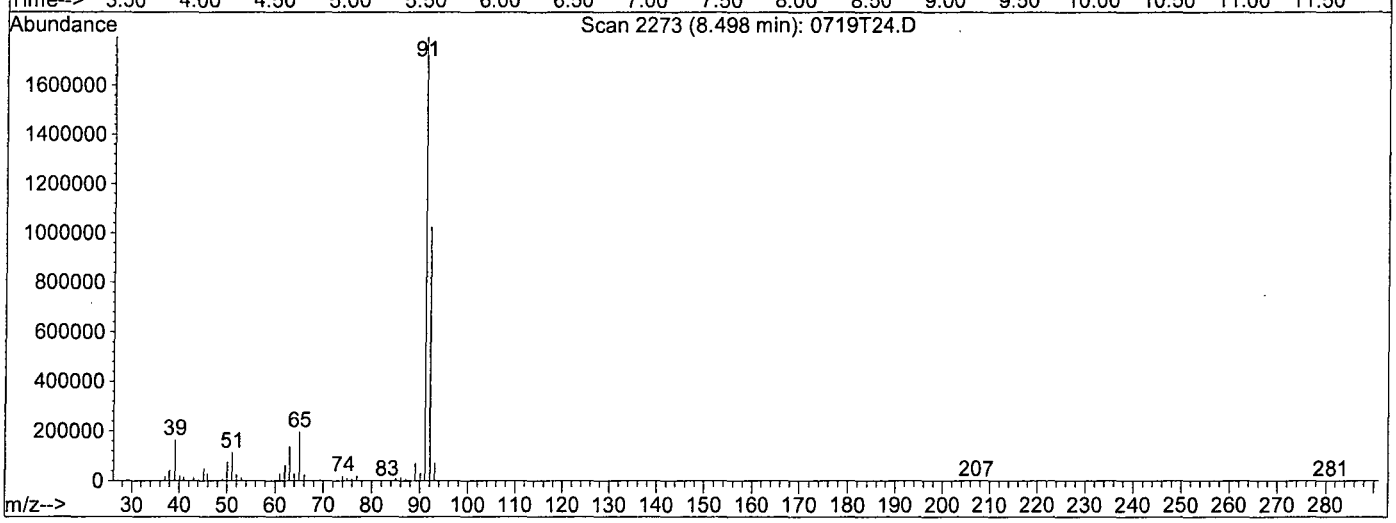


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T24.D Vial: 24
Acq On : 19 Jul 12 19:49 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





TIC: 0719T24.D

(2) Gasoline (TMHB)

8.50min 905.1239ppb m

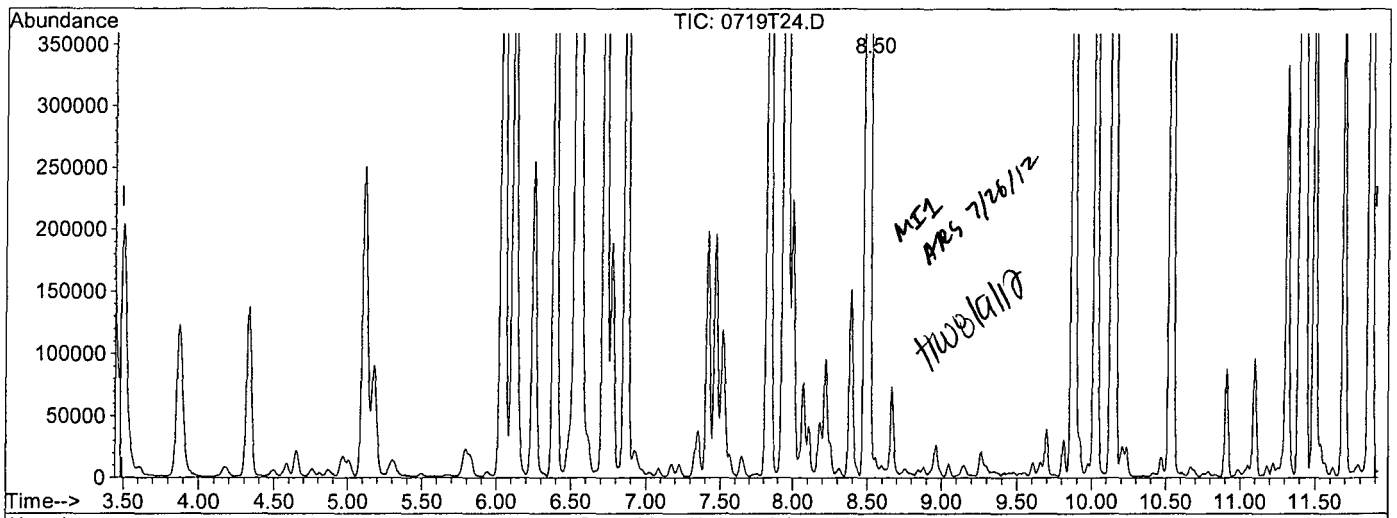
response 41599602

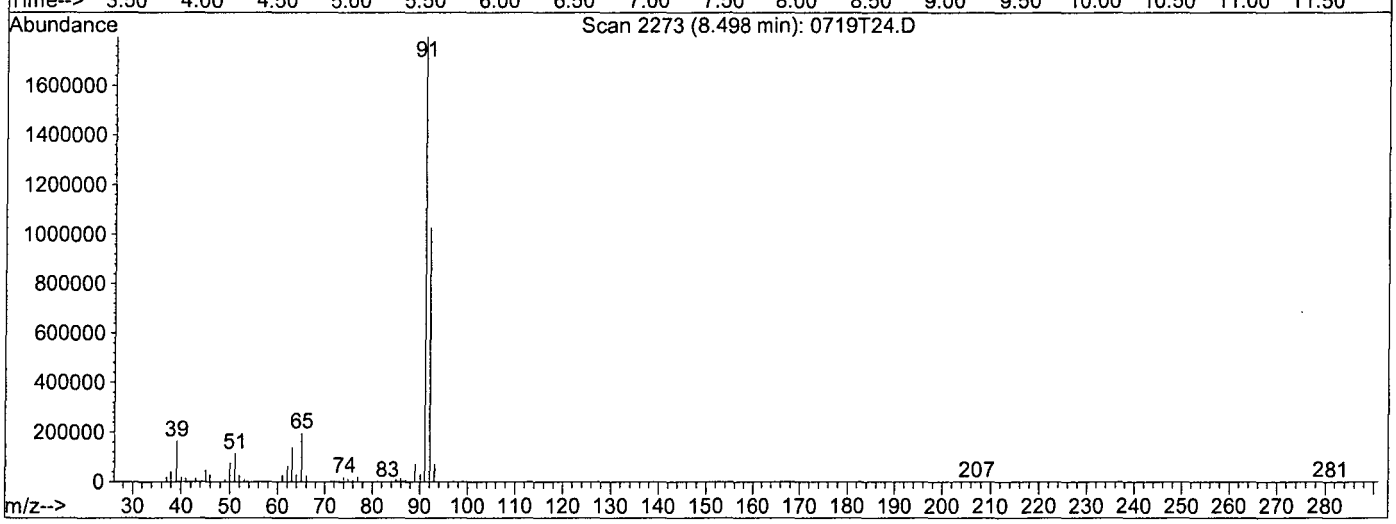
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.27#
0.00	1.80	0.80#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T24.D Vial: 24
Acq On : 19 Jul 12 19:49 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/LVol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:24 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 12:10:59 2012
Response via : Single Level Calibration





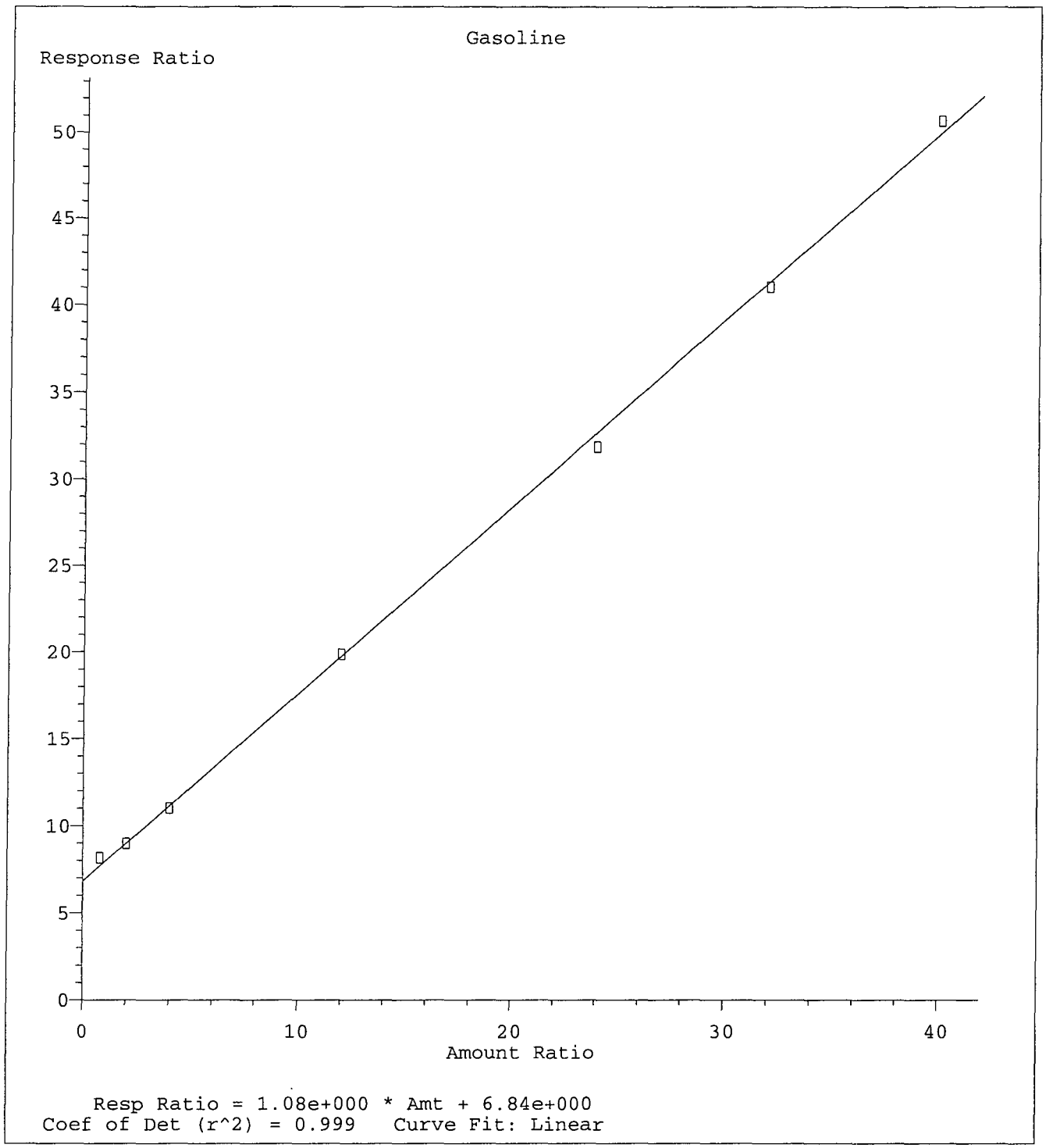
TIC: 0719T24.D

(2) Gasoline (TMHB)

8.50min 1019.2219ppb m

response 46029569

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.24#
0.00	1.80	0.72#
0.00	0.00	0.00



Method Name: M:\THOR\DATA\T120719\TGAS.M
Calibration Table Last Updated: Tue Jul 24 13:31:25 2012

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68258
Date Analyzed: 07/19/12
Instrument: Thor
Initial Cal. Date: 07/19/12
Data File: 0719T33.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline	3.282	1.857	43	TMHBL	19
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			43.0		

ARS 7/31/12

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T33.D Vial: 33
Acq On : 19 Jul 12 23:59 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 13:33 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 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	931728	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	1044016	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1183160	25.00000	ppb	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2) Gasoline	8.50	TIC	20760218m	358.46091	ppb	100

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

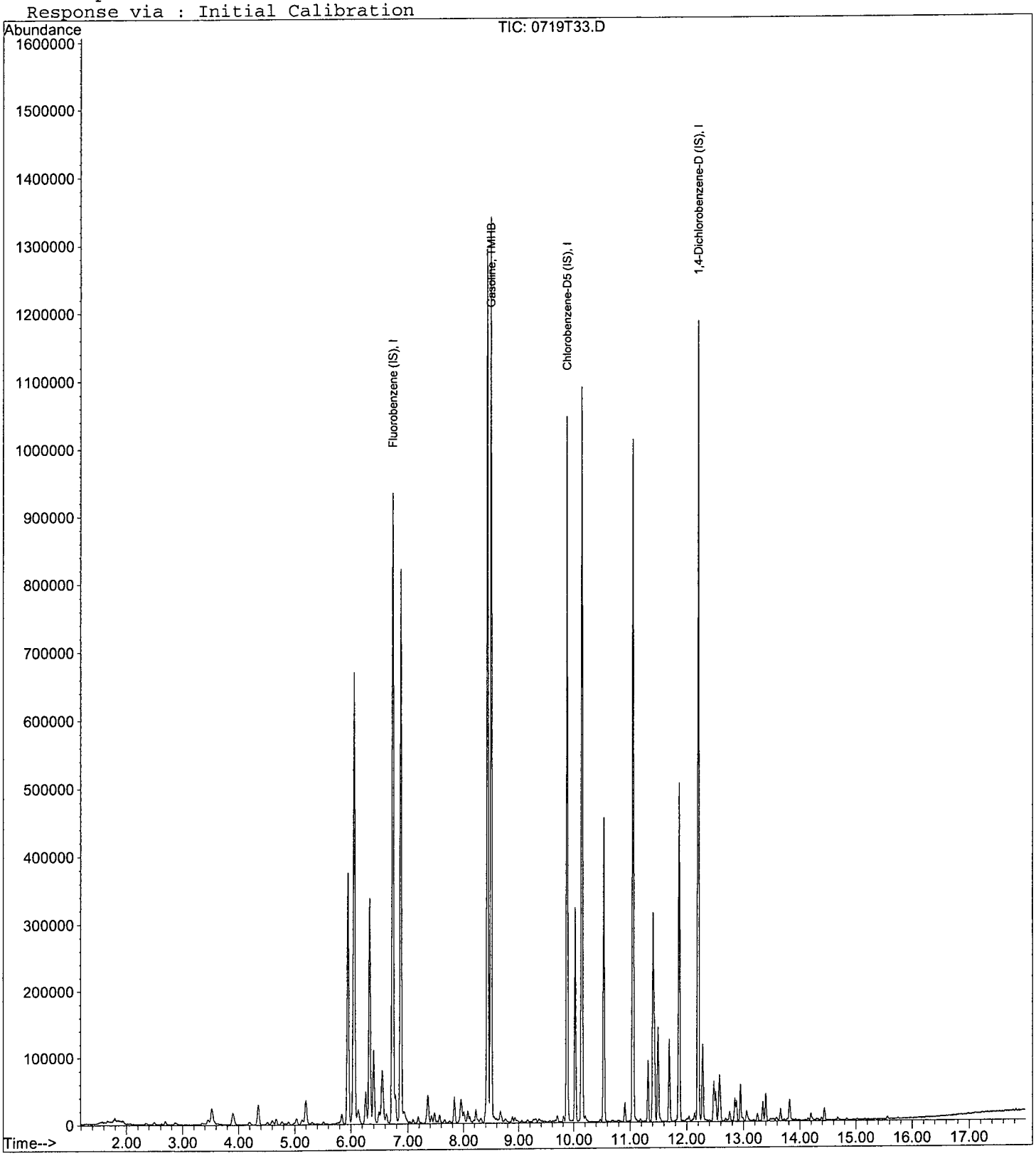
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T33.D
Acq On : 19 Jul 12 23:59
Sample : CCV gas 300ug/L (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 33
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:33 2012 Quant Results File: TGAS.RES

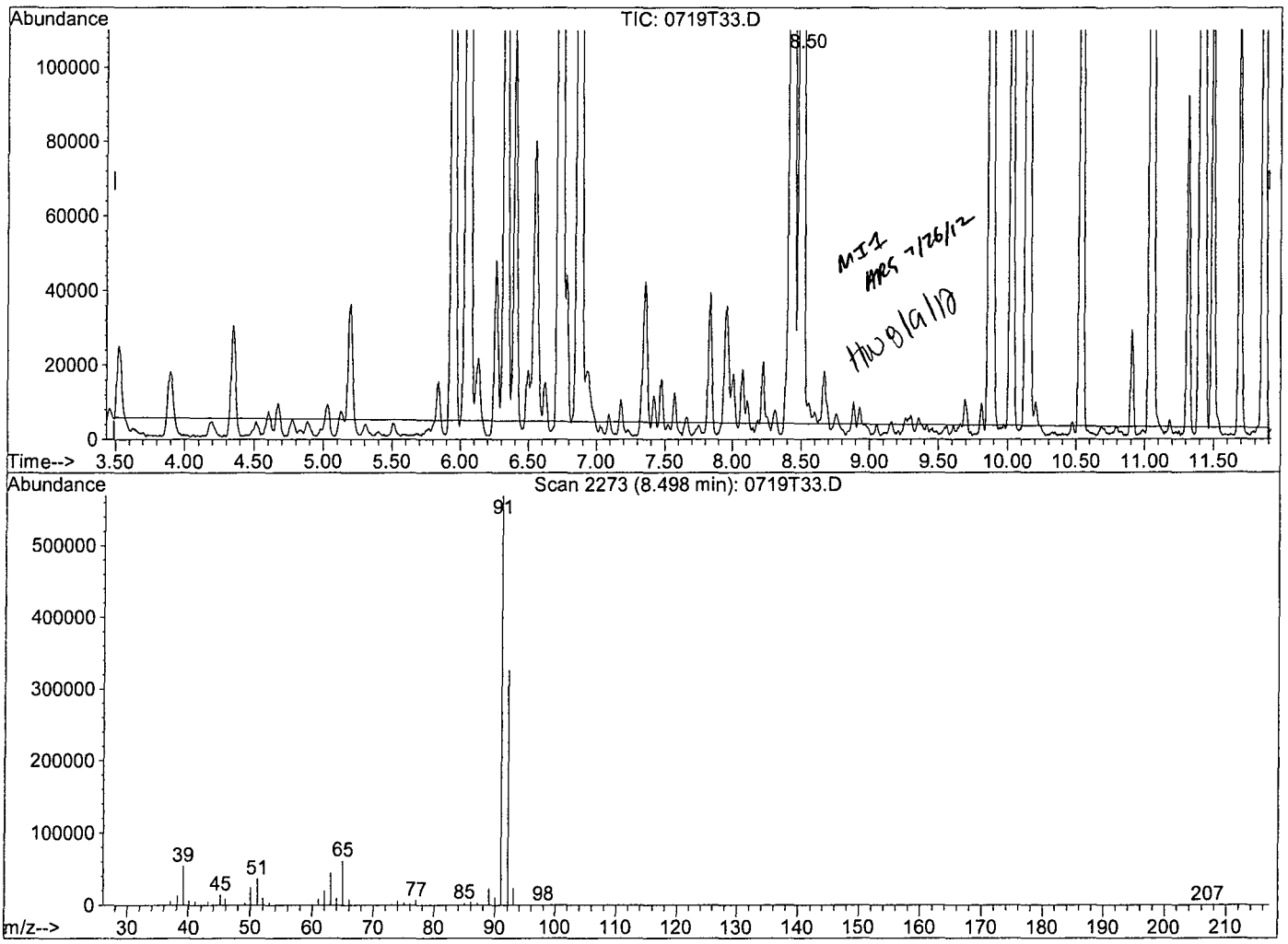
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T33.D Vial: 33
Acq On : 19 Jul 12 23:59 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:33 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration



TIC: 0719T33.D

(2) Gasoline (TMHB)

8.50min 280.7311ppb m

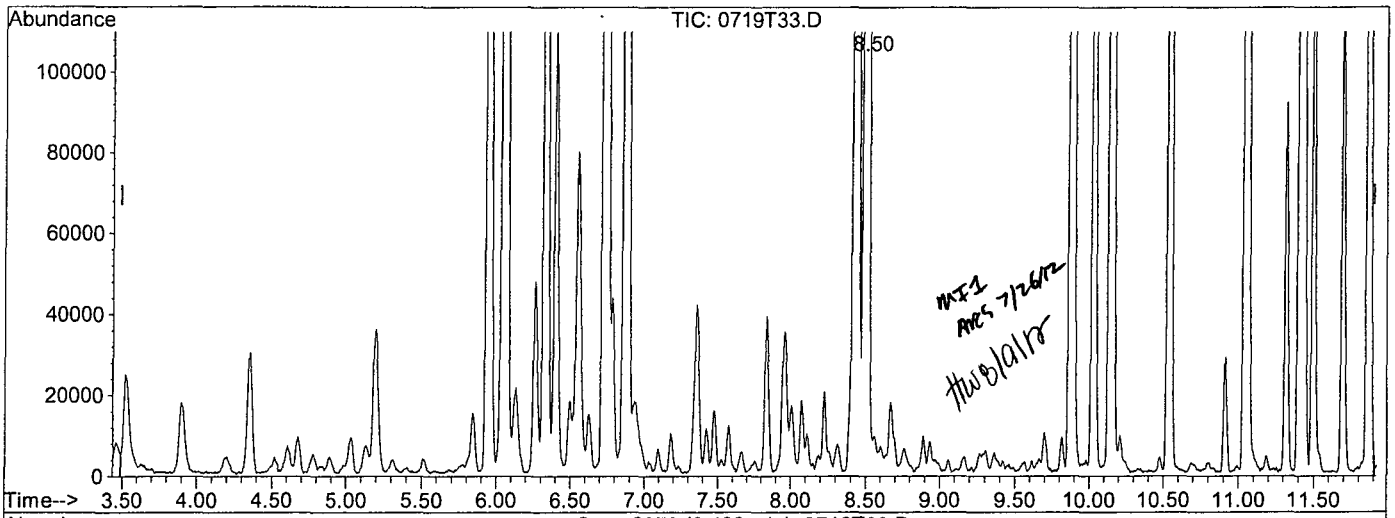
response 17639584

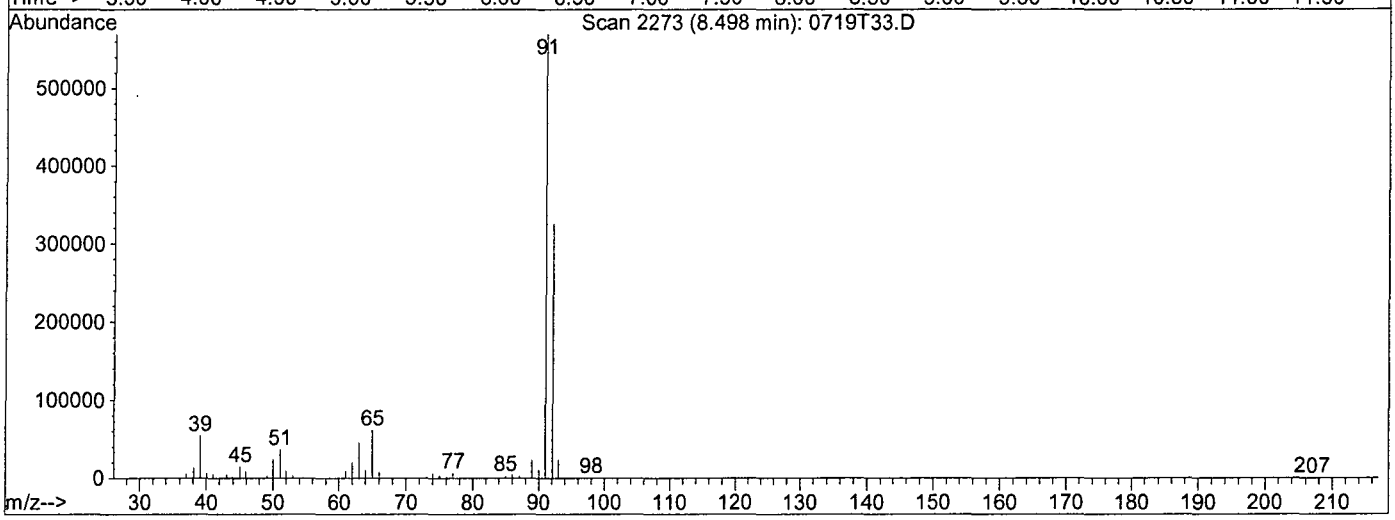
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.65#
0.00	1.80	1.90#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T33.D Vial: 33
Acq On : 19 Jul 12 23:59 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:33 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration





TIC: 0719T33.D

(2) Gasoline (TMHB)

8.50min 358.4609ppb m

response 20760218

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.55#
0.00	1.80	1.61#
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: 68258
Date Analyzed: 07/20/12
Instrument: Thor
Initial Cal. Date: 07/19/12
Data File: 0719T34.D

		Compound	MEAN	CCRF	%D		%Drift	
1	I	Fluorobenzene (IS)	ISTD			I		
2	TMHB	Gasoline	3.282	1.987	39	TMHBL	32	*
3	I	Chlorobenzene-D5 (IS)	ISTD			I		
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I		
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
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31								
32								
33								
34								
35								
36								
37								
38								
39								
40								
		Average			39.0			

AKS 7/31/12

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T34.D Vial: 34
Acq On : 20 Jul 12 00:27 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 24 13:36 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 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	923126	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	1020885	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1142879	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	22015447m	394.83647	ppb	100

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

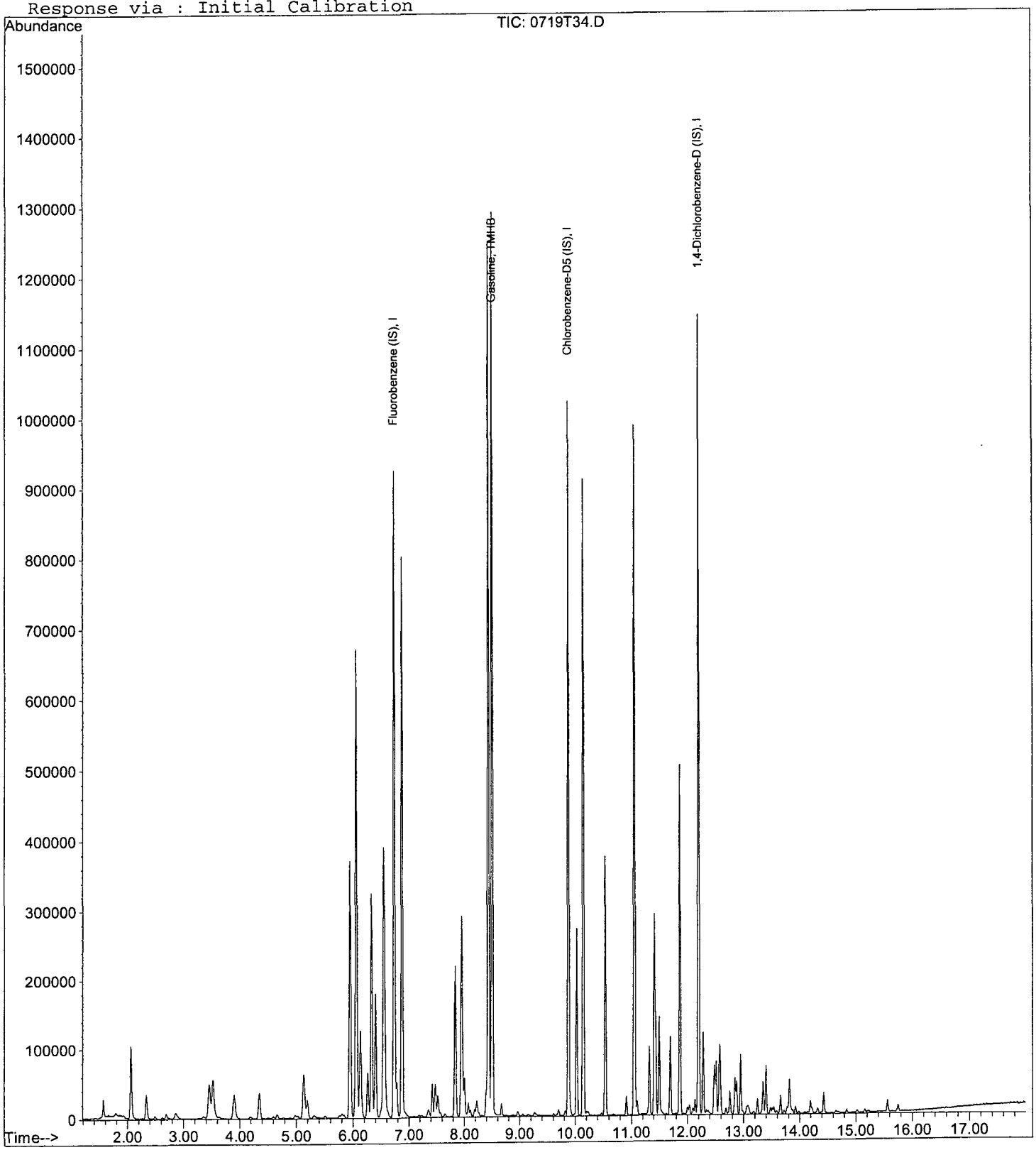
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T34.D
Acq On : 20 Jul 12 00:27
Sample : CCV gas 300ug/L
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 34
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:36 2012 Quant Results File: TGAS.RES

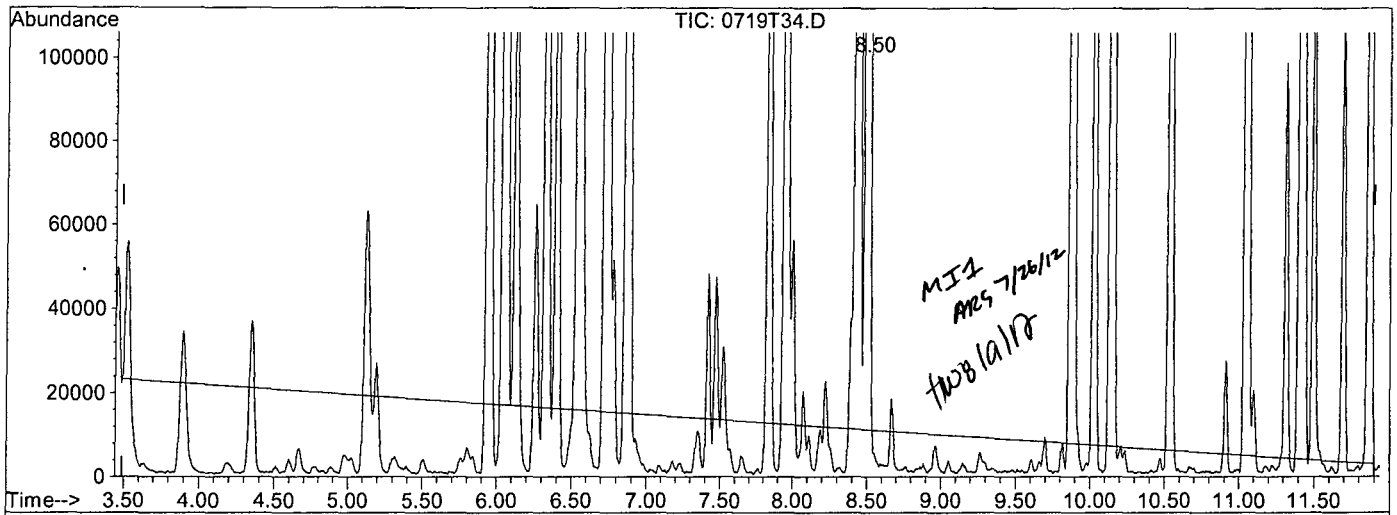
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

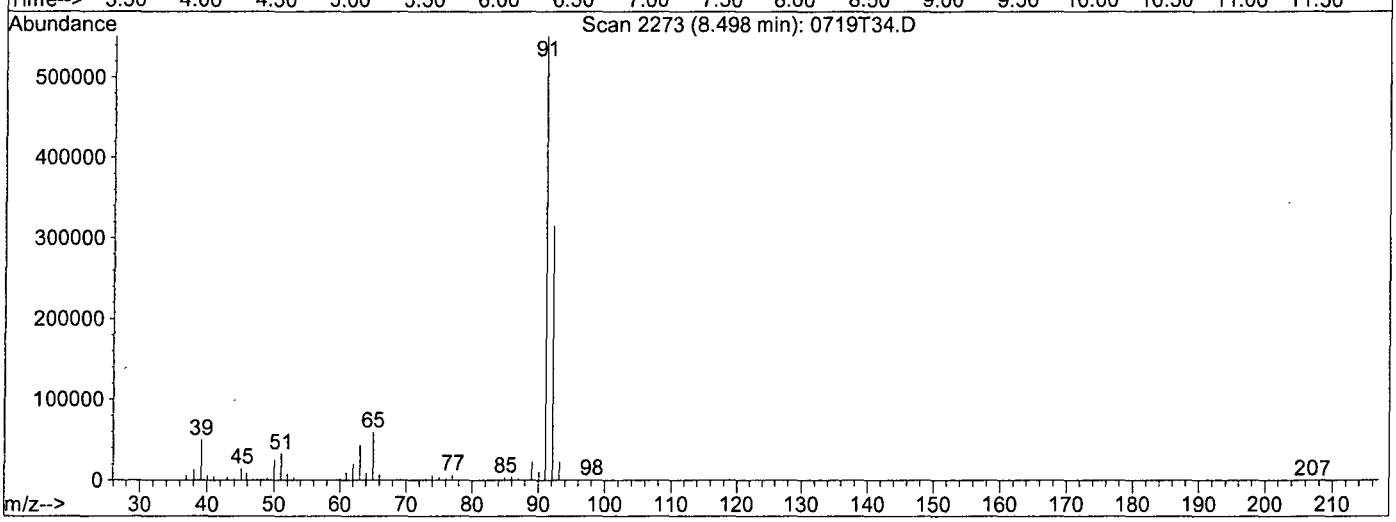


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T34.D Vial: 34
Acq On : 20 Jul 12 00:27 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 24 13:33 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration





TIC: 0719T34.D

(2) Gasoline (TMHB)

8.50min 320.1392ppb m

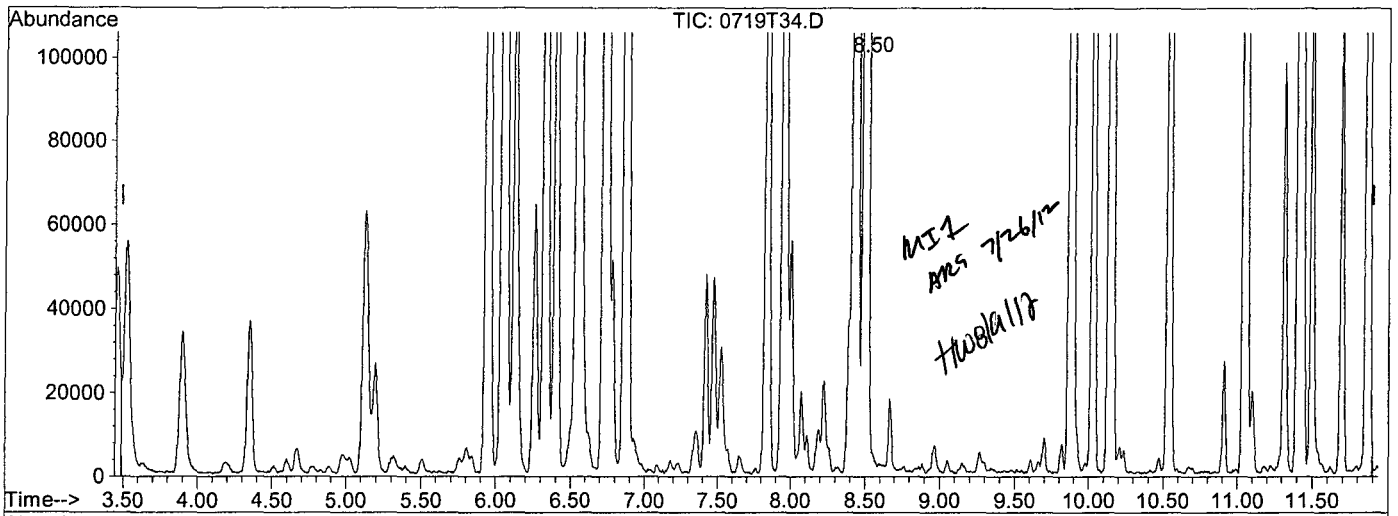
response 19044247

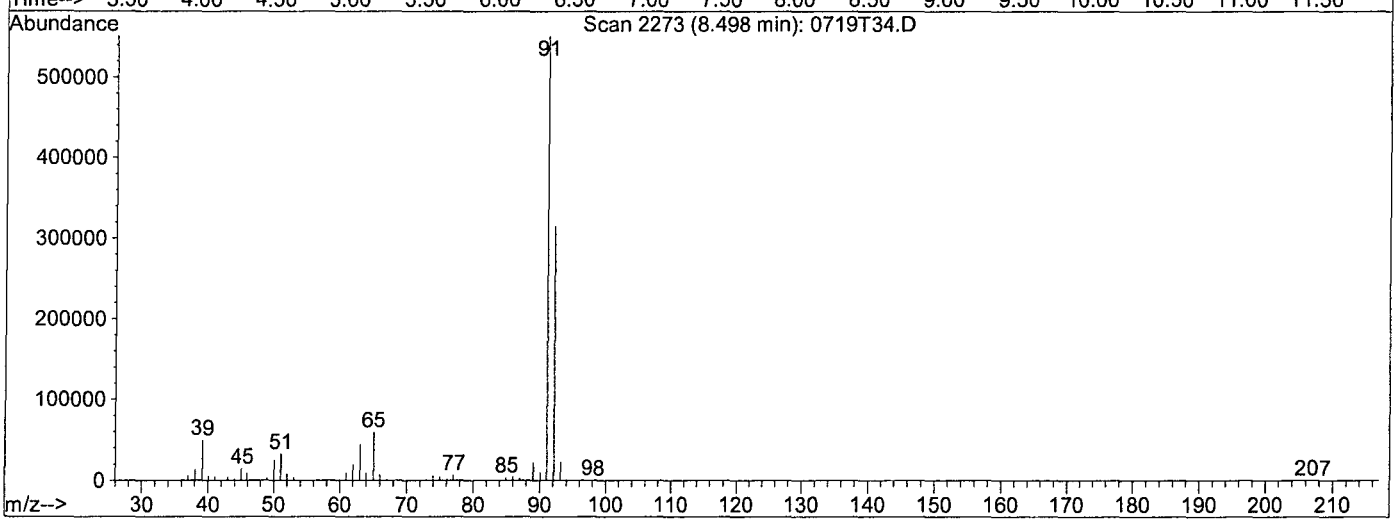
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.58#
0.00	1.80	1.68#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T34.D Vial: 34
Acq On : 20 Jul 12 00:27 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 24 13:36 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration





TIC: 0719T34.D

(2) Gasoline (TMHB)

8.50min 394.8365ppb m

response 22015447

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.50#
0.00	1.80	1.45#
0.00	0.00	0.00

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68258
Case No: Initial Cal. Date: 07/25/12
Matrix: Water Instrument: Thor (TGAS.M) Initials:

			0725T04.D	0725T05.D	0725T06.D	0725T07.D	0725T08.D	0725T09.D	0725T10.D								
		Compound	20	50	100	300	600	800	1000				Avg	%RSD		r2
1	I	Fluorobenzene (IS)	ISTD													
2	TMHBL	Gasoline	16.5	7.205	4.047	2.093	1.605	1.465	1.393				4.9	113	TMHBL	1.000
3	I	Chlorobenzene-D5 (IS)	ISTD													
4	I	1,4-Dichlorobenzene-D (IS)	ISTD													
5																
6																
7																
8																
9																
10																
11																
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34																
35																

ARS 7/26/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0725T03.D Vial: 2
Acq On : 25 Jul 12 10:22 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 8:59 2012 Quant Results File: TALLW.RES

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

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	96	383424	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	310848	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	187136	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	196549	32.75773 ppb	0.00
Spiked Amount 31.881			Recovery	= 102.750%	
36) 1,2-DCA-D4(S)	6.33	65	189874	34.05104 ppb	0.00
Spiked Amount 33.647			Recovery	= 101.202%	
56) Toluene-D8(S)	8.43	98	687242	37.39680 ppb	0.00
Spiked Amount 37.345			Recovery	= 100.140%	
64) 4-Bromofluorobenzene(S)	11.05	95	268751	30.92365 ppb	0.00
Spiked Amount 29.515			Recovery	= 104.773%	
Target Compounds					Qvalue
4) Chloromethane	1.45	50	159	-0.39190 ppb #	74
6) Bromomethane	1.78	94	376	0.07763 ppb #	3
11) Acetone	2.90	43	3396	1.47860 ppb	98
14) t-Butanol	3.69	59	126	1.01338 ppb #	72
15) Methyl Acetate	3.34	43	3113	-0.48779 ppb	93
18) Methylene chloride	3.45	84	326	-0.71073 ppb	84
23) 1,1-DCA	4.34	63	775	0.10017 ppb #	1
26) MEK (2-Butanone)	5.39	43	1036	0.87321 ppb #	46
34) 1,1-Dichloropropene	6.05	75	22005	5.24130 ppb #	48
35) 2,2,4-Trimethylpentane	6.55	57	913	0.15131 ppb	91
37) Carbon Tetrachloride	6.05	117	28709	5.29852 ppb #	14
38) Tert Amyl Methyl Ether	6.73	73	8830	0.81289 ppb #	29
39) 1,2-DCA	6.40	62	6268	0.99480 ppb #	74
40) Benzene	6.40	78	769435	44.71126 ppb	98
48) MIBK (methyl isobutyl ket	8.43	43	1645	0.62070 ppb #	1
51) Toluene	8.50	91	828486	40.80362 ppb	100
58) Tetrachloroethene	9.06	166	842	0.15978 ppb	84
59) 1-Chlorohexane	10.03	91	895259	142.72325 ppb #	17
61) m&p-Xylene	10.14	106	710590	73.98703 ppb	98
62) o-Xylene	10.54	106	355718	35.80371 ppb	99
63) Styrene	10.54	104	17860	1.05802 ppb #	1
68) Ethylbenzene	10.03	91	895459	35.43670 ppb	99
79) 1,3,5-Trimethylbenzene	11.50	105	3503	0.15620 ppb	89
81) Tert-Butylbenzene	11.86	119	92293	4.49215 ppb #	73
82) 1,2,4-Trimethylbenzene	11.86	105	731223	31.50884 ppb	99
83) Sec-Butylbenzene	11.86	105	709314	25.85946 ppb #	55
94) Naphthalene	14.43	128	598073	31.60454 ppb	99

ARS 7/26/12

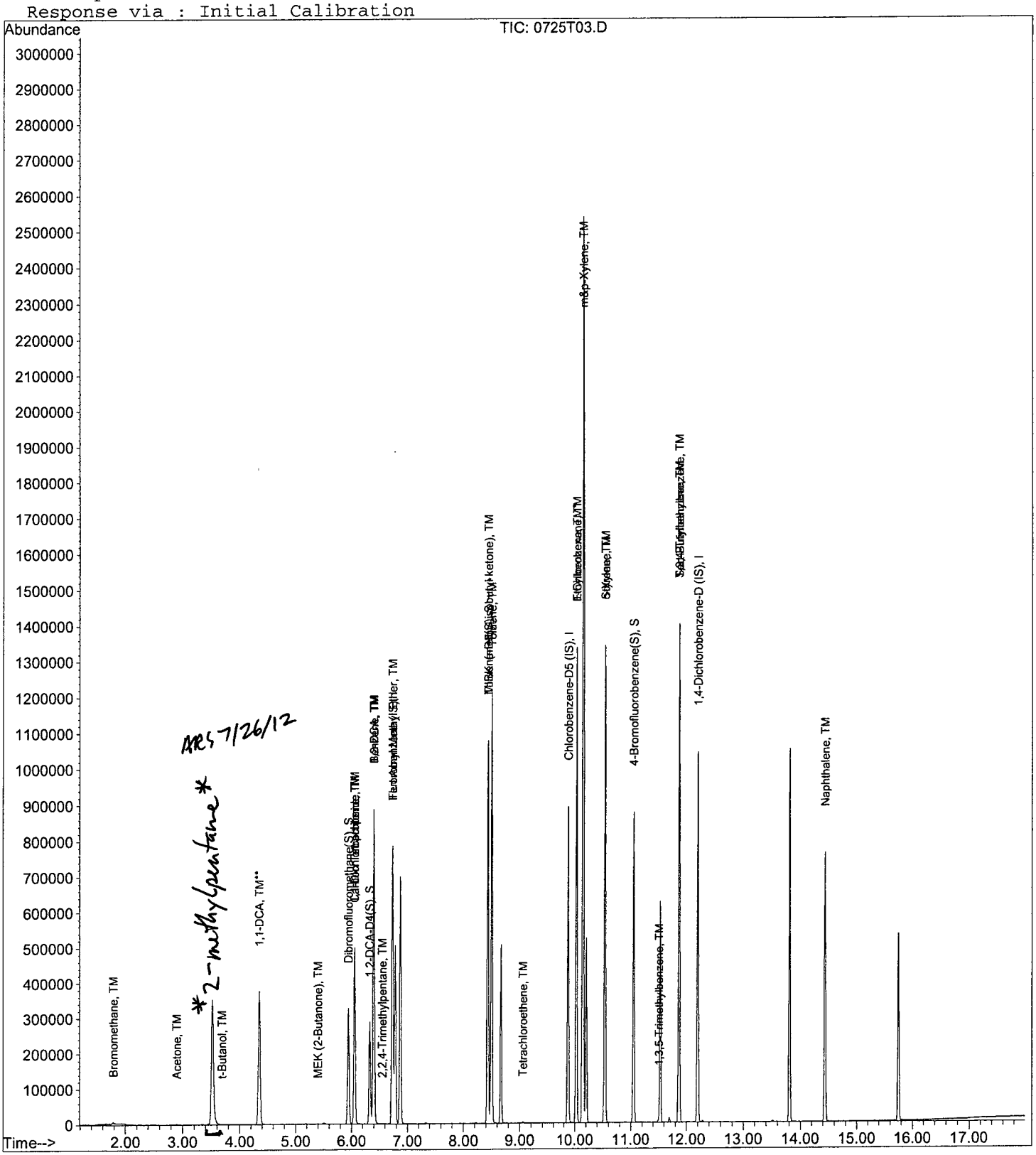
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T03.D Vial: 2
Acq On : 25 Jul 12 10:22 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 8:59 2012 Quant Results File: TALLW.RES

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



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:59 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	757122	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	882358	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	975664	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10003915m	-268.75372	ppb	100

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

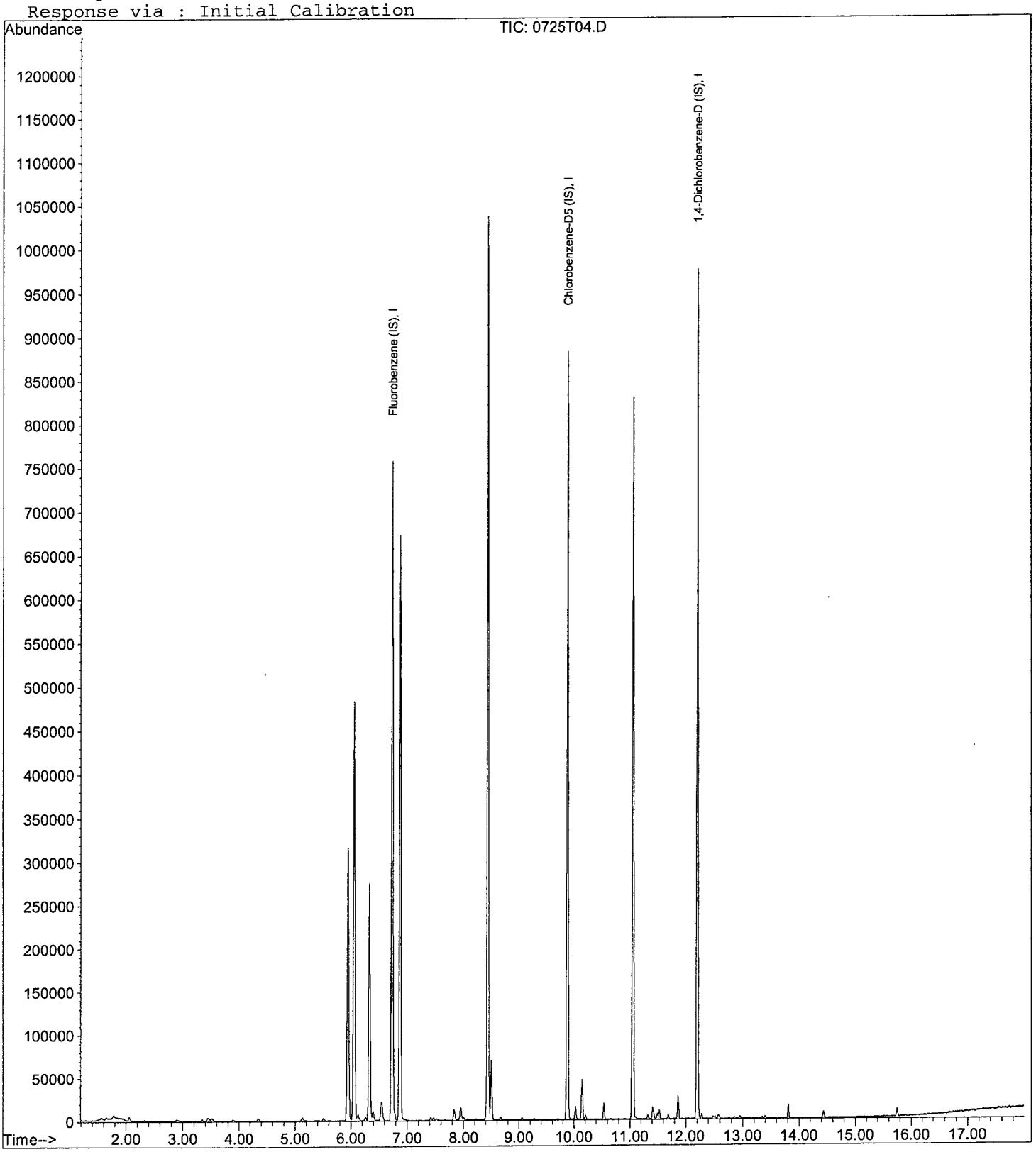
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D
Acq On : 25 Jul 12 10:50
Sample : 20ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 25 15:59 2012 Quant Results File: TGAS.RES

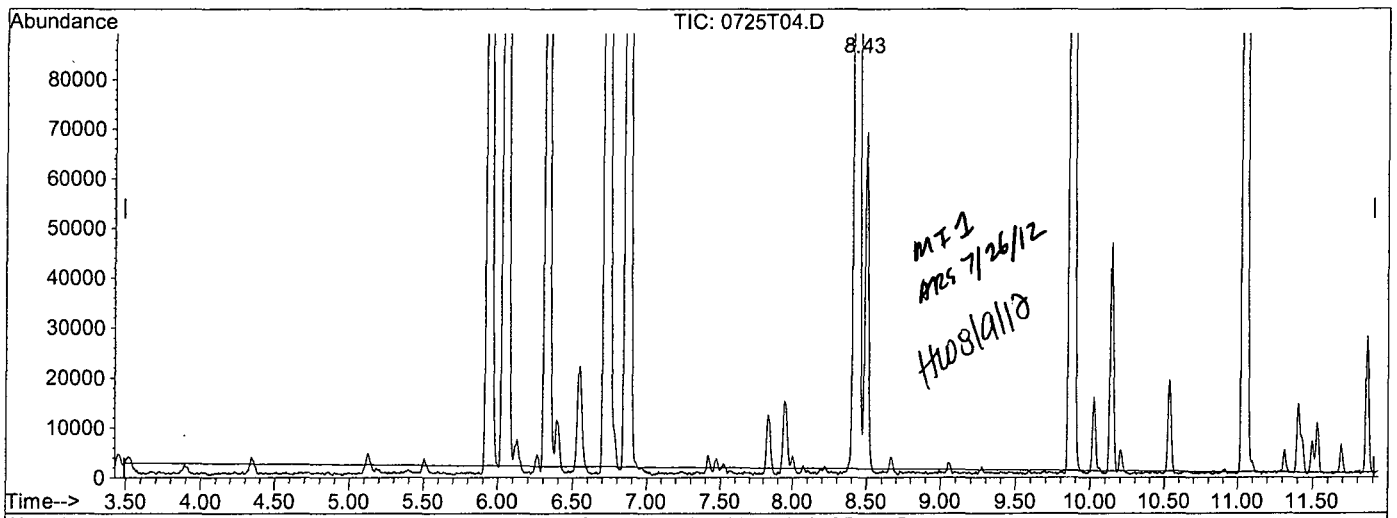
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

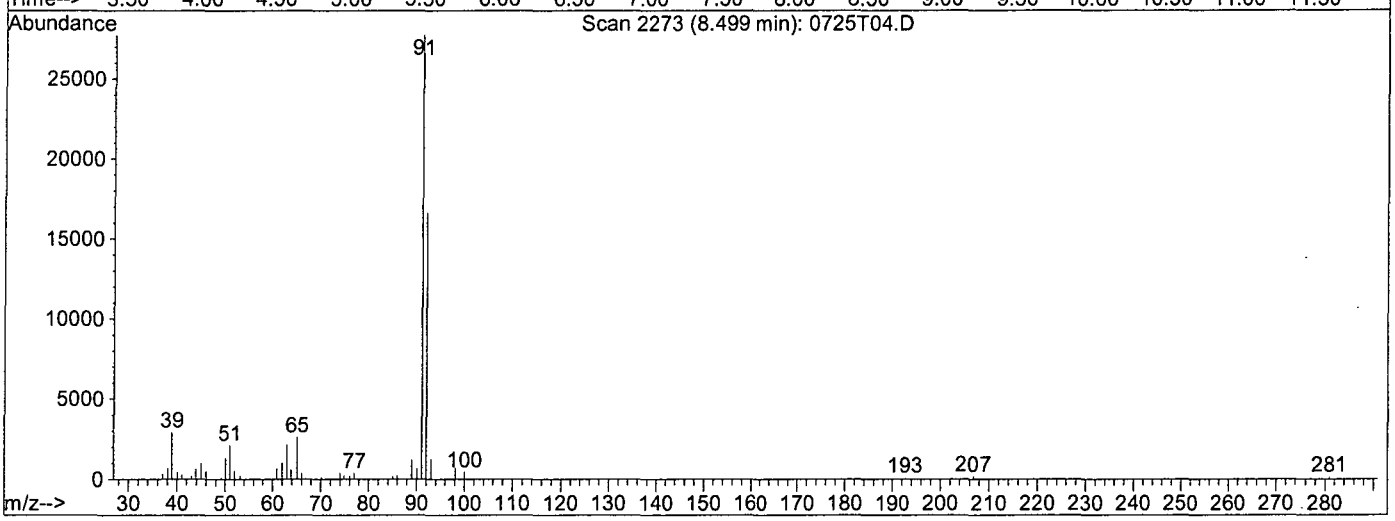


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T04.D

(2) Gasoline (TMHB)

8.50min -376.6351ppb m

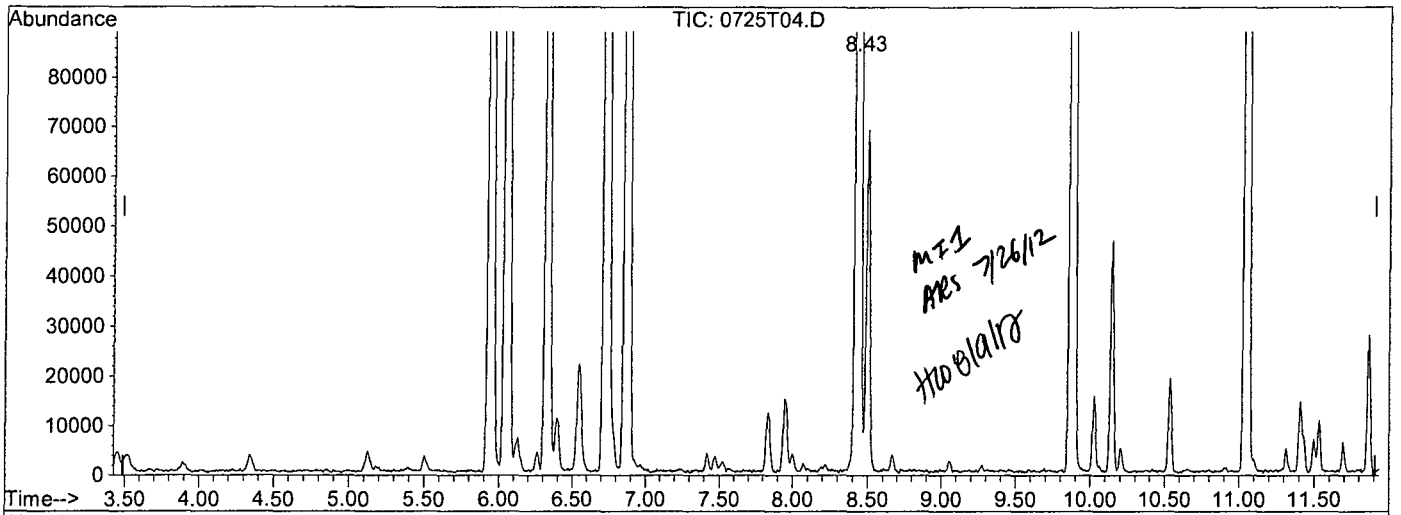
response 7759068

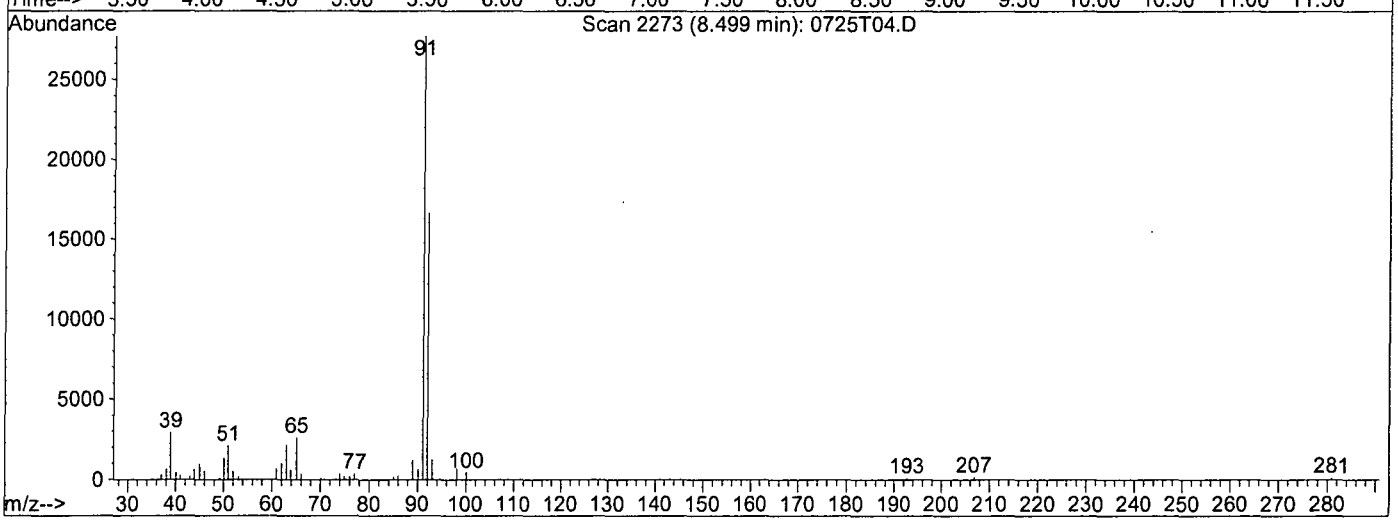
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	1.20#
0.00	1.40	3.55#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:59 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T04.D

(2) Gasoline (TMHB)

8.43min -268.7537ppb m

response 10003915

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.93#
0.00	1.40	2.76#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	757407	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	877869	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	954185	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10913490m	-225.23930	ppb	100

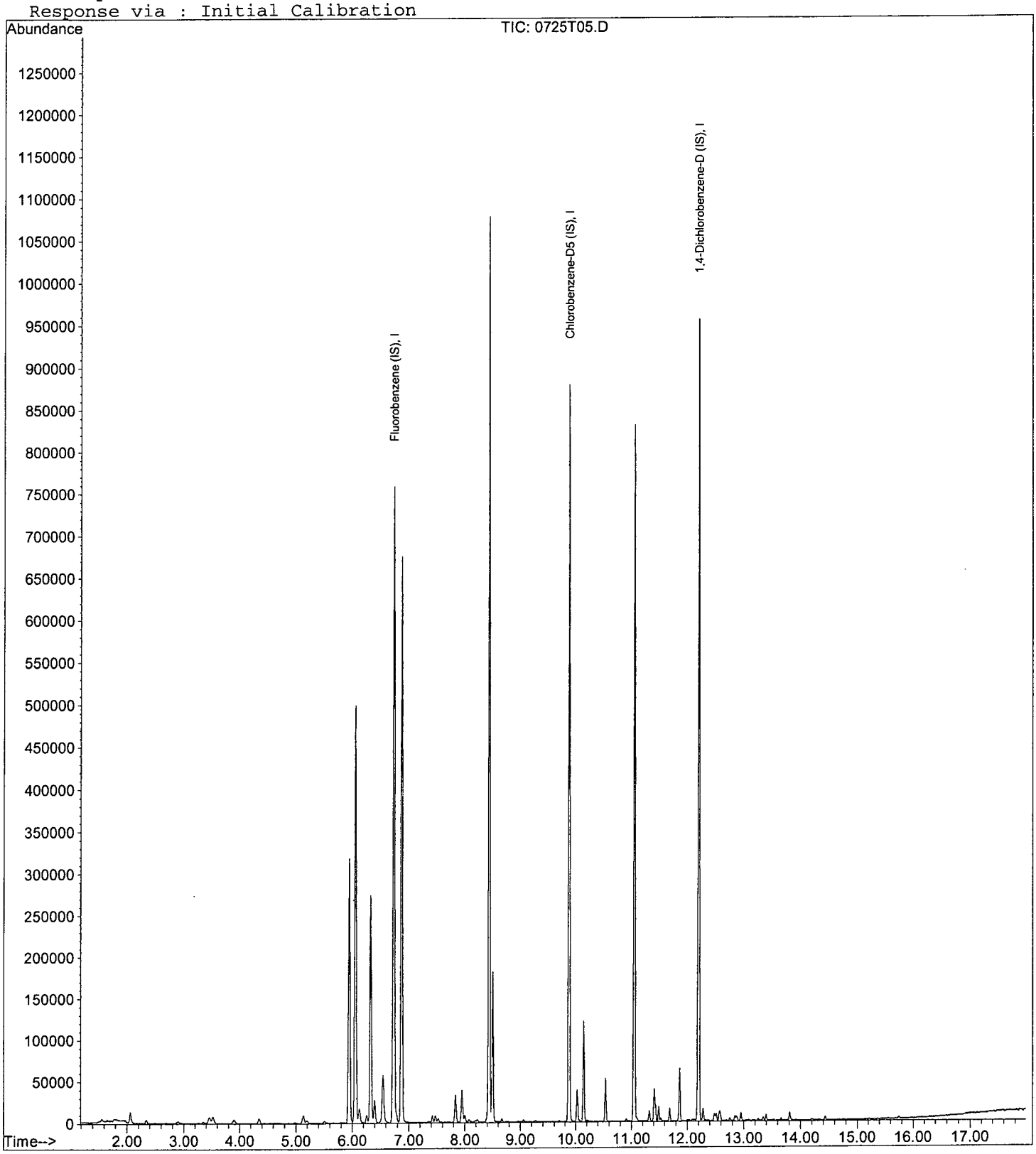
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

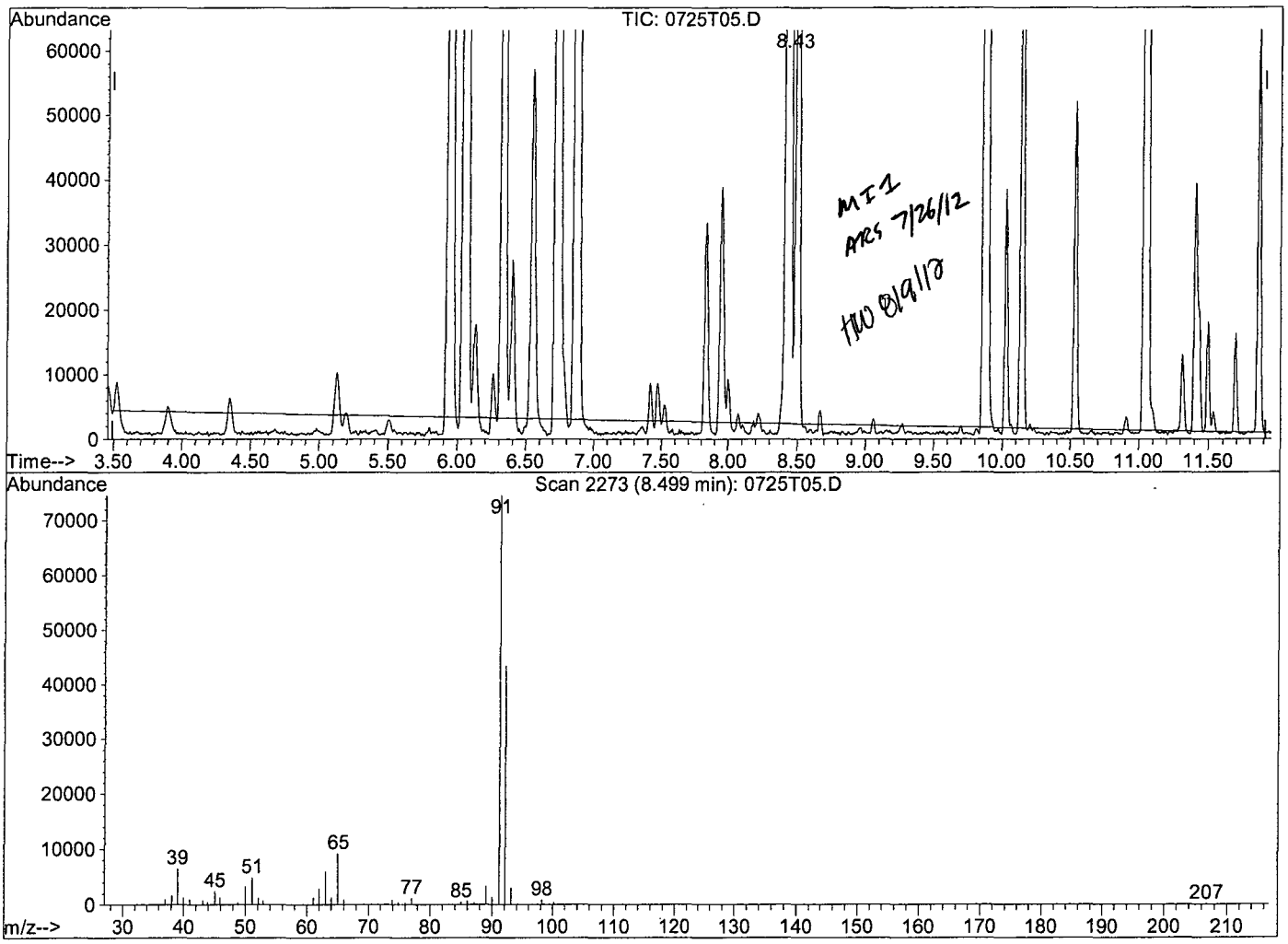
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration



TIC: 0725T05.D

(2) Gasoline (TMHB)

8.50min -333.5537ppb m

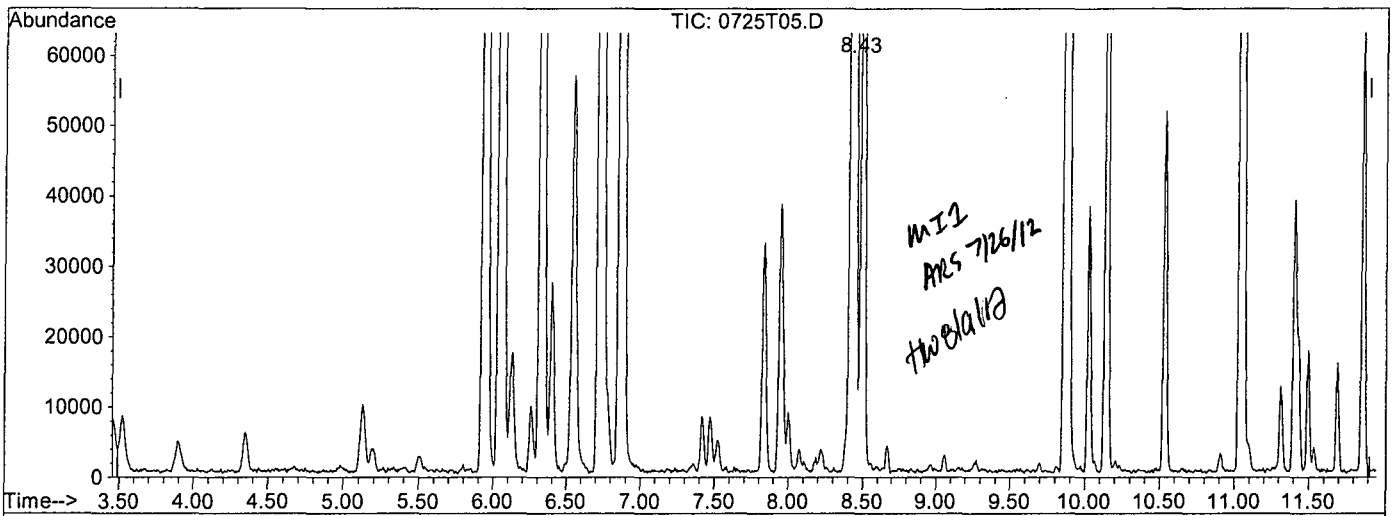
response 8658785

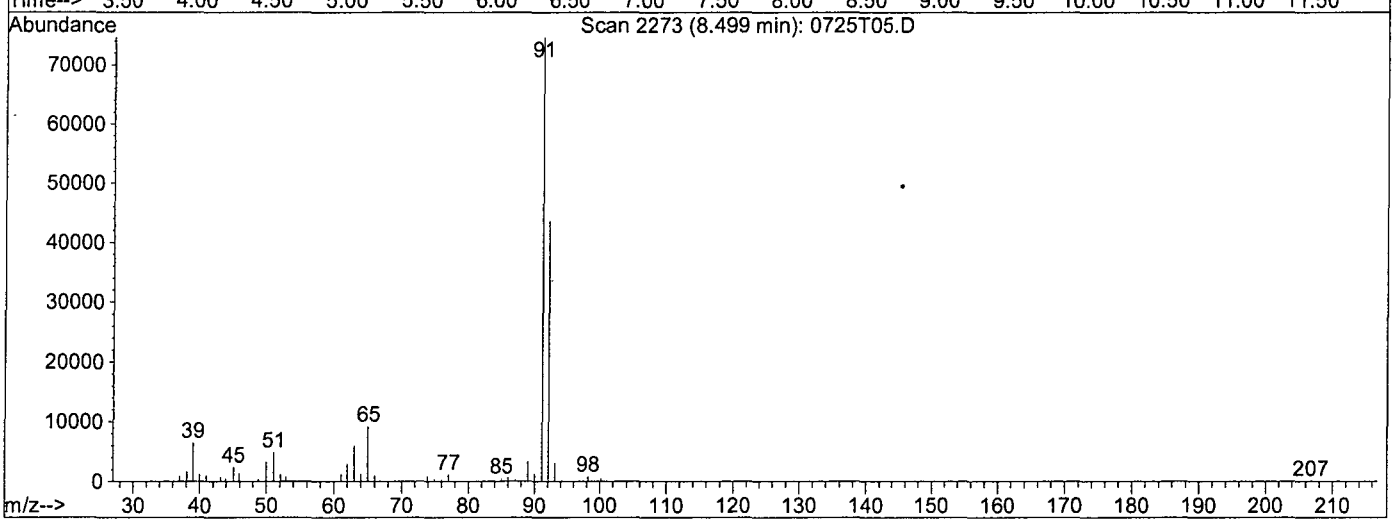
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	1.05#
0.00	1.40	3.08#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:58 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T05.D

(2) Gasoline (TMHB)

8.43min -225.2393ppb m

response 10913490

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.83#
0.00	1.40	2.44#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	774747	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	873528	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	976201	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	12540540m	-160.56049	ppb	100

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

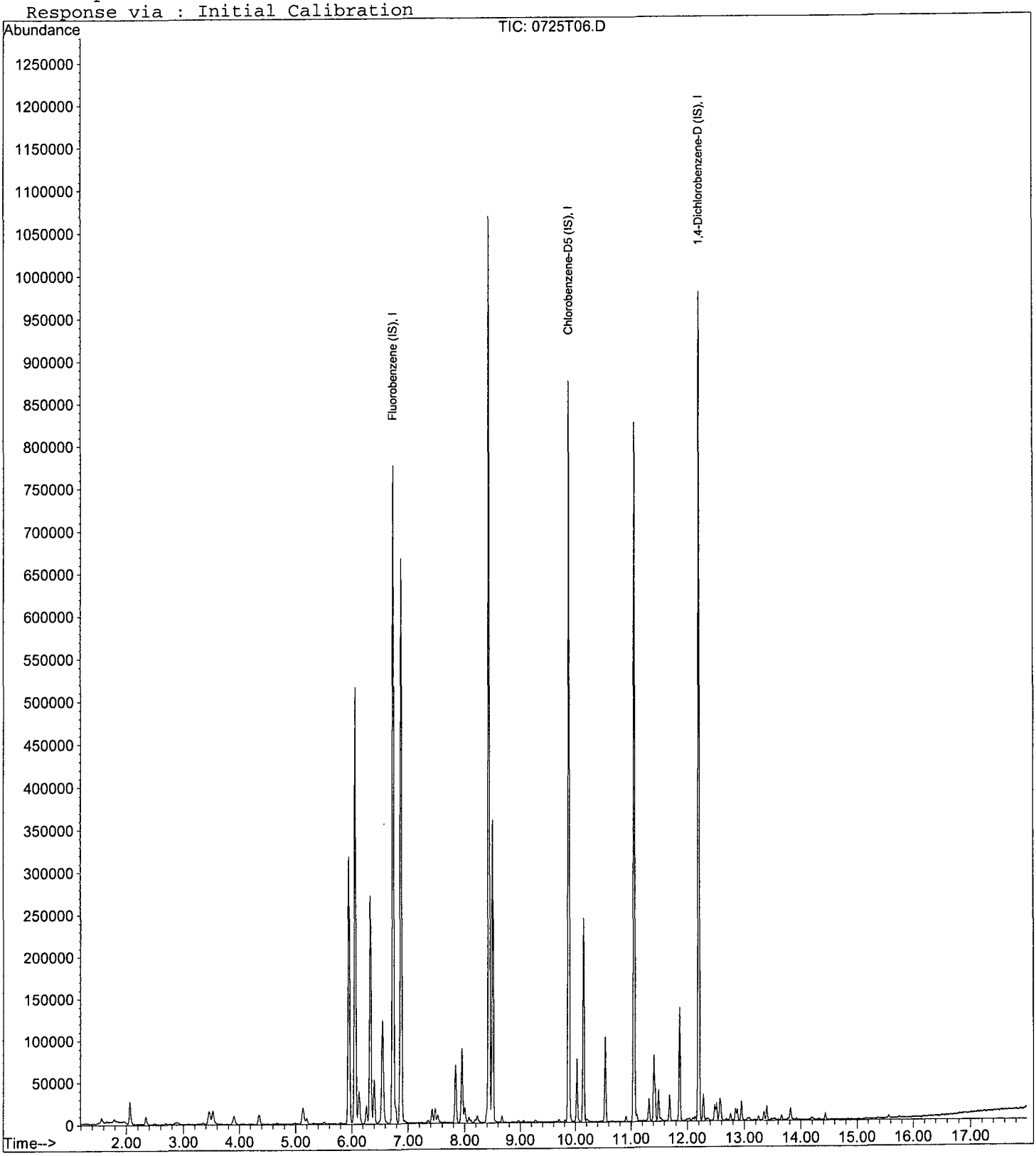
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D
Acq On : 25 Jul 12 11:45
Sample : 100ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

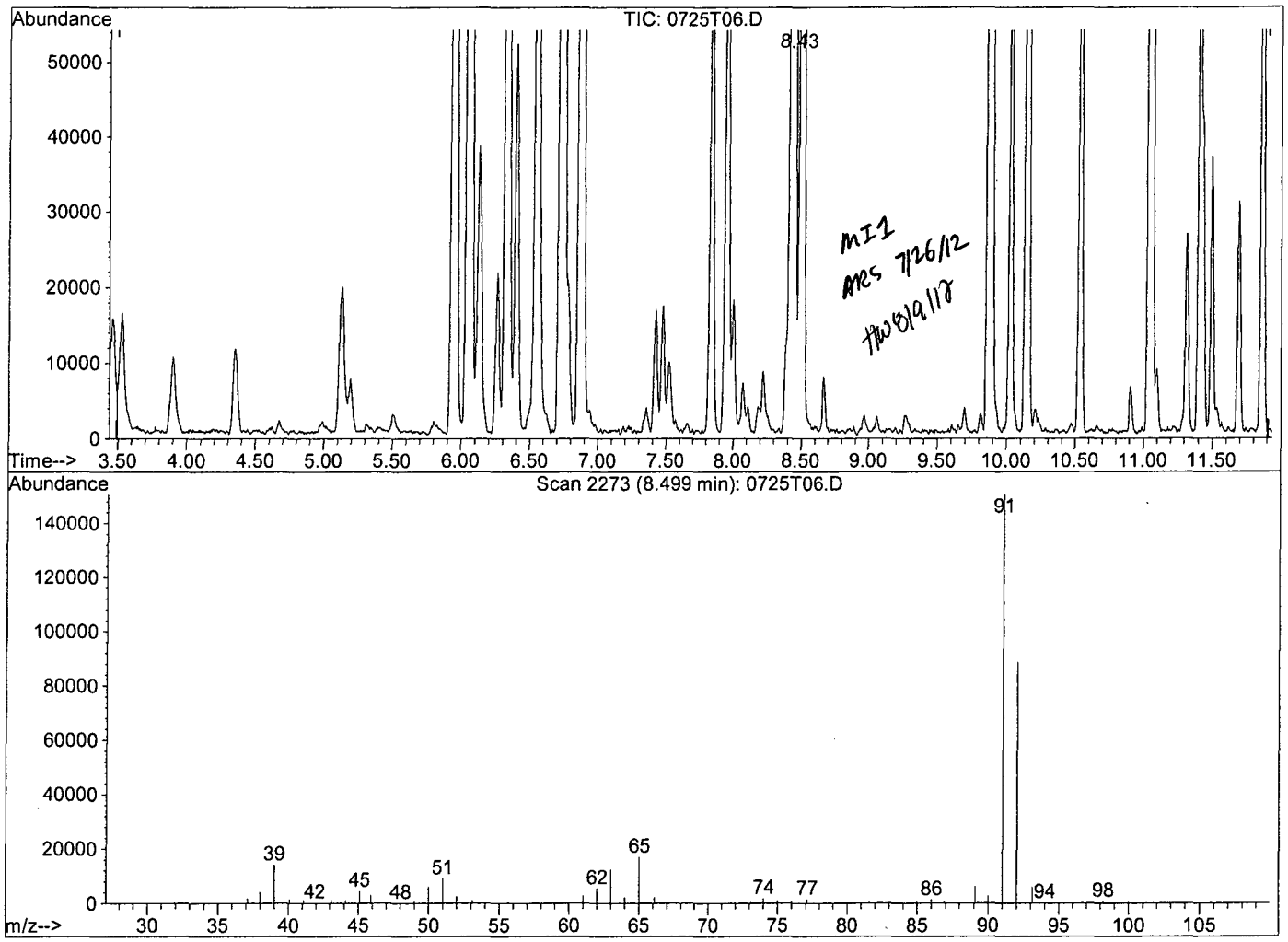
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:58 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration



TIC: 0725T06.D

(2) Gasoline (TMHB)

8.43min -160.5605ppb m

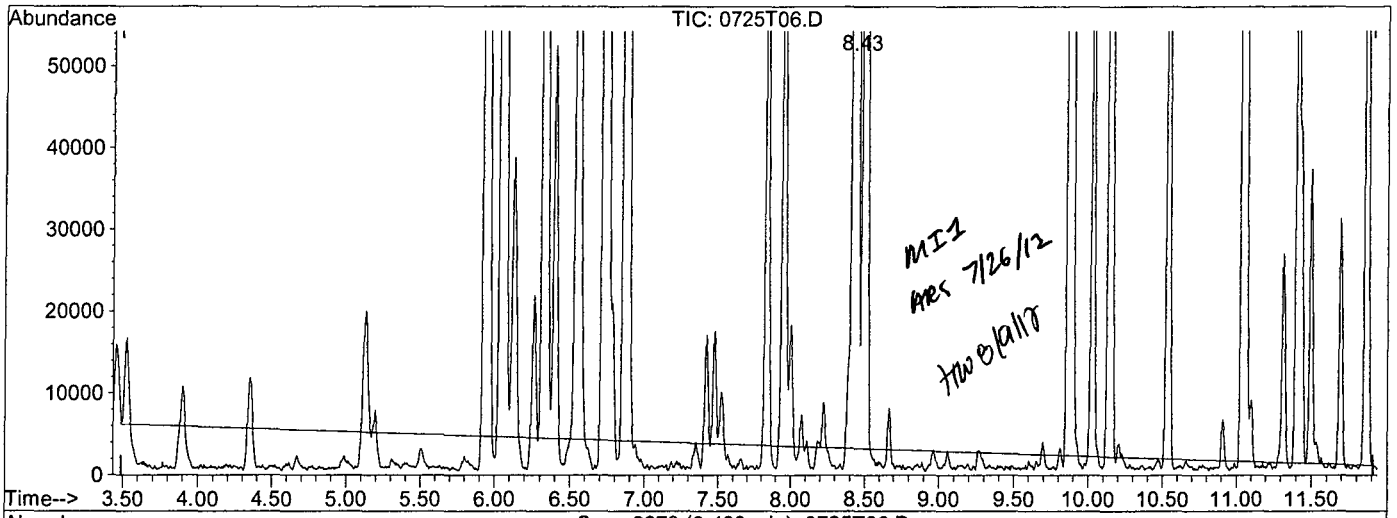
response 12540540

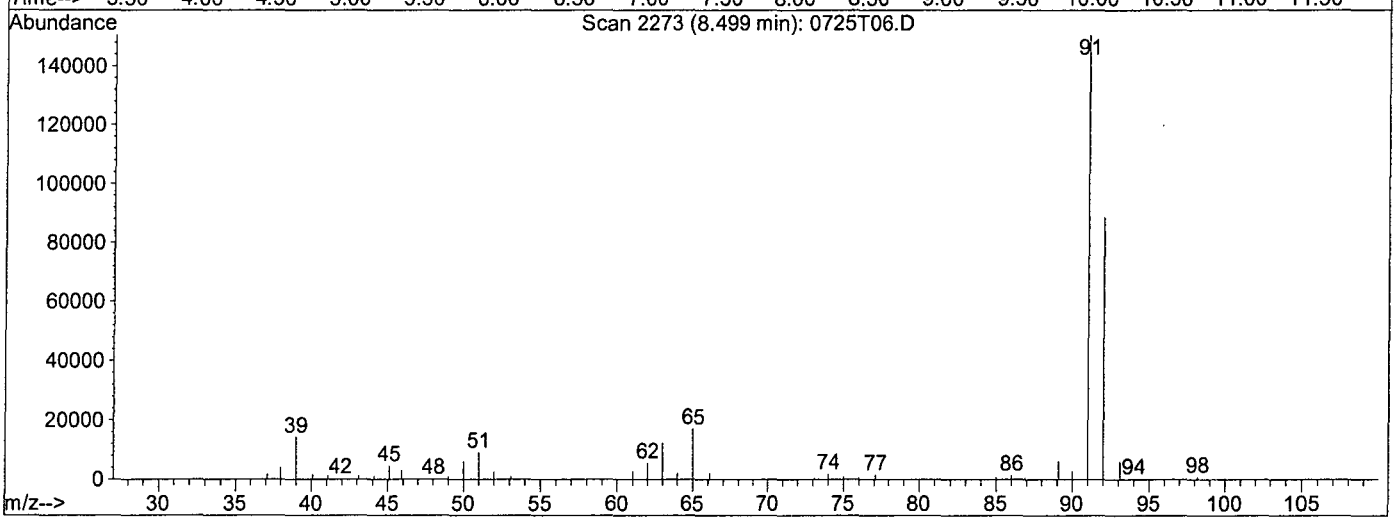
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.76#
0.00	1.40	2.17#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T06.D

(2) Gasoline (TMHB)

8.50min -268.9292ppb m

response 10233059

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.93#
0.00	1.40	2.66#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:50 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	782981	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	897407	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	996199	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	19663639m	410.65057	ppb	100

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

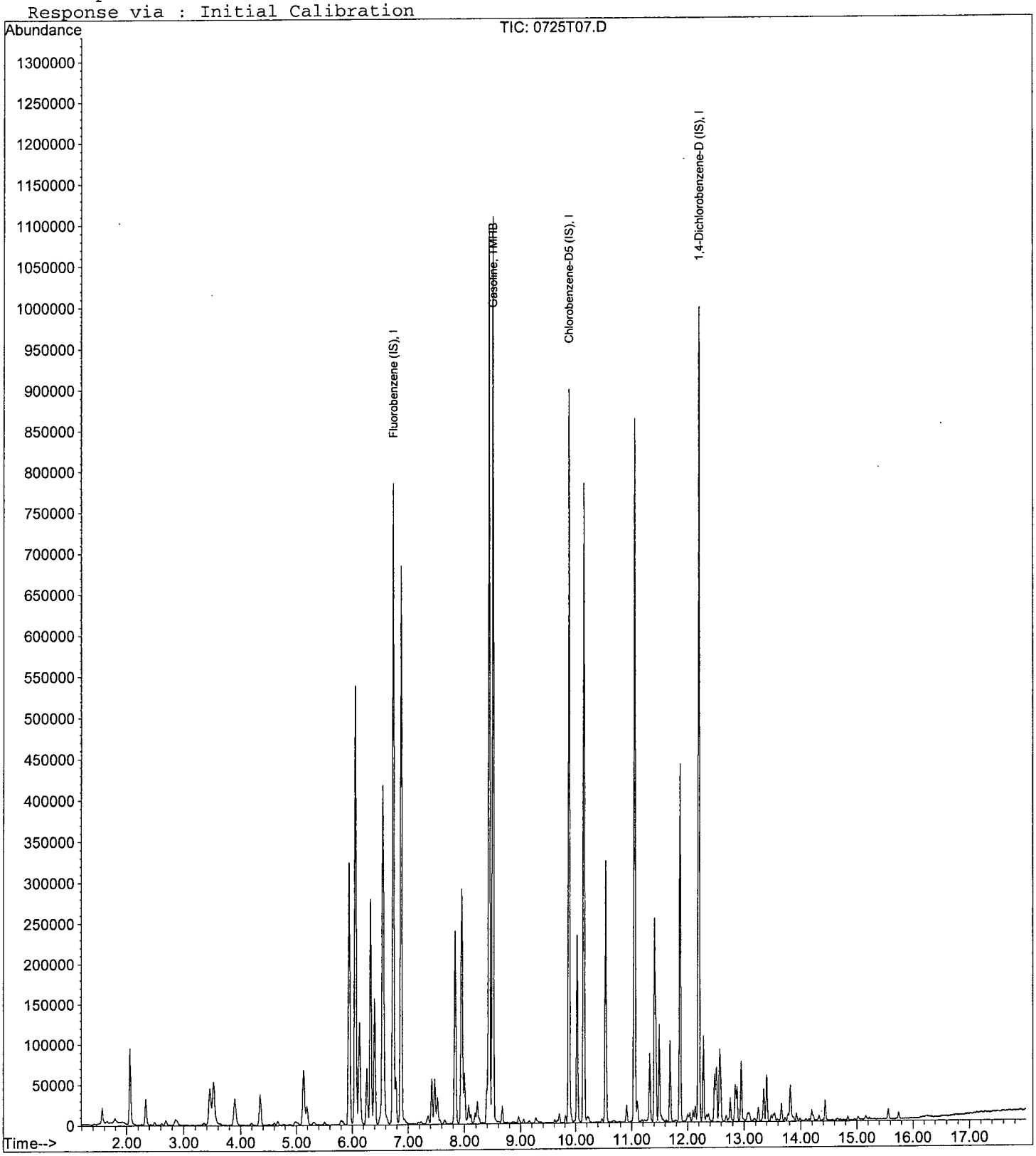
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D
Acq On : 25 Jul 12 12:13
Sample : 300ug/L Vol Std 07-25-13
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 25 15:50 2012 Quant Results File: TGAS.RES

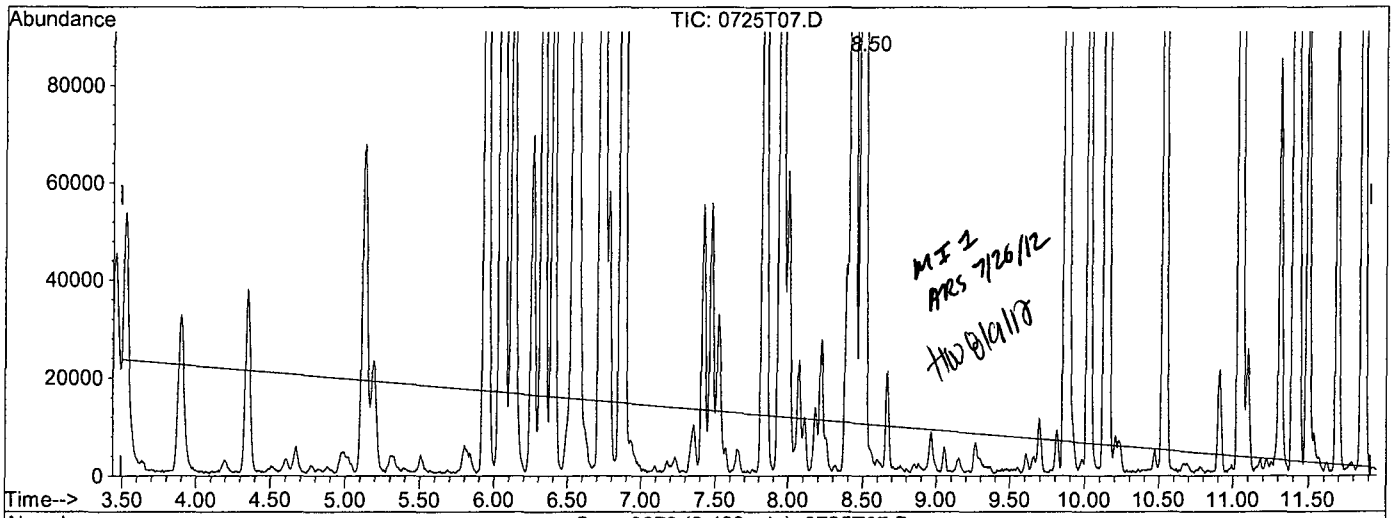
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

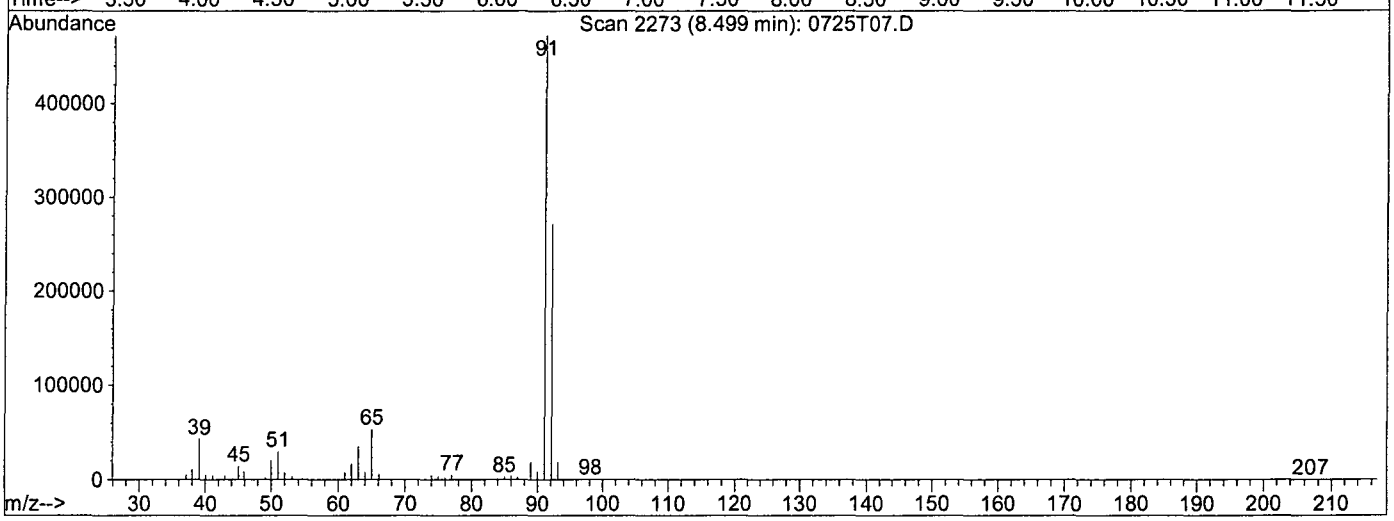


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:49 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Single Level Calibration





TIC: 0725T07.D

(2) Gasoline (TMHB)

8.50min 339.0063ppb m

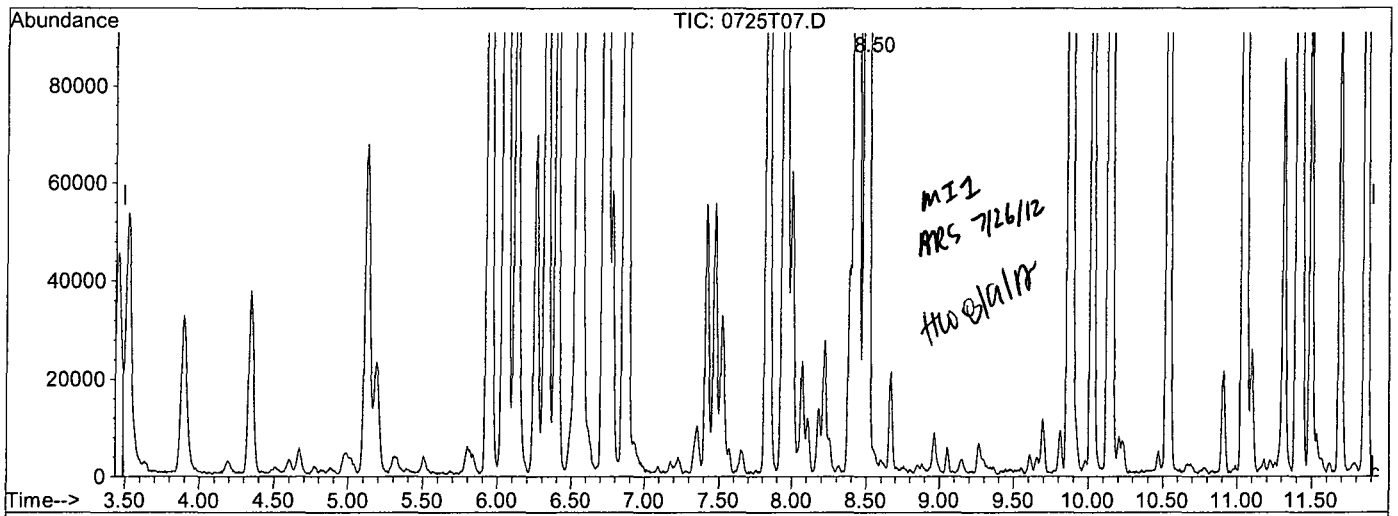
response 17146776

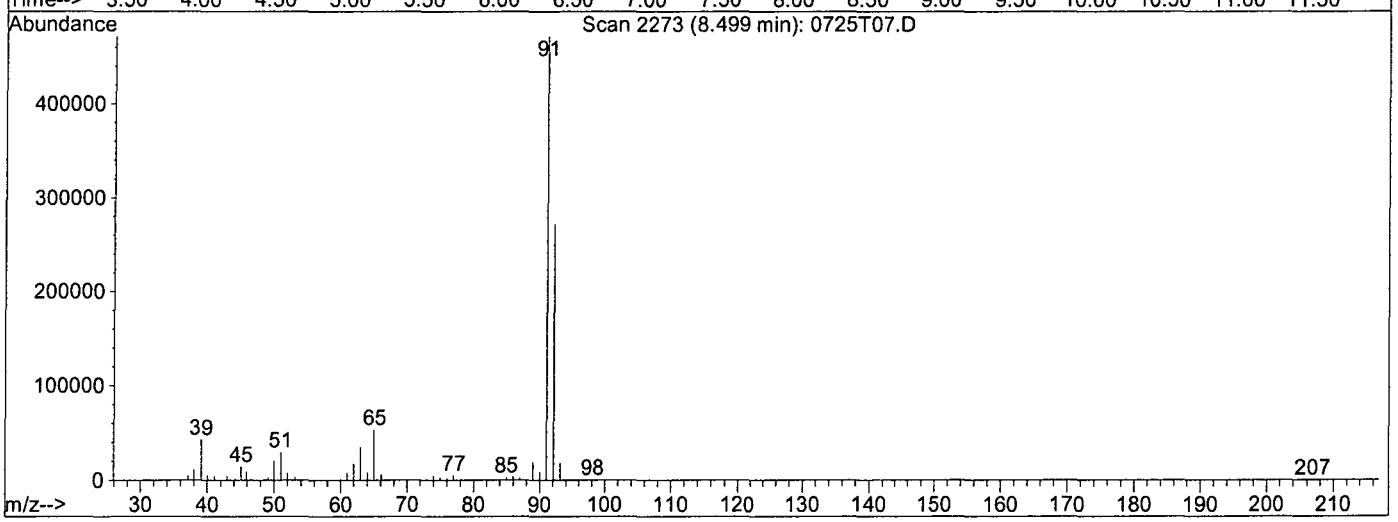
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.55#
0.00	0.00	1.63#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:50 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Single Level Calibration





TIC: 0725T07.D

(2) Gasoline (TMHB)

8.50min 410.6506ppb m

response 19663639

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.48#
0.00	0.00	1.42#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:56 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	782399	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	890063	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	996015	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	30141216m	652.19460	ppb	100

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

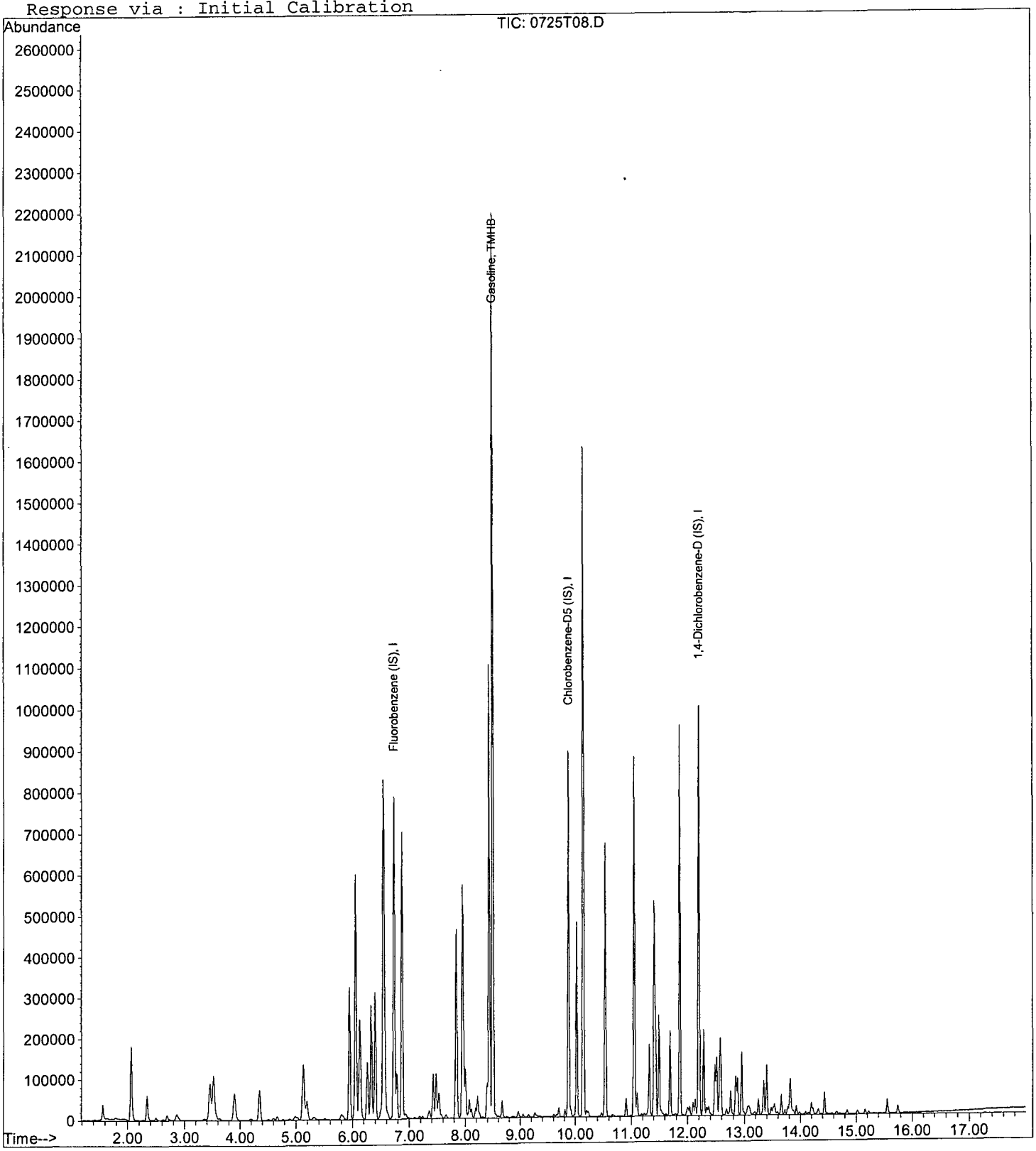
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D
Acq On : 25 Jul 12 12:41
Sample : 600ug/L Vol Std 07-25-14
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 25 15:56 2012 Quant Results File: TGAS.RES

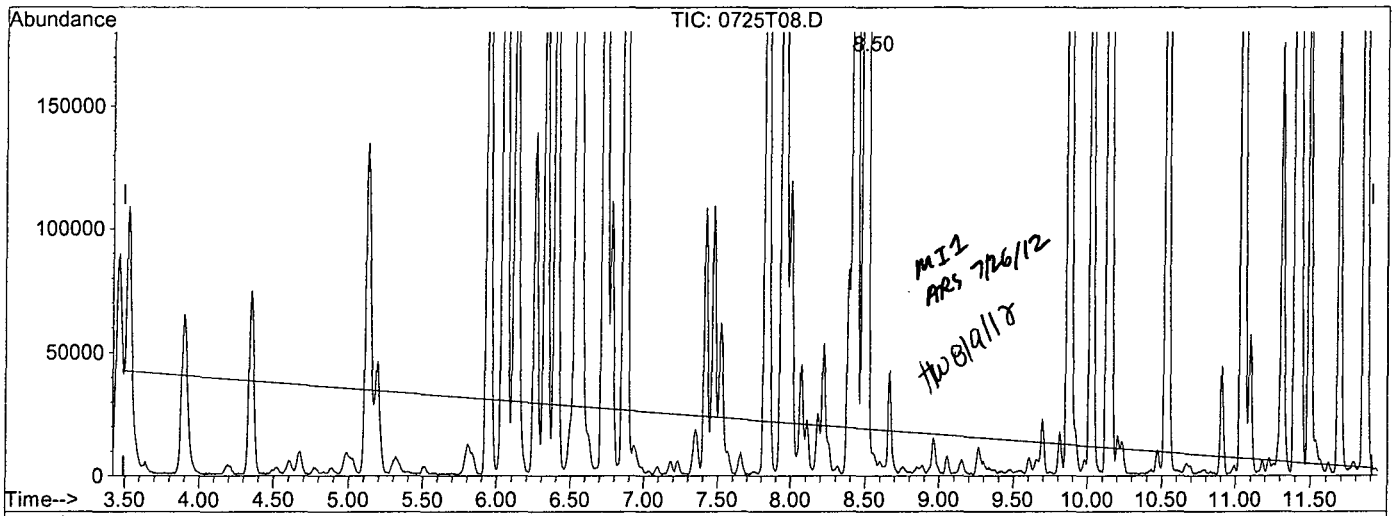
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

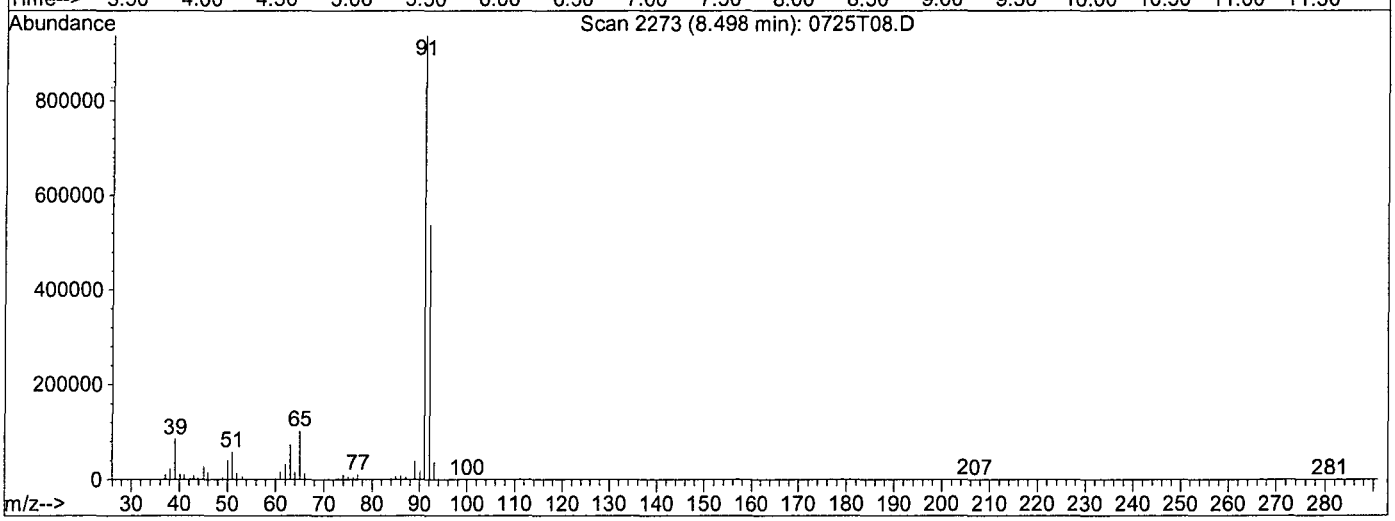


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T08.D

(2) Gasoline (TMHB)

8.50min 500.4974ppb m

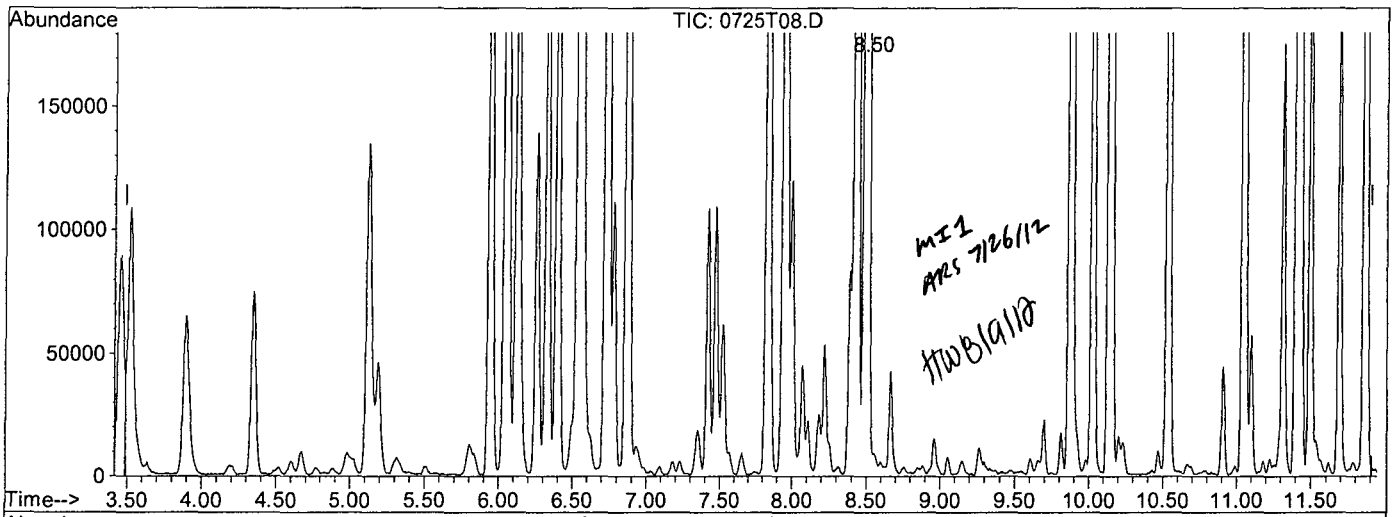
response 26879245

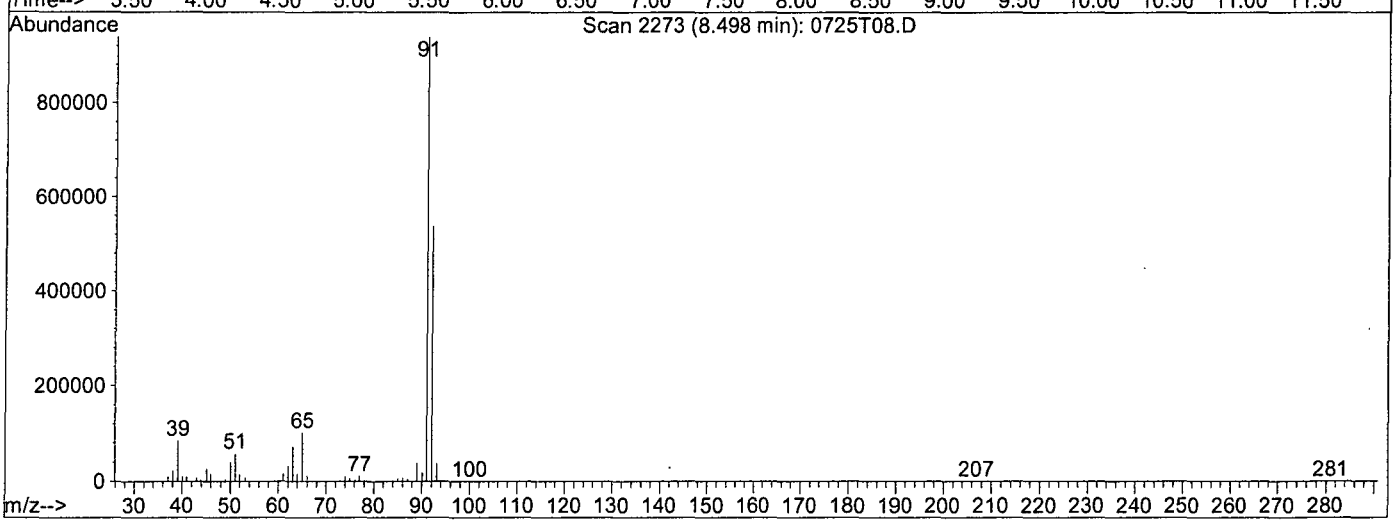
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.36#
0.00	1.40	1.04#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:56 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T08.D

(2) Gasoline (TMHB)

8.50min 652.1946ppb m

response 30141216

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.32#
0.00	1.40	0.93#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:55 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	788221	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	883861	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1013991	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	36946726m	955.99215	ppb	100

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

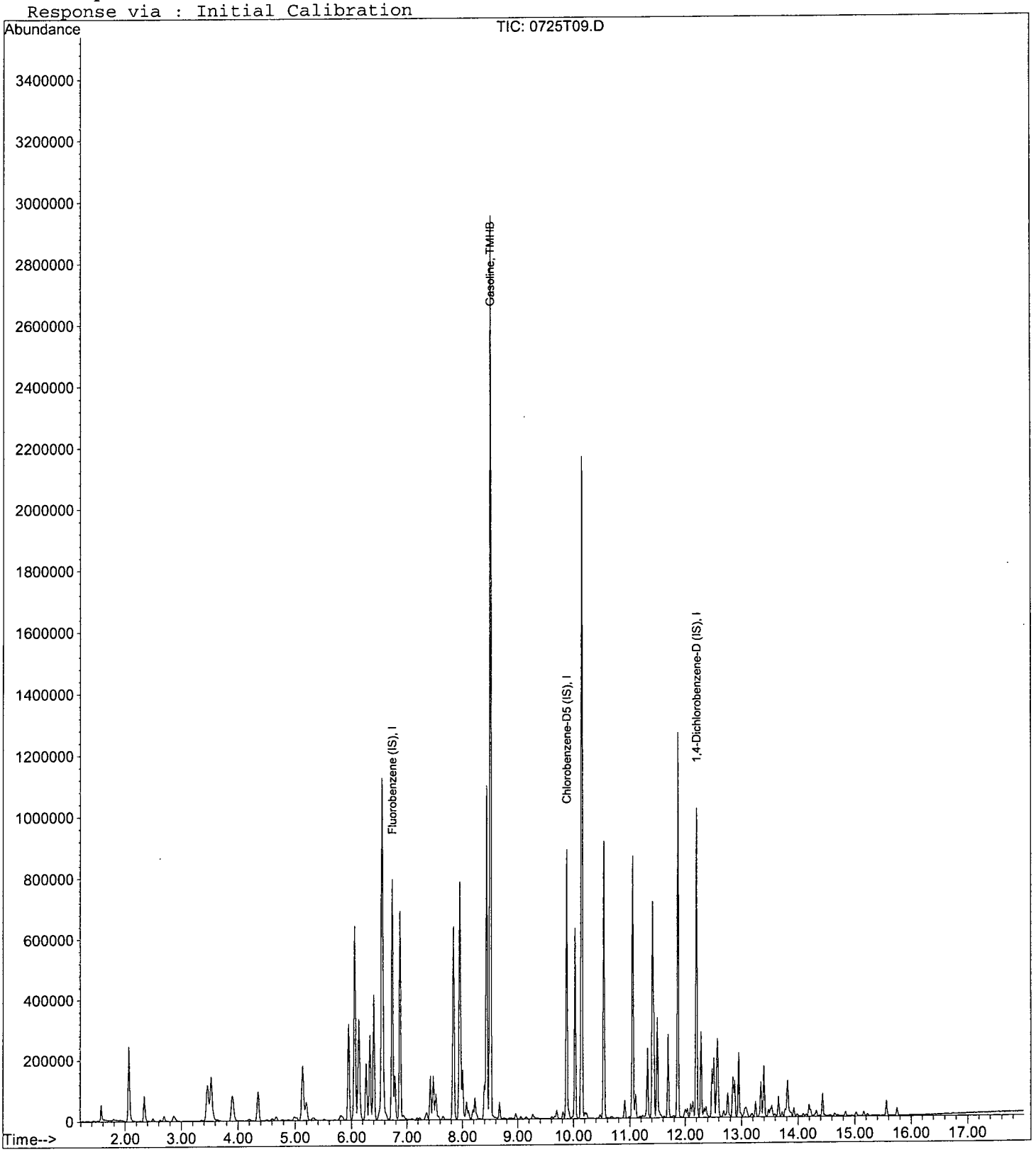
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D
Acq On : 25 Jul 12 13:08
Sample : 800ug/L Vol Std 07-25-15
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 25 15:55 2012 Quant Results File: TGAS.RES

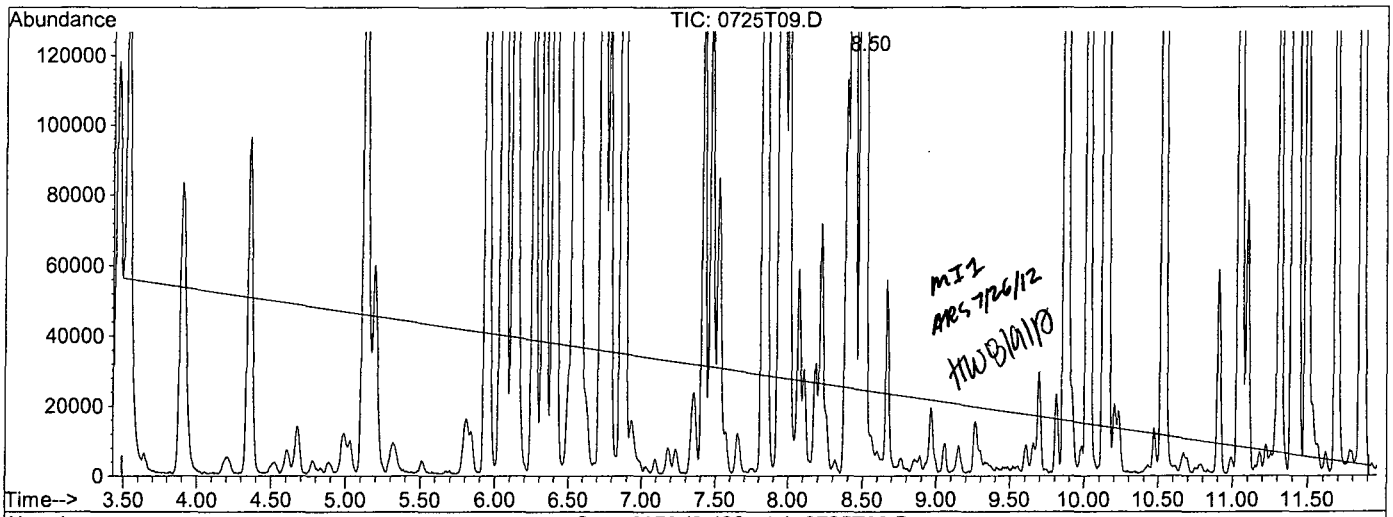
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

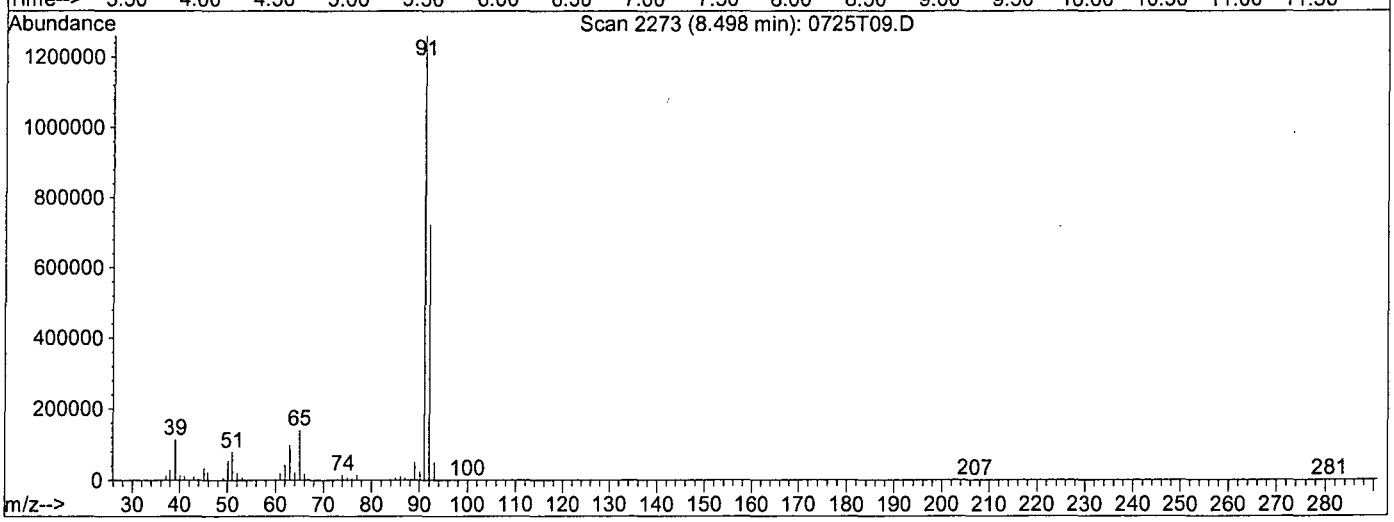


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T09.D

(2) Gasoline (TMHB)

8.50min 790.6203ppb m

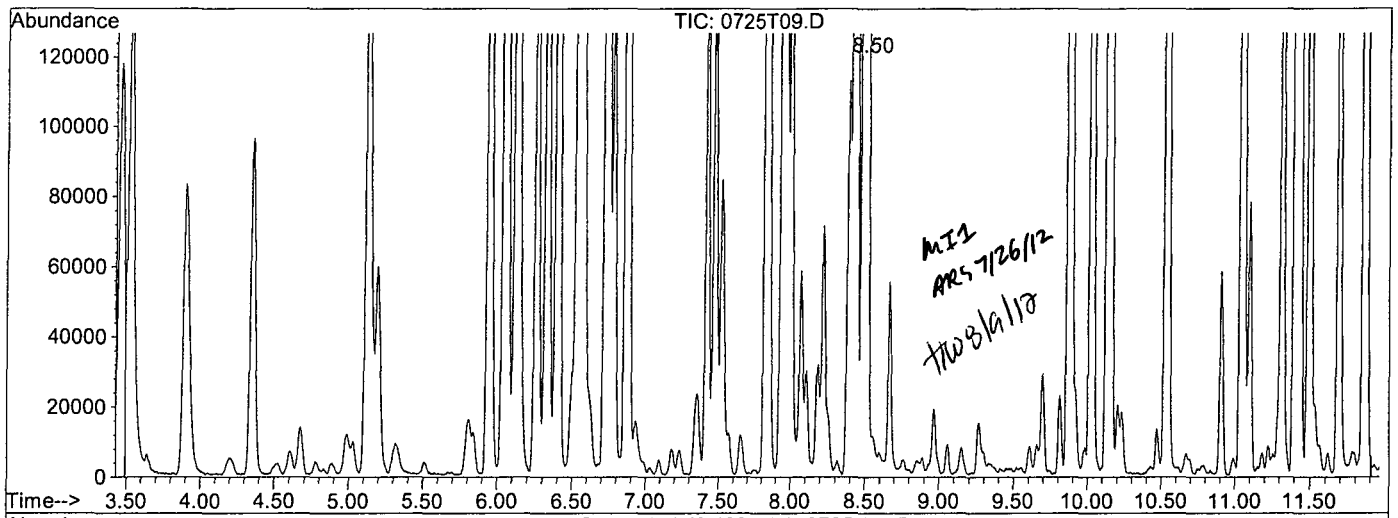
response 33364245

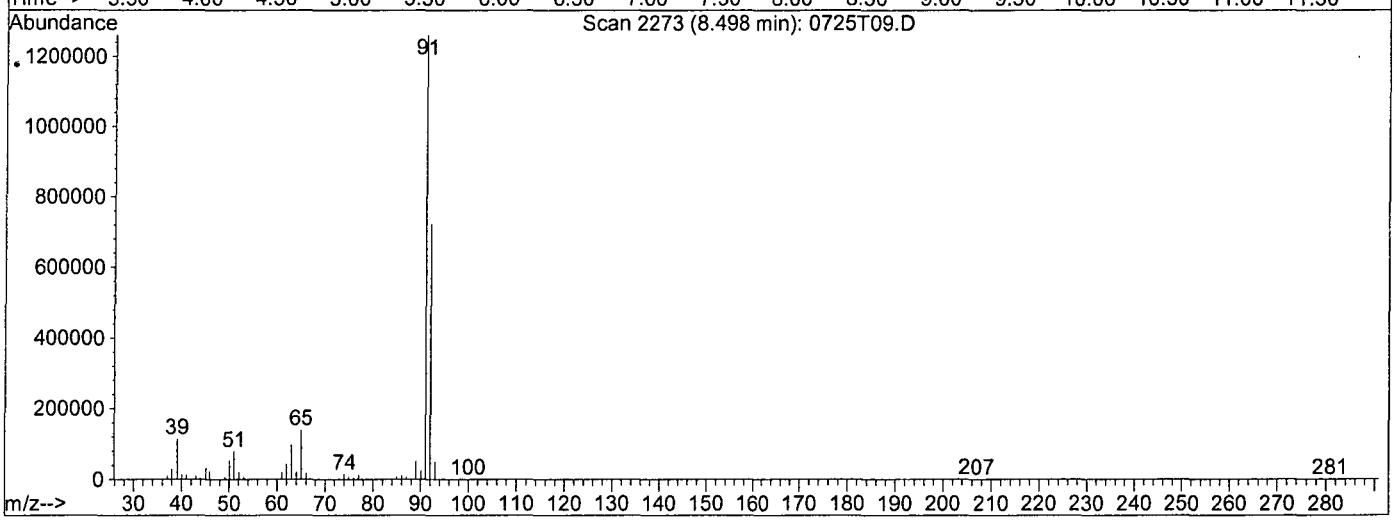
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.30#
0.00	1.40	0.86#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:55 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T09.D

(2) Gasoline (TMHB)

8.50min 955.9921ppb m

response 36946726

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.27#
0.00	1.40	0.77#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 16:00 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	808332	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	927489	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1069004	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	45050186m	1278.31907	ppb	100

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

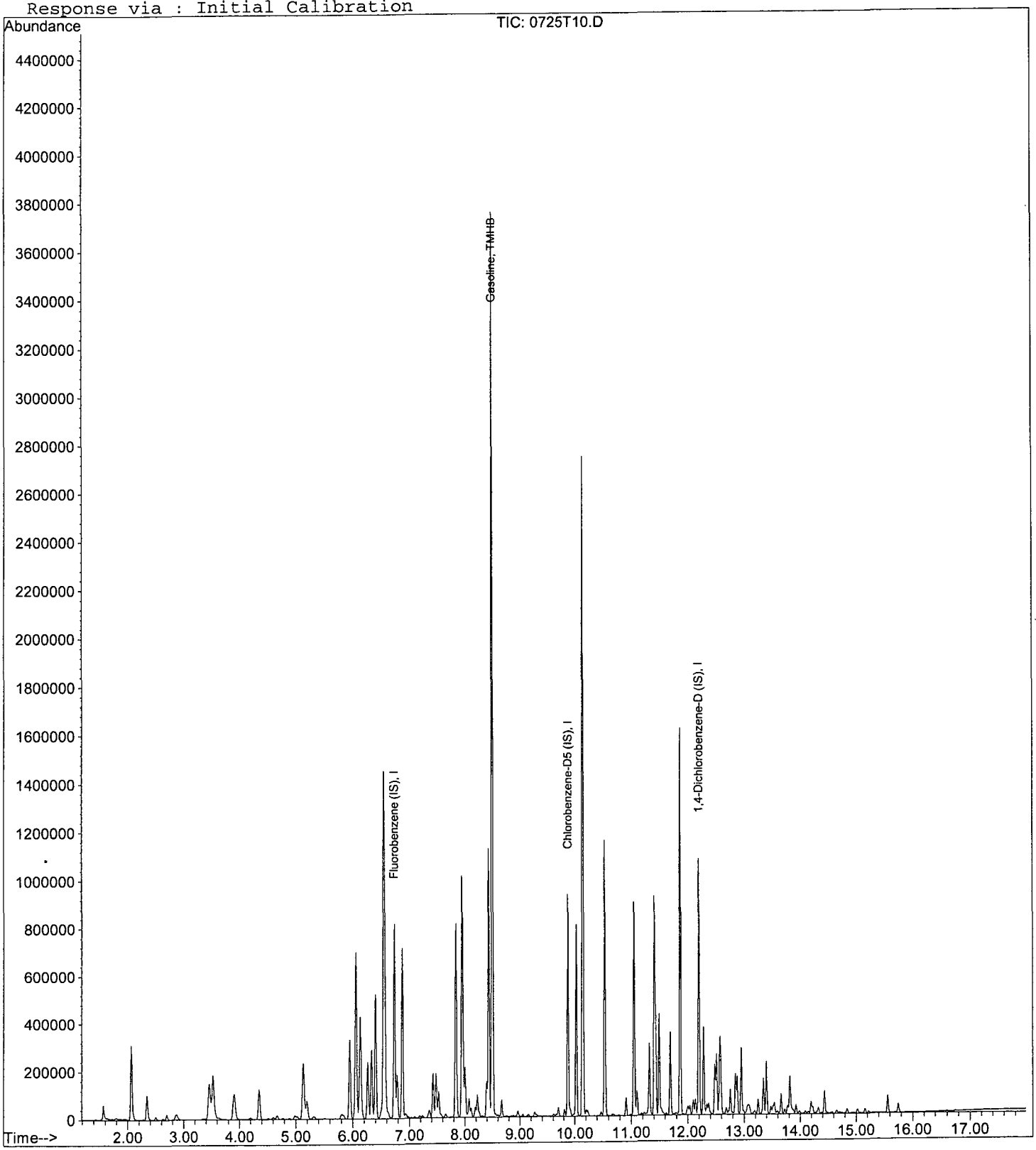
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D
Acq On : 25 Jul 12 13:36
Sample : 1000ug/L Vol Std 07-25-16
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 25 16:00 2012 Quant Results File: TGAS.RES

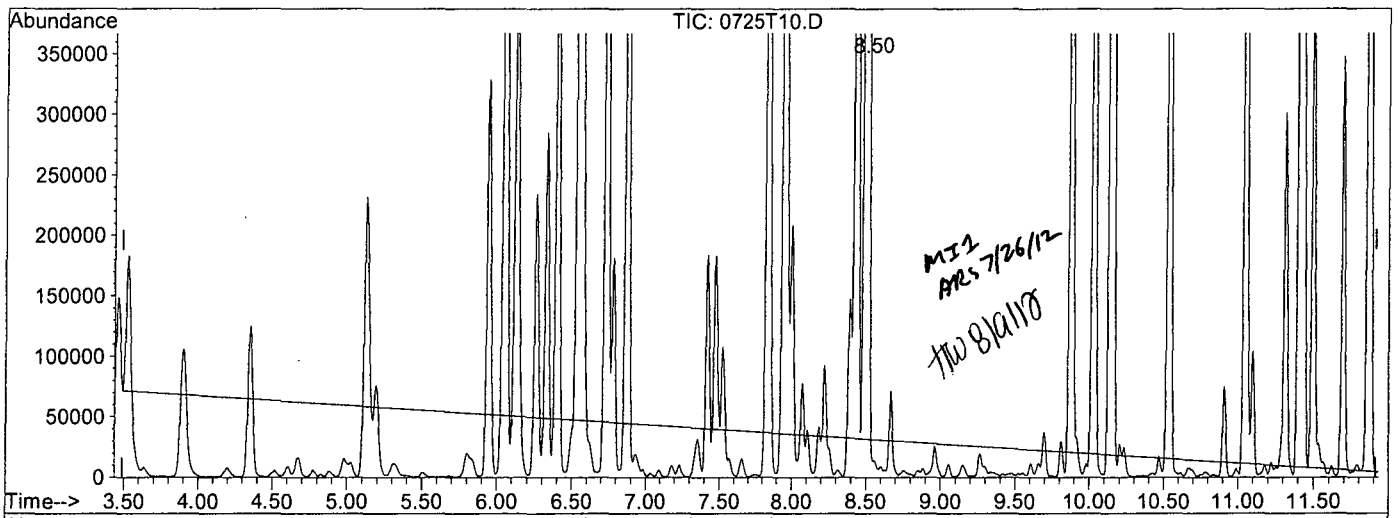
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

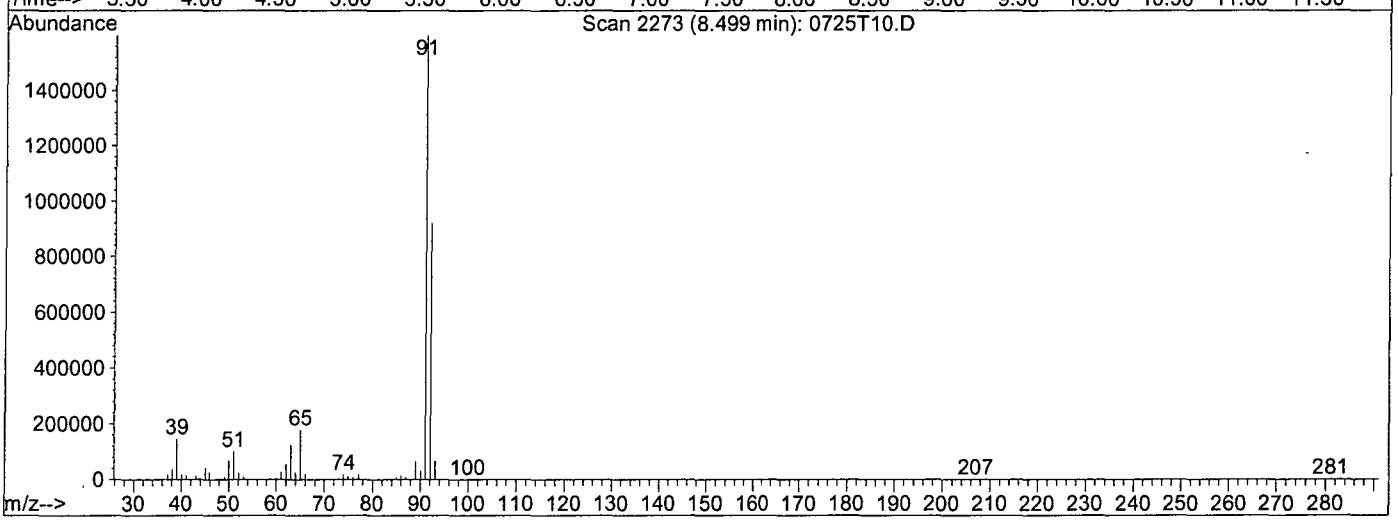


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T10.D

(2) Gasoline (TMHB)

8.50min 1108.4543ppb m

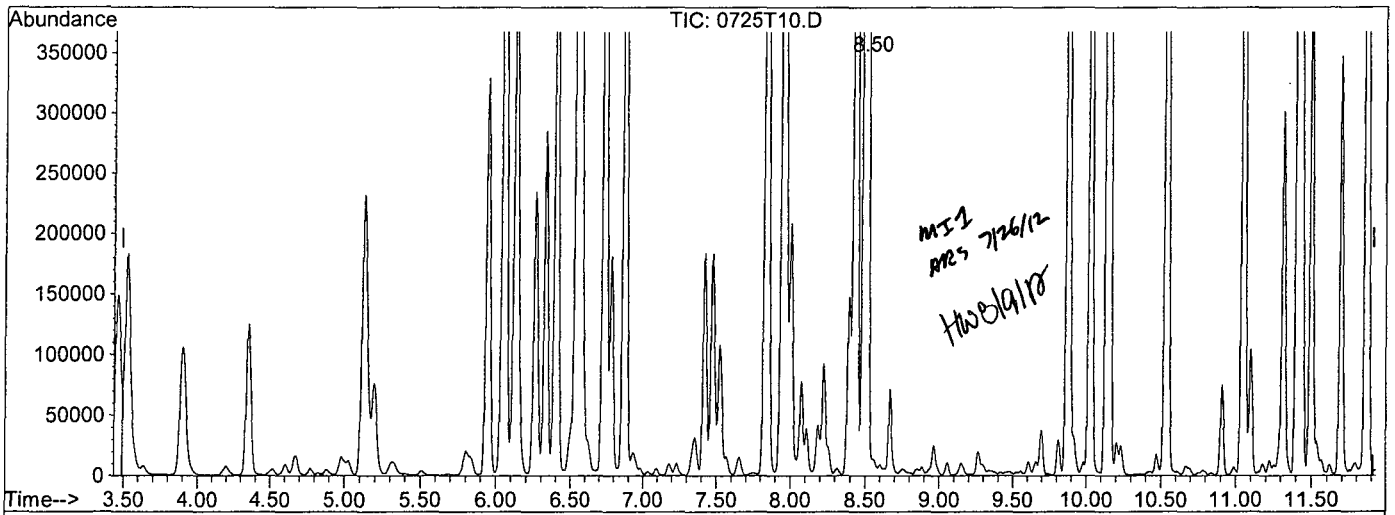
response 41276485

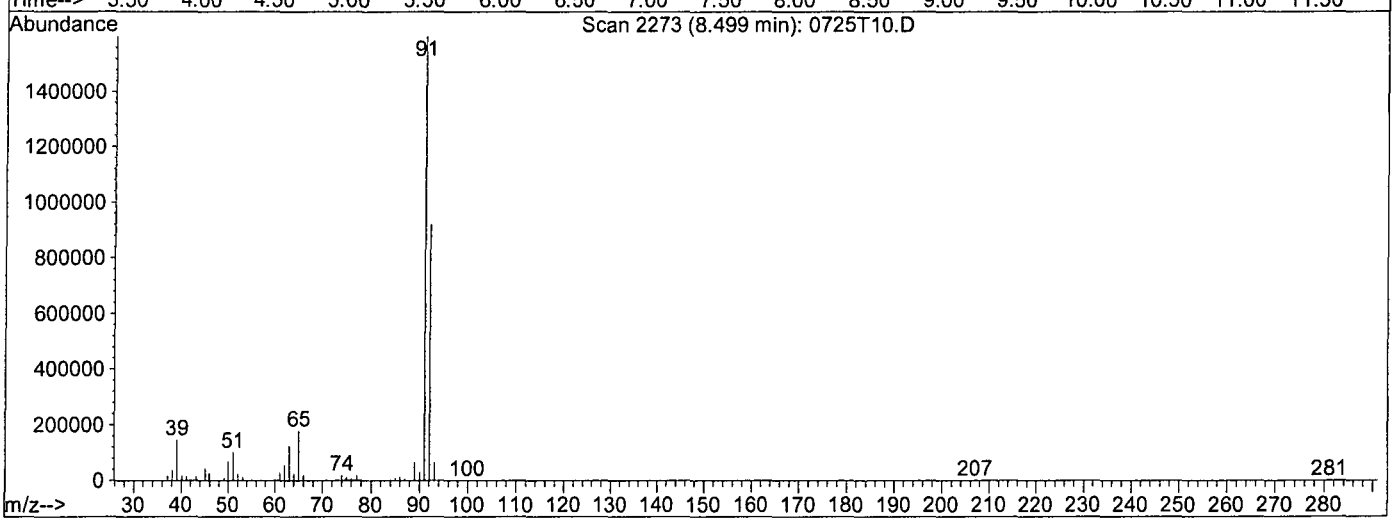
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.25#
0.00	1.40	0.73#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 16:00 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





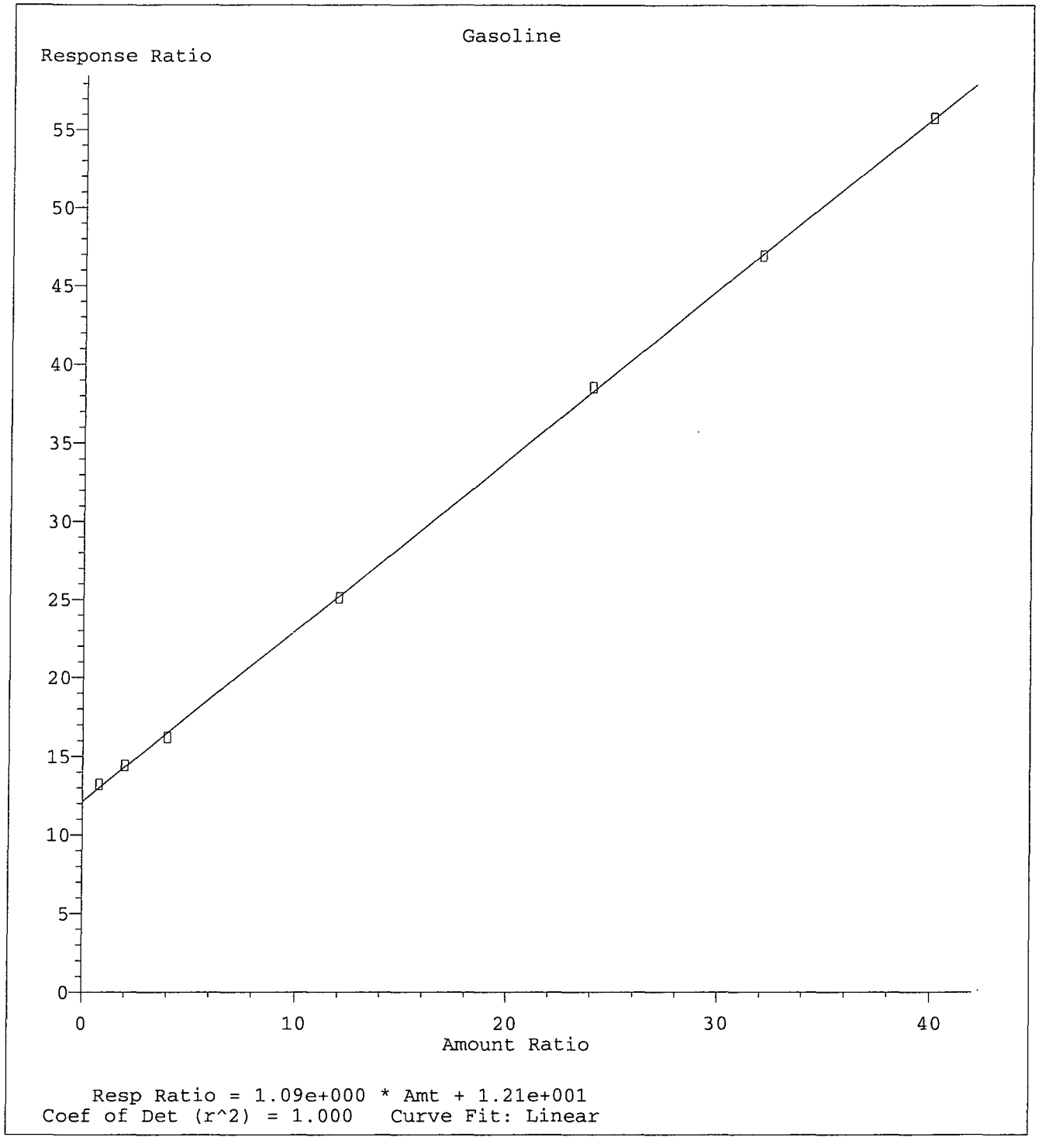
TIC: 0725T10.D

(2) Gasoline (TMHB)

8.50min 1278.3191ppb m

response 45050186

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.23#
0.00	1.40	0.67#
0.00	0.00	0.00



Method Name: M:\THOR\DATA\T120725\TGAS.M
Calibration Table Last Updated: Wed Jul 25 16:07:29 2012

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

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

SDG No: 68258
Date Analyzed: 07/25/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0725T15.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline	4.903	2.065	58	TMHBL	3.3
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			58.0		

AMS 7/31/12

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 8:23 2012 Quant Results File: TGAS.RES

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

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	788179	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	879850	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1024196	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	19535277m	290.16403	ppb	100

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

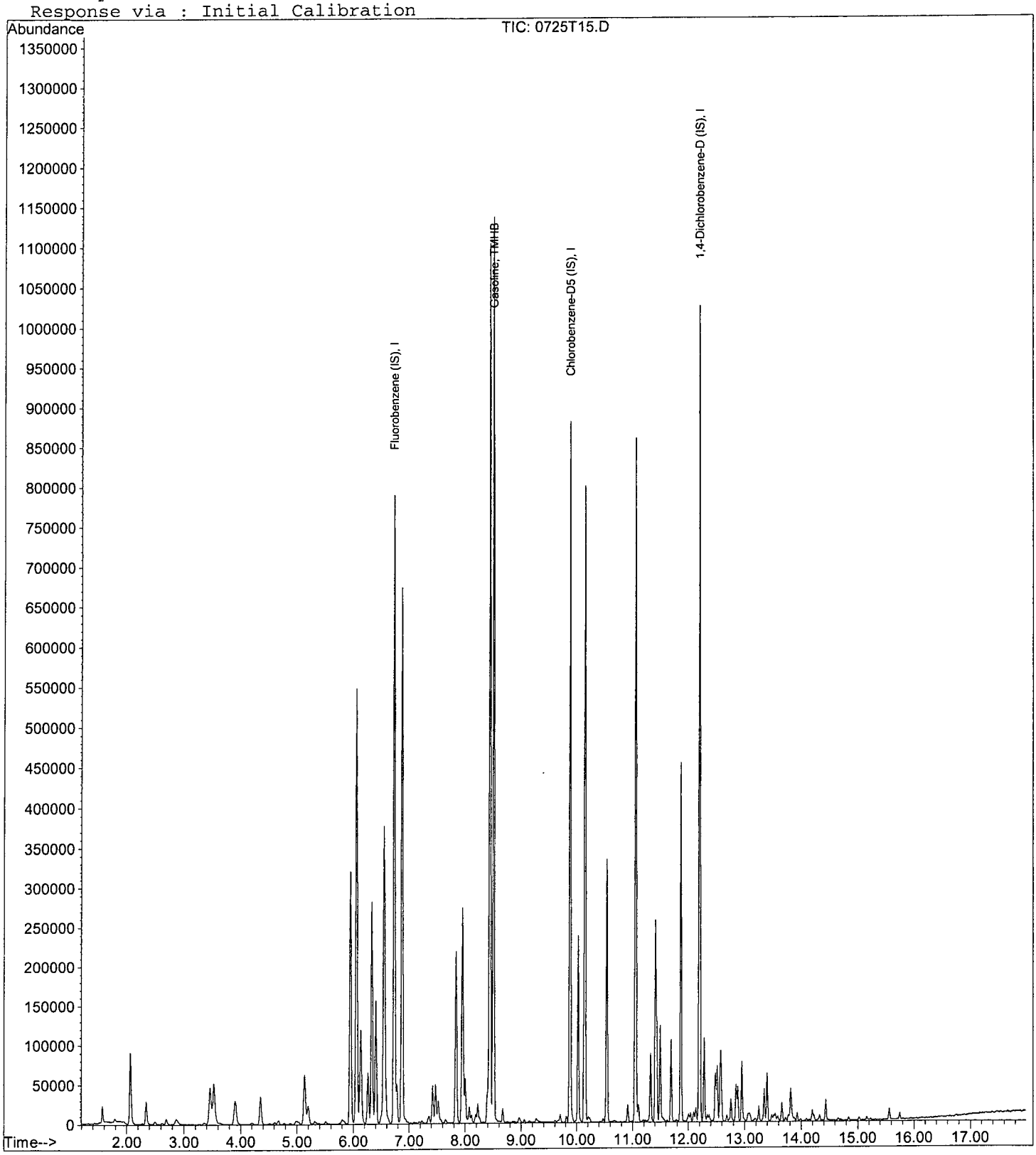
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D
Acq On : 25 Jul 12 15:55
Sample : LCS gas 300ug/L (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 26 8:23 2012 Quant Results File: TGAS.RES

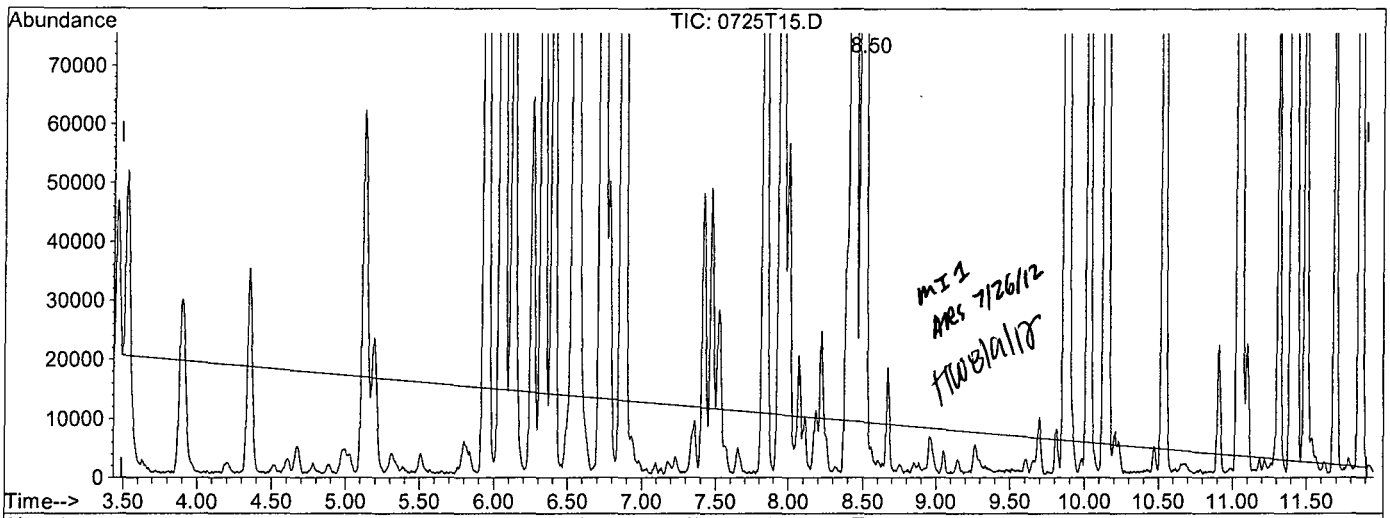
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

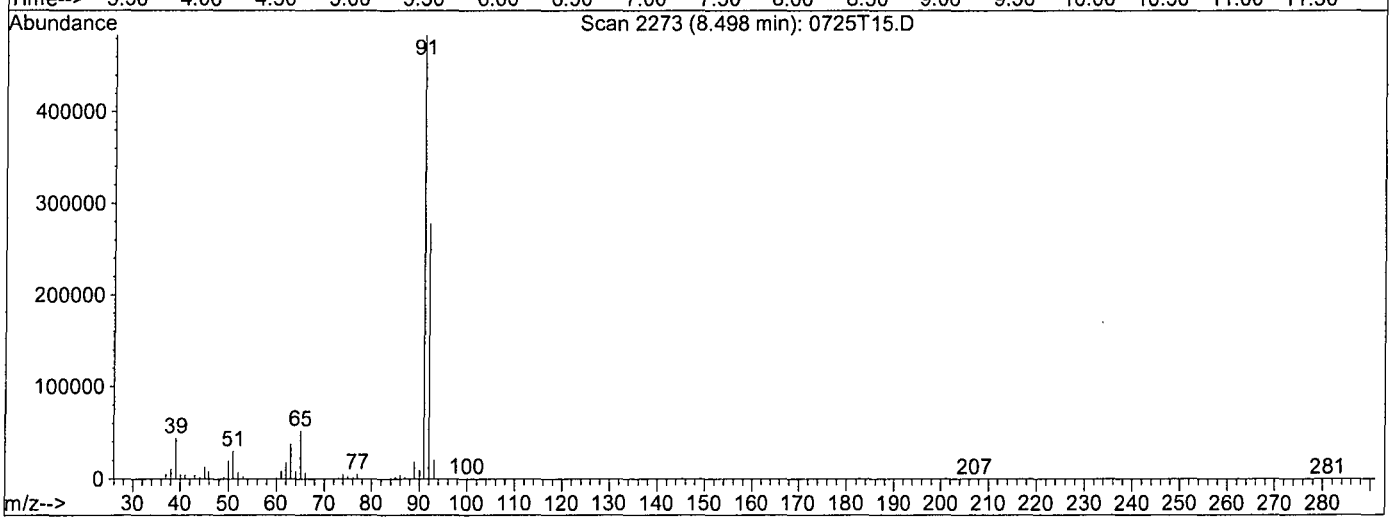


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:23 2012 Quant Results File: temp.res

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





TIC: 0725T15.D

(2) Gasoline (TMHB)

8.50min 216.4348ppb m

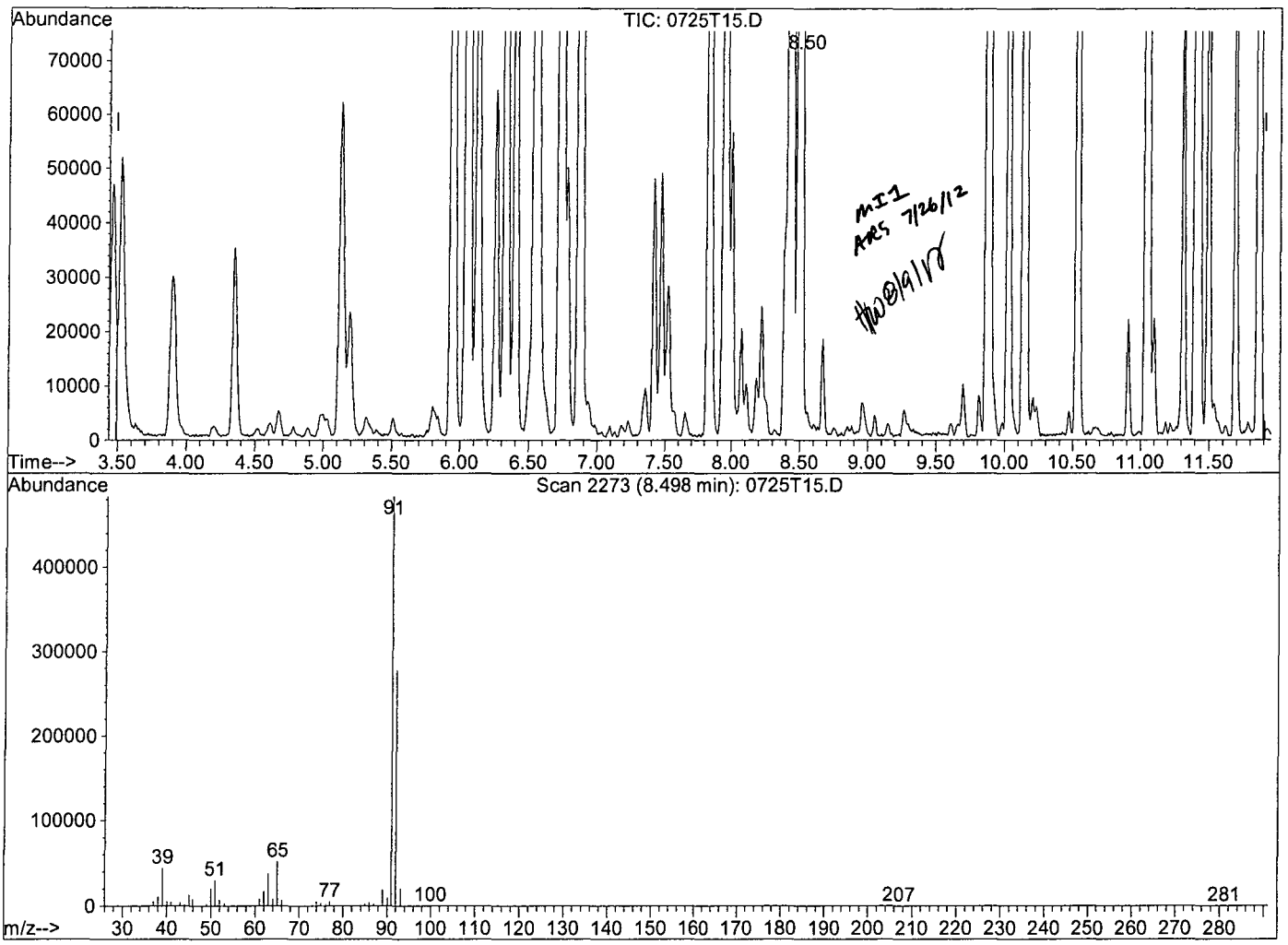
response 17002901

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:23 2012 Quant Results File: temp.res

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



TIC: 0725T15.D

(2) Gasoline (TMHB)

8.50min 290.1640ppb m

response 19535277

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.51#
0.00	0.00	1.47#
0.00	0.00	0.00

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

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

SDG No: 68258
Date Analyzed: 07/25/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0725T14.D

		Compound	MEAN	CCRF	%D	%Drift	
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline	4.903	1.970	60	TMHBL	12
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			60.0		

AMS 7/31/12

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T14.D Vial: 13
Acq On : 25 Jul 12 15:27 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 8:22 2012 Quant Results File: TGAS.RES

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

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	819782	25.00000 ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	915724	25.00000 ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1043658	25.00000 ppb	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
2) Gasoline	8.50	TIC	19379947m	263.88990 ppb	100

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

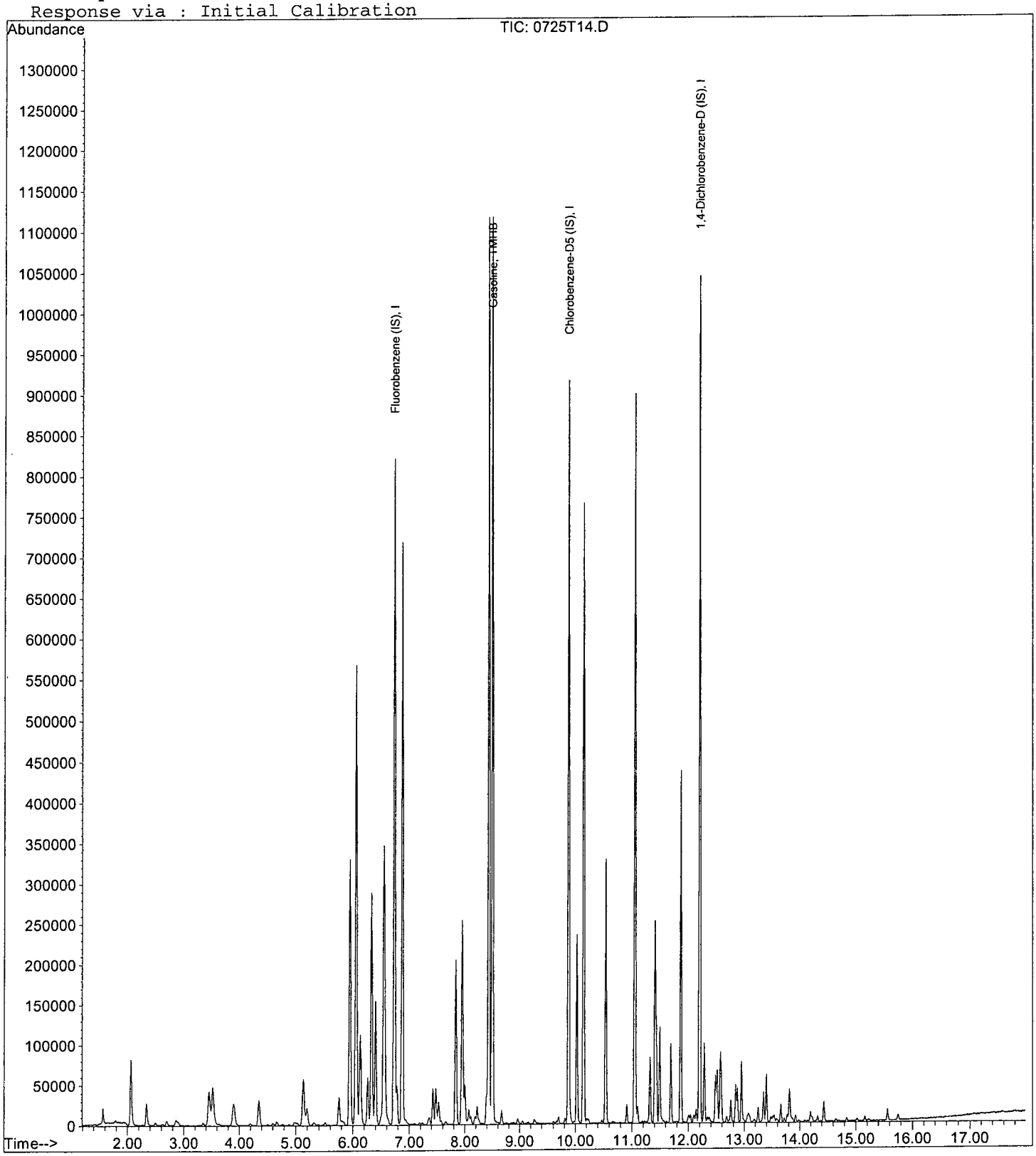
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T14.D
Acq On : 25 Jul 12 15:27
Sample : CCV gas 300ug/L
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 8:22 2012 Quant Results File: TGAS.RES

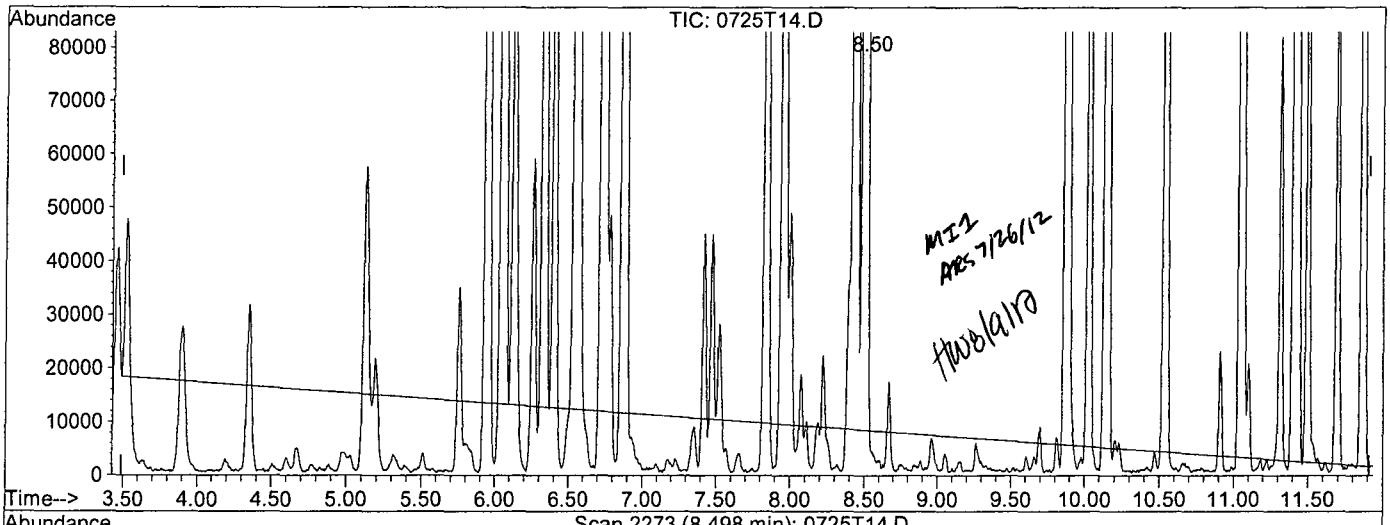
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

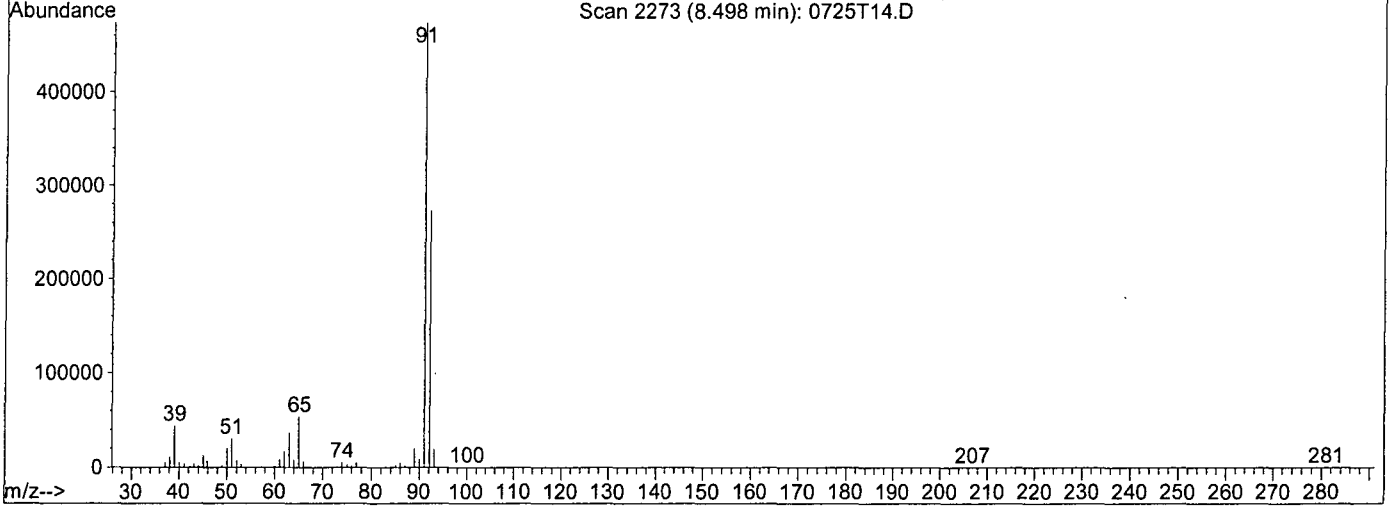


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T14.D Vial: 13
Acq On : 25 Jul 12 15:27 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 8:20 2012 Quant Results File: temp.res

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





TIC: 0725T14.D

(2) Gasoline (TMHB)

8.50min 191.4806ppb m

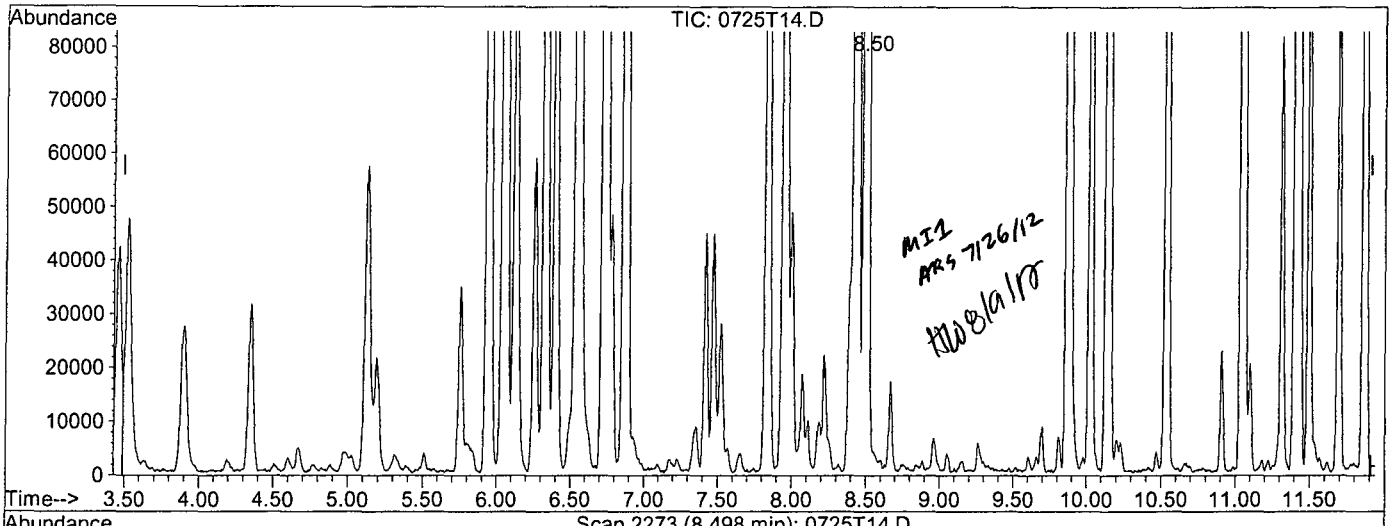
response 16793186

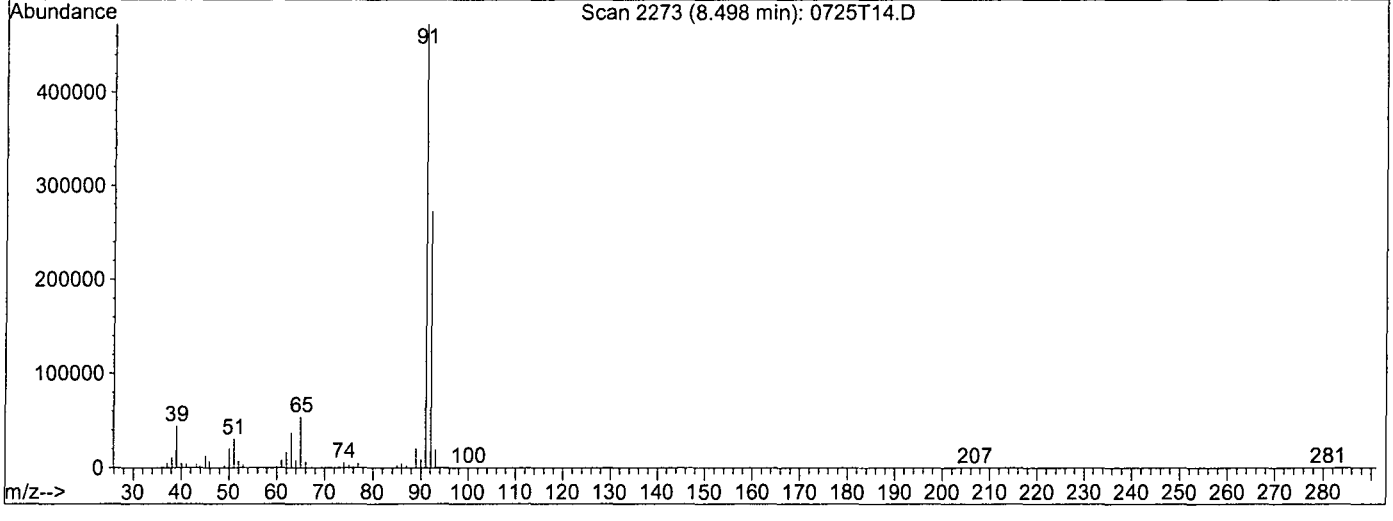
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.61#
0.00	0.00	1.76#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T14.D Vial: 13
Acq On : 25 Jul 12 15:27 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 8:22 2012 Quant Results File: temp.res

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





TIC: 0725T14.D

(2) Gasoline (TMHB)

8.50min 263.8899ppb m

response 19379947

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.53#
0.00	0.00	1.53#
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-65112 - 169441**

Batch ID: #86RHB-120719AT1

APPL Inc.
908 North Temperance Avenu
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: ARS

Printed: 07/31/12 9:50:34 AM
GC SC-Blank-REG MDLs

Method Blank

EPA 8260B VOCs + Gas Water

Blank Name/QCG: **120719W-65112 - 169441**
Batch ID: #86RHB-120719AT1

APPL Inc.
908 North Temperance Avenu
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: ARS

Printed: 07/31/12 9:50:34 AM
GC SC-Blank-REG MDLs

Data File : M:\THOR\DATA\T120719\0719T38.D Vial: 38
Acq On : 20 Jul 12 2:18 Operator: DG,RS,HW,ARS,SV
Sample : 120719A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 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					
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

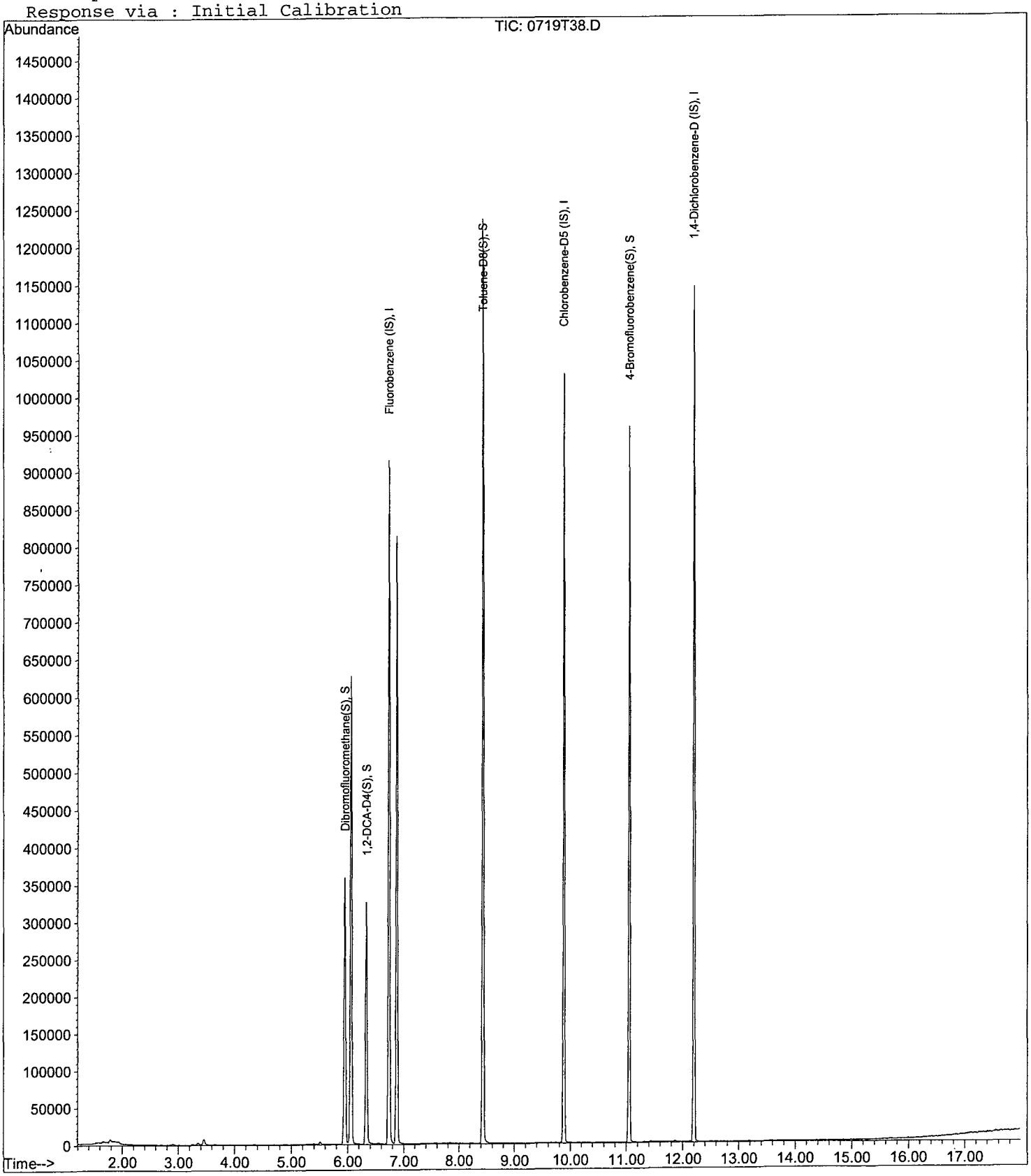
(#) = qualifier out of range (m) = manual integration

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\T120725\0725T20.D Vial: 19
Acq On : 25 Jul 12 18:14 Operator: DG,RS,HW,ARS,SV
Sample : 120725A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 8:07 2012 Quant Results File: TGAS.RES

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

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	787932	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	886149	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	982900	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10210921m	18.78182	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

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

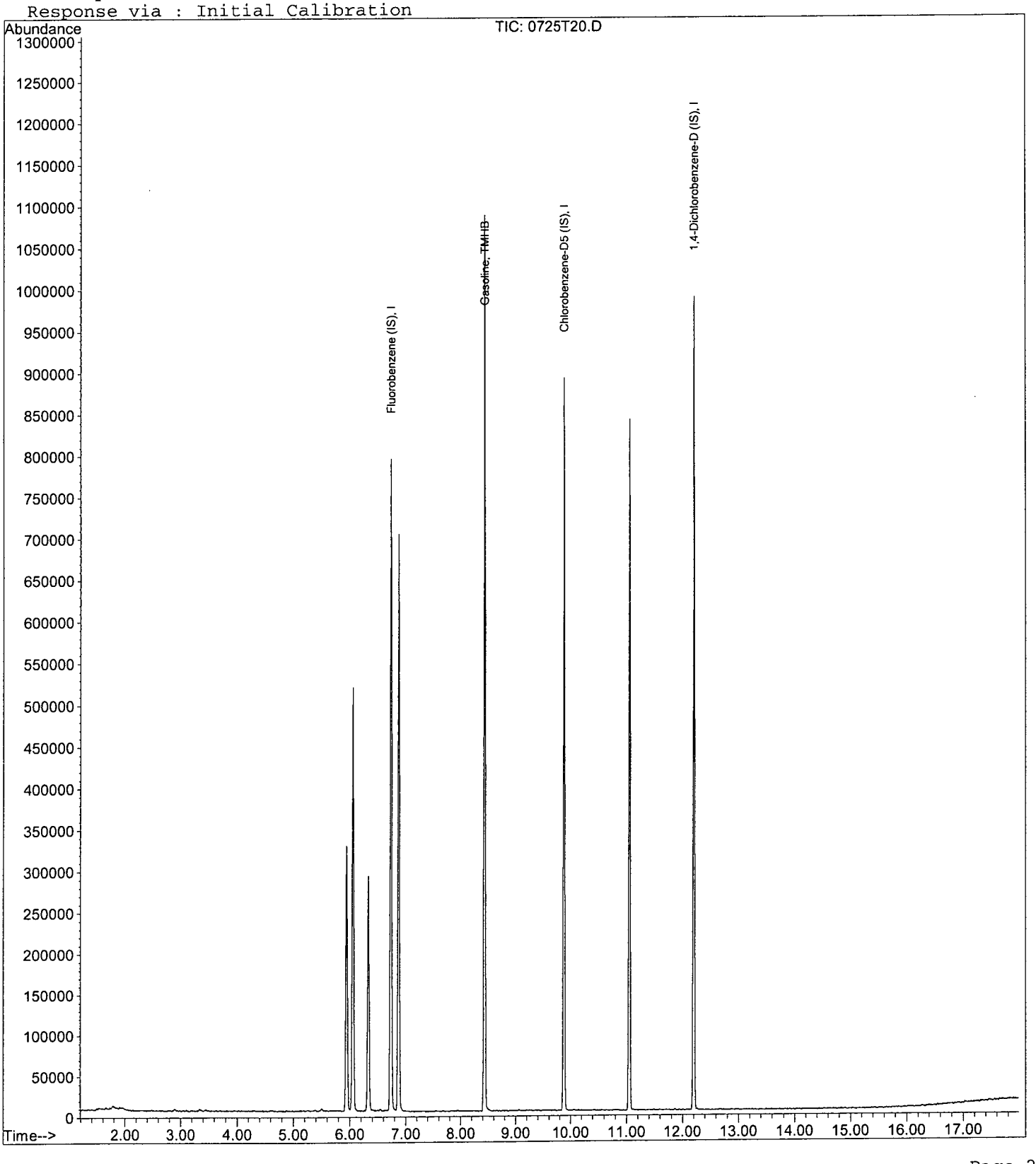
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T20.D
Acq On : 25 Jul 12 18:14
Sample : 120725A BLK-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 19
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 8:07 2012 Quant Results File: TGAS.RES

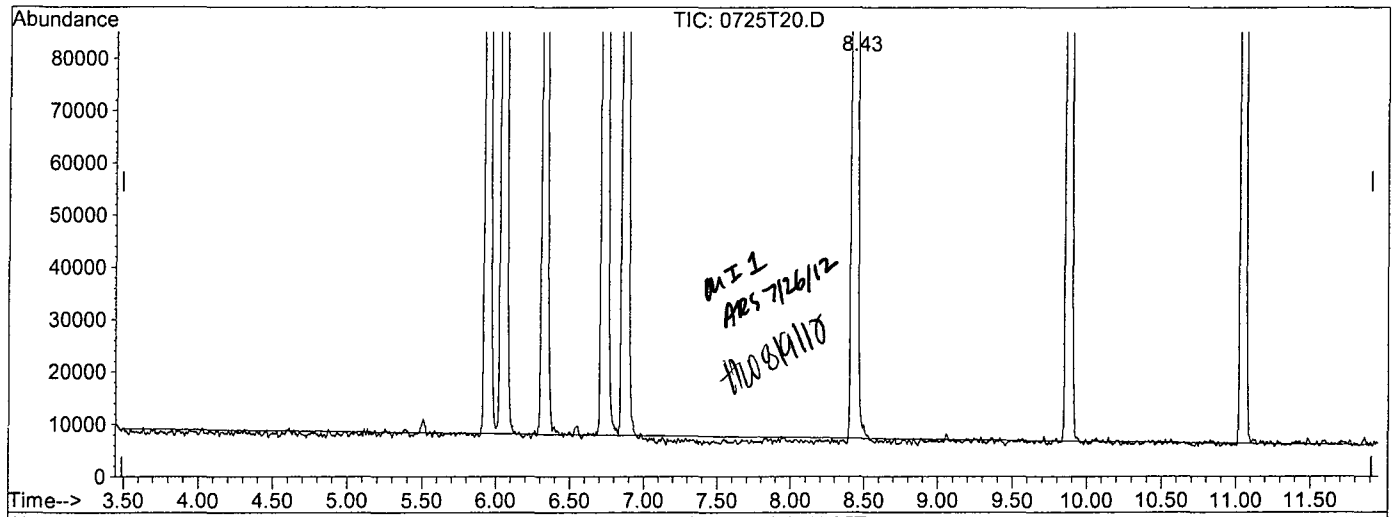
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

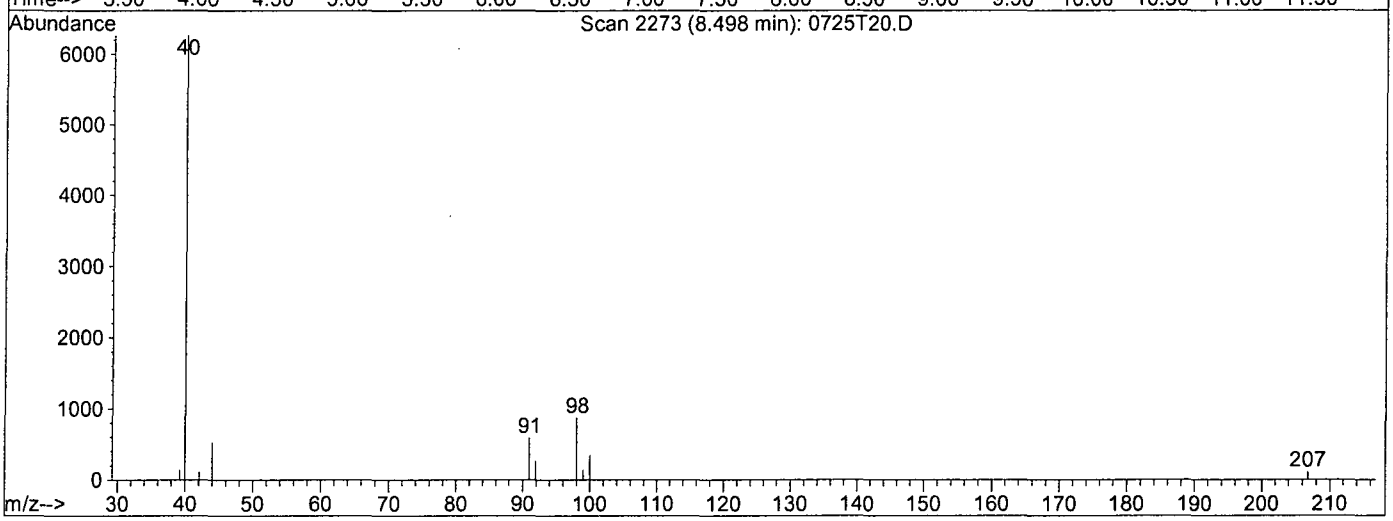


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T20.D Vial: 19
Acq On : 25 Jul 12 18:14 Operator: DG,RS,HW,ARS,SV
Sample : 120725A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 7:57 2012 Quant Results File: temp.res

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





TIC: 0725T20.D

(2) Gasoline (TMHB)

8.50min -58.7487ppb m

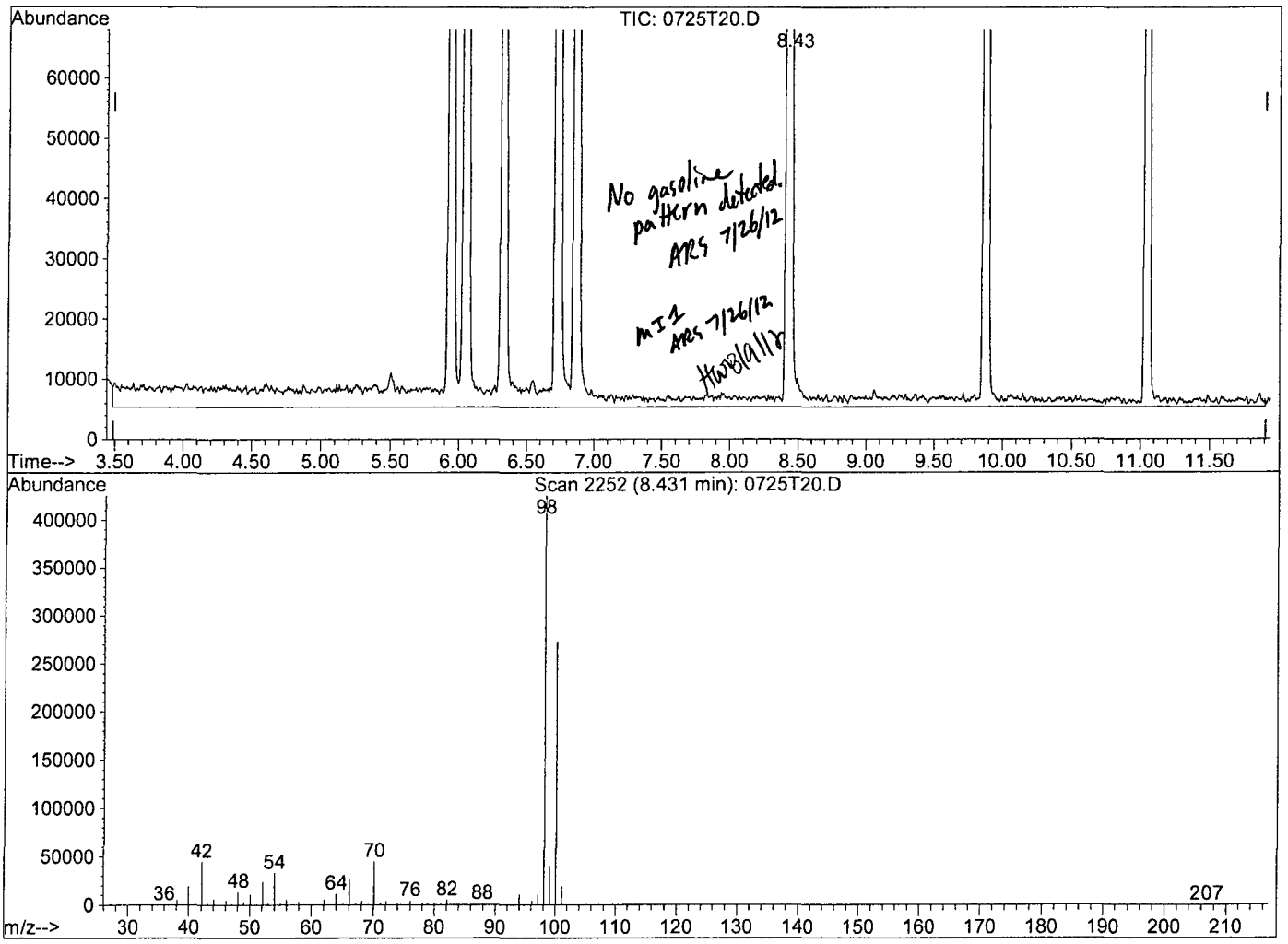
response 7548819

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.25#
0.00	0.00	3.68#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T20.D Vial: 19
Acq On : 25 Jul 12 18:14 Operator: DG,RS,HW,ARS,SV
Sample : 120725A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:07 2012 Quant Results File: temp.res

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



TIC: 0725T20.D

(2) Gasoline (TMHB)

8.43min 18.7818ppb m

response 10210921

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.92#
0.00	0.00	2.72#
0.00	0.00	0.00

Method Blank

EPA 8260B VOCS + GAS WATER

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120719W-65113 - 169517**
Batch ID: #86RHB-120719AT2

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	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: ARS

Printed: 07/31/12 1:07:19 PM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T38.D Vial: 38
Acq On : 20 Jul 12 2:18 Operator: DG,RS,HW,ARS,SV
Sample : 120719A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 15:38 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 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	913286	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	1028057	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1144195	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	11231950m	126.77689	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

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

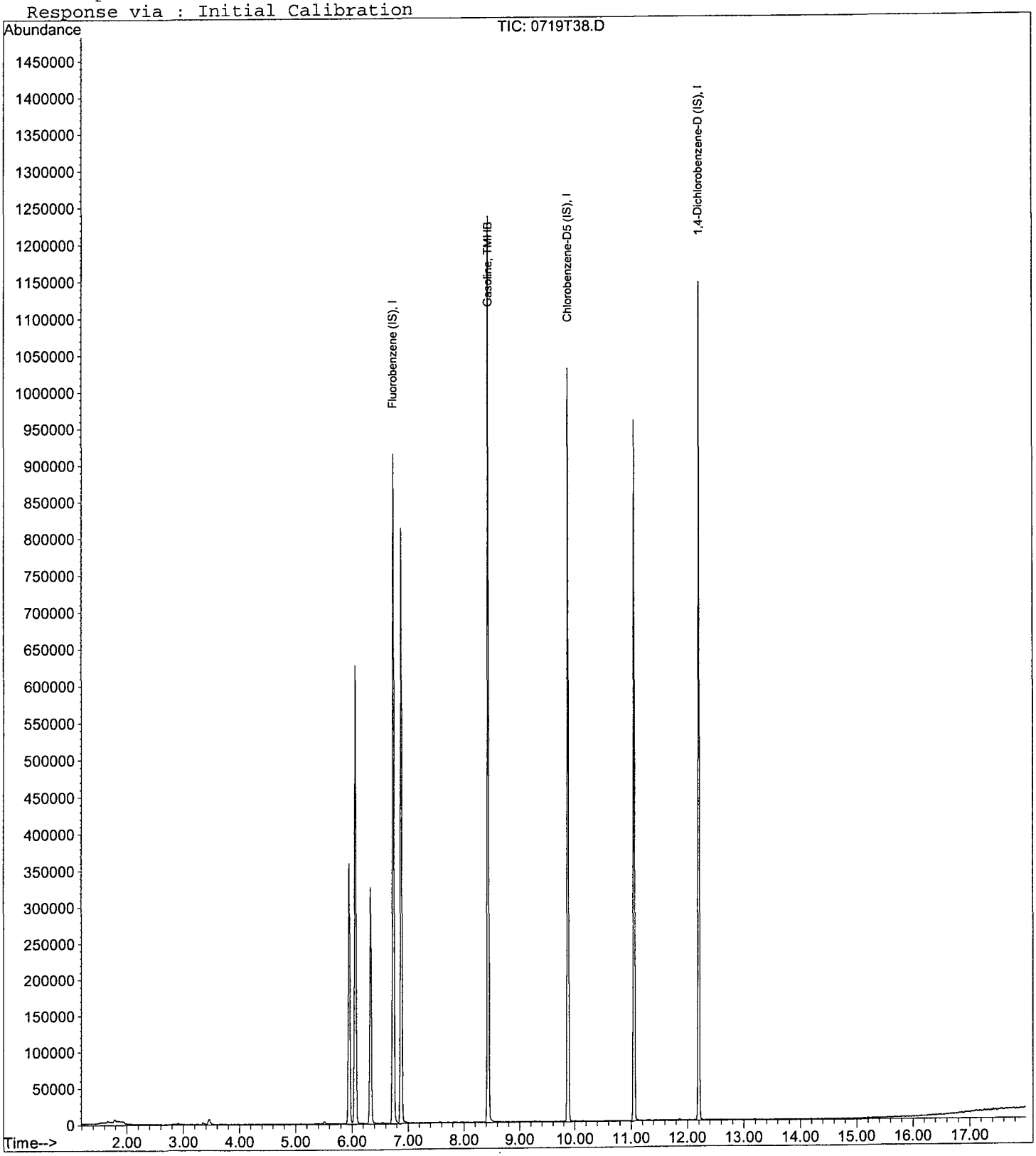
Quantitation Report

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 26 15:38 2012 Quant Results File: TGAS.RES

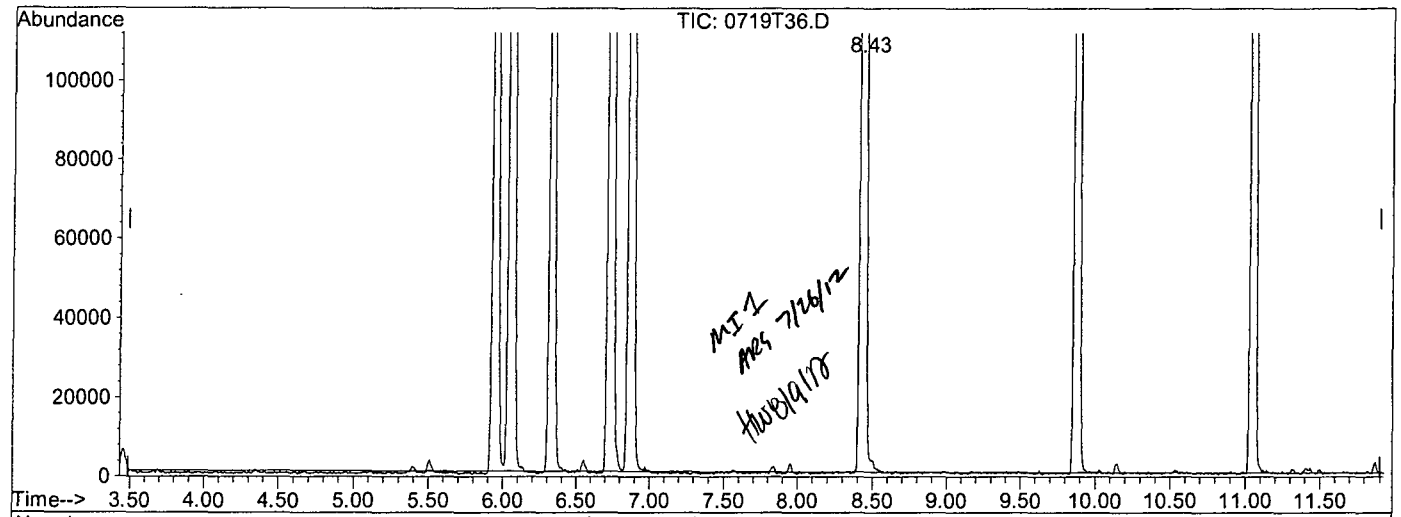
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

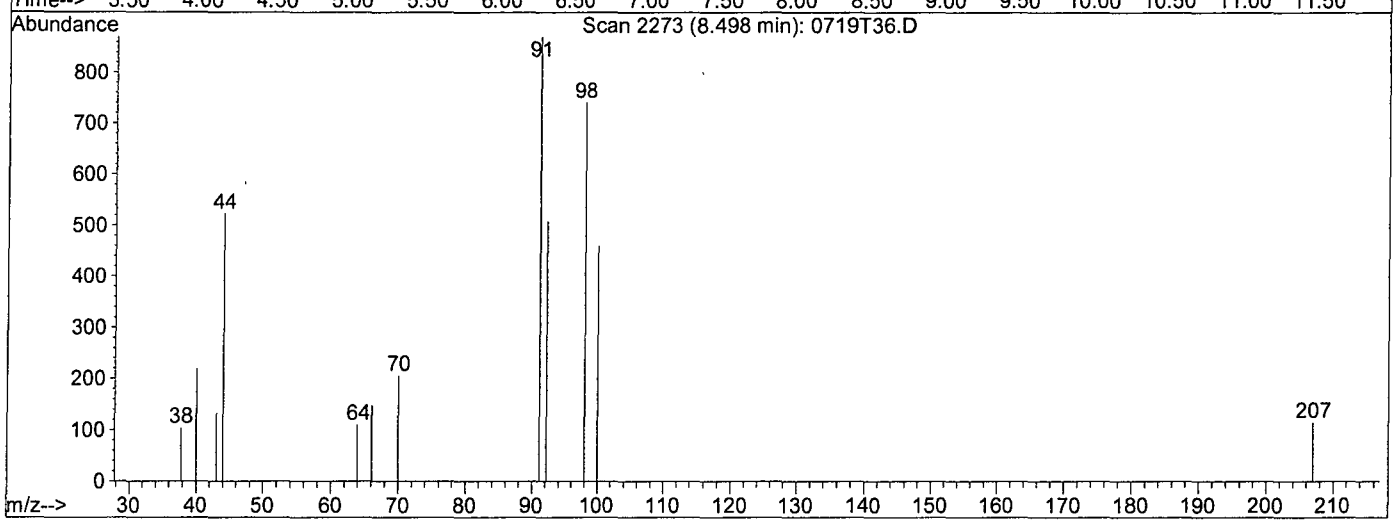


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T36.D Vial: 36
Acq On : 20 Jul 12 1:22 Operator: DG,RS,HW,ARS,SV
Sample : 120719A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 15:37 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration





TIC: 0719T36.D

(2) Gasoline (TMHB)

8.50min 63.1186ppb m

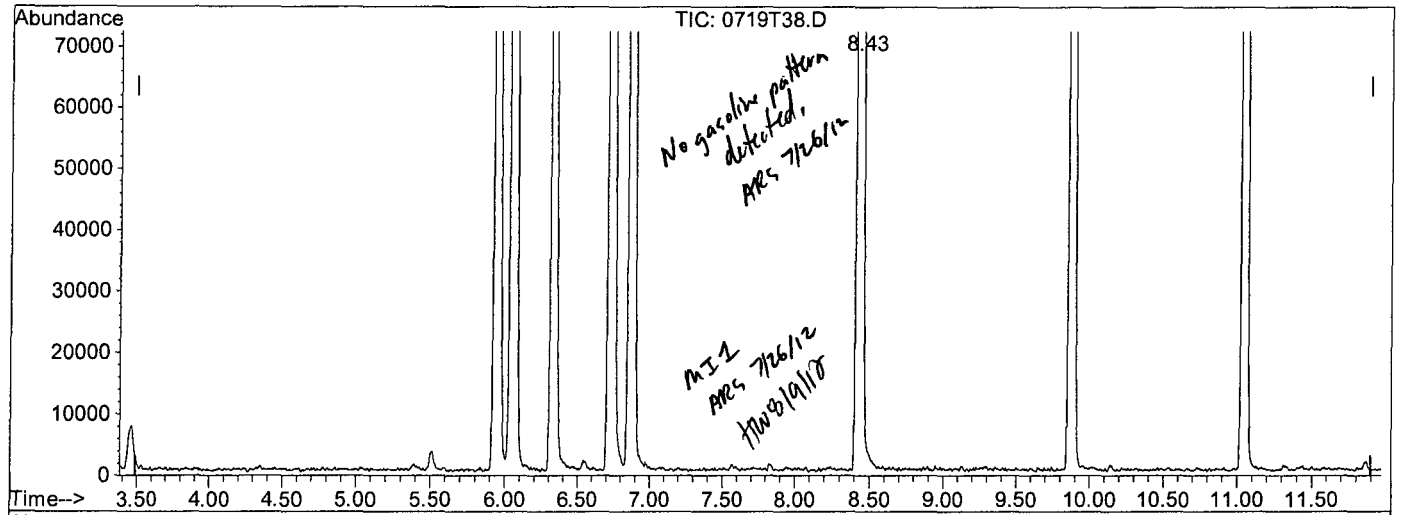
response 8713545

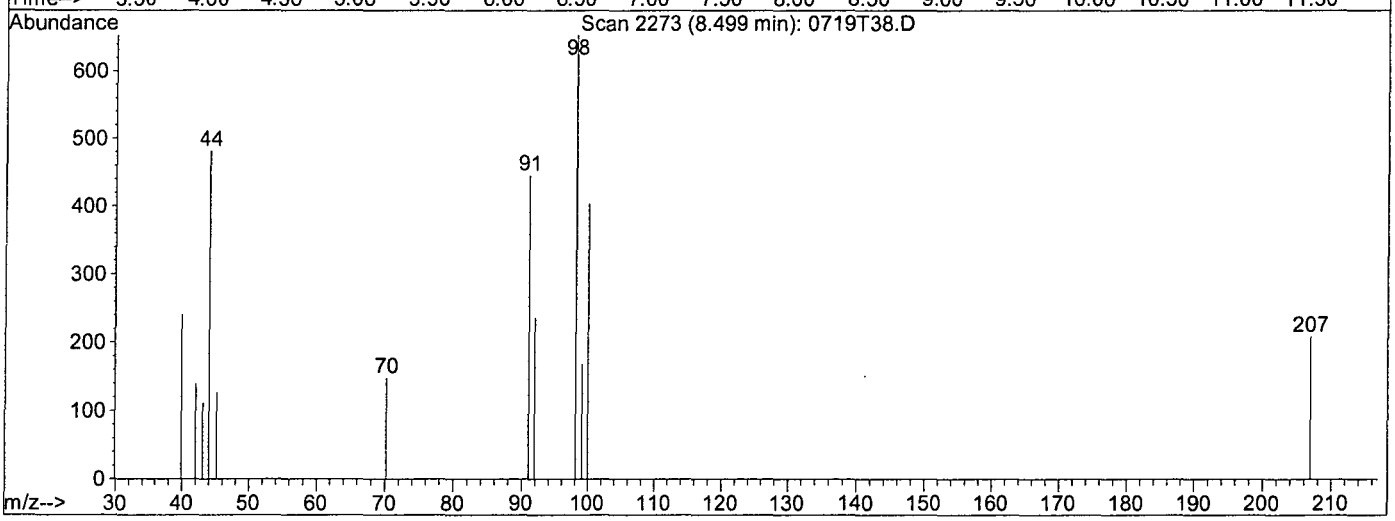
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	1.30#
0.00	1.80	3.61#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T38.D Vial: 38
Acq On : 20 Jul 12 2:18 Operator: DG,RS,HW,ARS,SV
Sample : 120719A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 15:38 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration





TIC: 0719T38.D

(2) Gasoline (TMHB)

8.43min 126.7769ppb m

response 11231950

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.98#
0.00	1.80	2.87#
0.00	0.00	0.00

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: **120719W-65112 LCS - 169441**
Batch ID: #86RHB-120719AT1

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

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

Comments: _____

Printed: 07/31/12 9:50:26 AM
APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: **120719W-65112 LCS - 169441**
Batch ID: #86RHB-120719AT1

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	290	96.7	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

Comments: _____

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

Printed: 07/31/12 9:50:26 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

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

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	459584	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	371008	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	216768	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	225058	31.29333 ppb		0.00
Spiked Amount 31.881			Recovery = 98.155%			
36) 1,2-DCA-D4(S)	6.33	65	220138	32.93626 ppb		0.00
Spiked Amount 33.647			Recovery = 97.888%			
56) Toluene-D8(S)	8.43	98	802051	36.56718 ppb		0.00
Spiked Amount 37.345			Recovery = 97.917%			
64) 4-Bromofluorobenzene(S)	11.05	95	313456	30.21914 ppb		0.00
Spiked Amount 29.515			Recovery = 102.384%			
Target Compounds						Qvalue
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) / (459584)(0.4941) (1) = 10.10522903 ✓ ARS 7/27/12

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

Quantitation Report (Not Reviewed)

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

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) Bromodichloromethane	7.68	83	89098	9.56942 ppb		98
45) Methyl Cyclohexane	7.36	83	38326	9.57410 ppb		95
46) Dibromomethane	7.49	93	36747	10.03731 ppb		99
47) 2-Chloroethyl vinyl ether	7.99	106	1154	8.86120 ppb	#	100
48) MIBK (methyl isobutyl ket	8.33	43	32328	10.17680 ppb		97
49) 1-Bromo-2-chloroethane	7.99	63	45864	9.79426 ppb		99
50) Cis-1,3-Dichloropropene	8.15	75	86842	9.42535 ppb		98
51) Toluene	8.50	91	246468	10.12718 ppb		98
52) Trans-1,3-Dichloropropene	8.72	75	75443	9.28657 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

ARS 7/27/12

(#) = qualifier out of range (m) = manual integration
0719T31.D TALLW.M Fri Jul 20 10:53:42 2012 Page 2

Quantitation Report

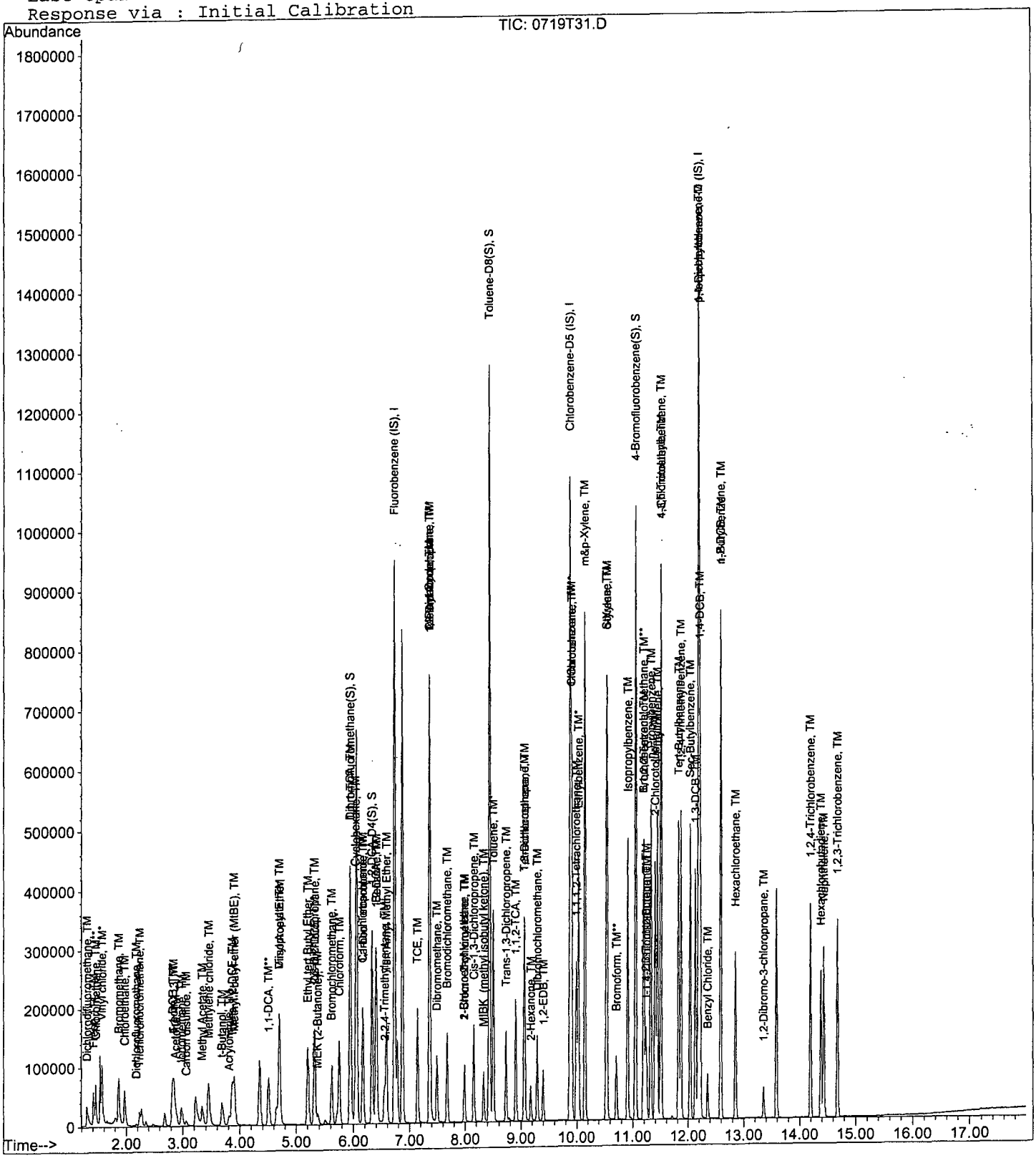
Data File : M:\THOR\DATA\T120719\0719T31.D
Acq On : 19 Jul 12 23:03
Sample : 120719A LCS-1WT (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 31
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 10:45 2012

Quant Results File: TALLW.RES

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



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 8:23 2012 Quant Results File: TGAS.RES

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

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	788179	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	879850	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1024196	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	19535277m	290.16403	ppb	100

(#) = qualifier out of range (m) = manual integration
0725T15.D TGAS.M Thu Jul 26 08:28:33 2012 Page 1

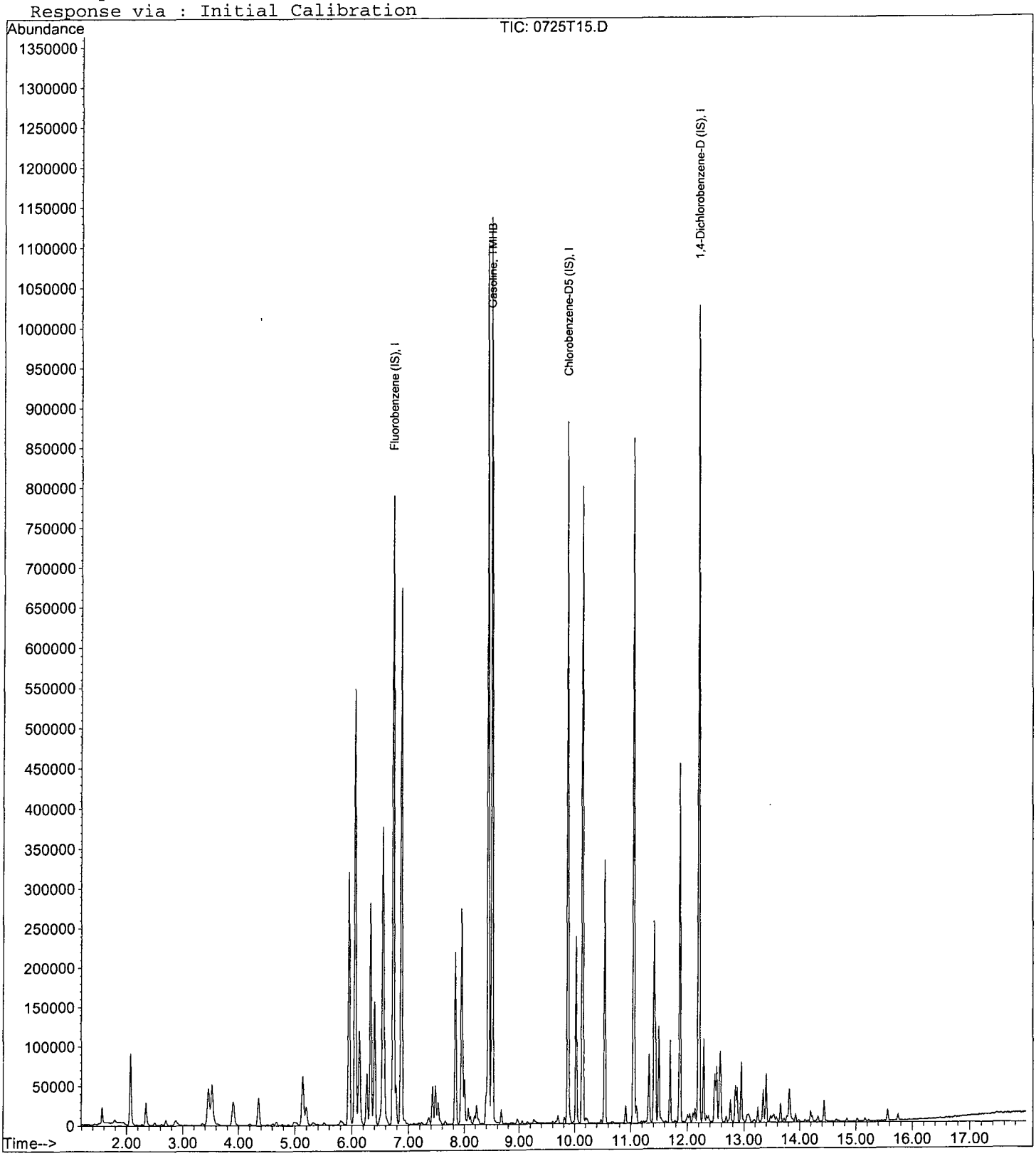
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D
Acq On : 25 Jul 12 15:55
Sample : LCS gas 300ug/L (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

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

Quant Time: Jul 26 8:23 2012 Quant Results File: TGAS.RES

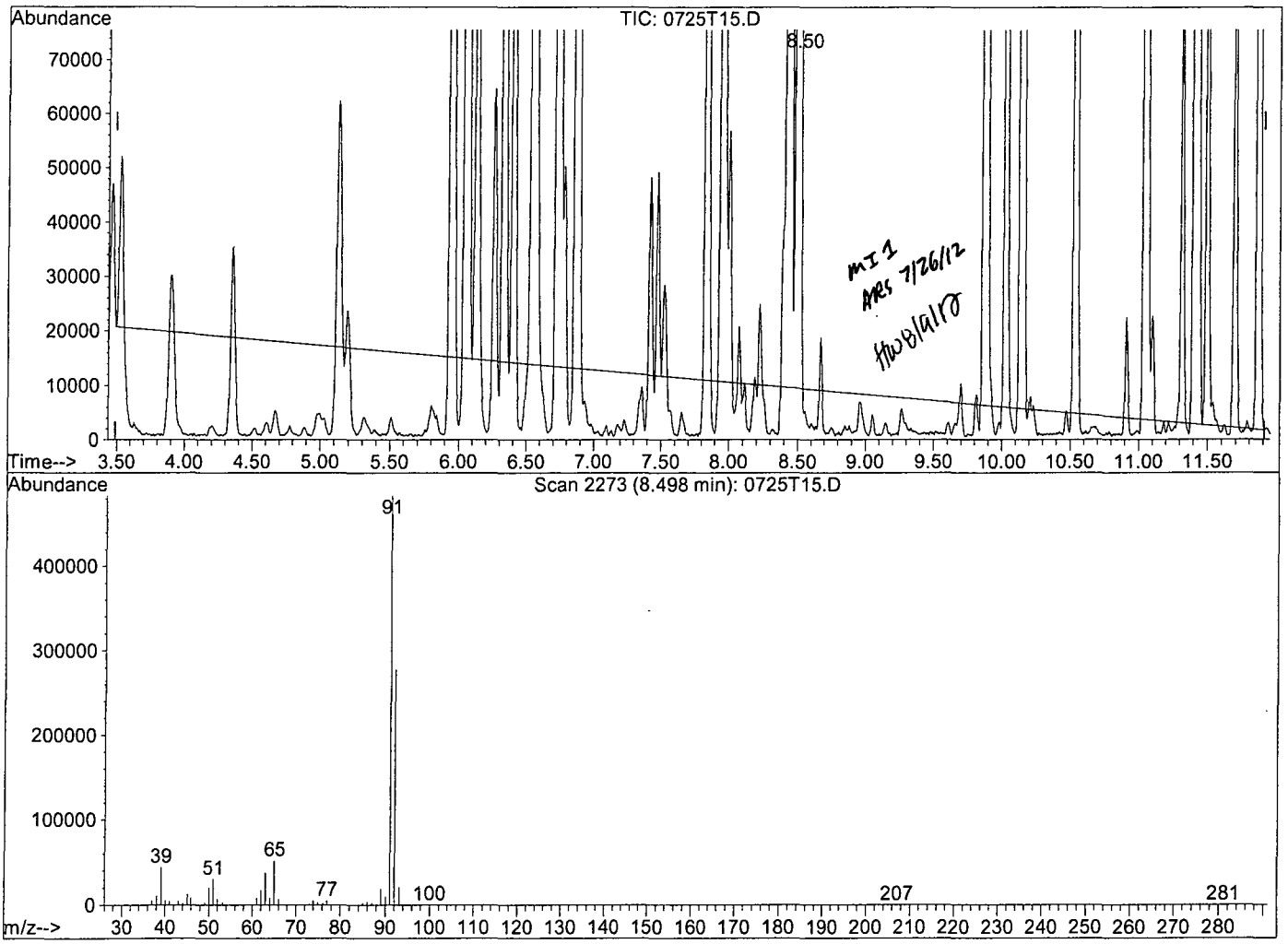
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:23 2012 Quant Results File: temp.res

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



TIC: 0725T15.D

(2) Gasoline (TMHB)

8.50min 216.4348ppb m

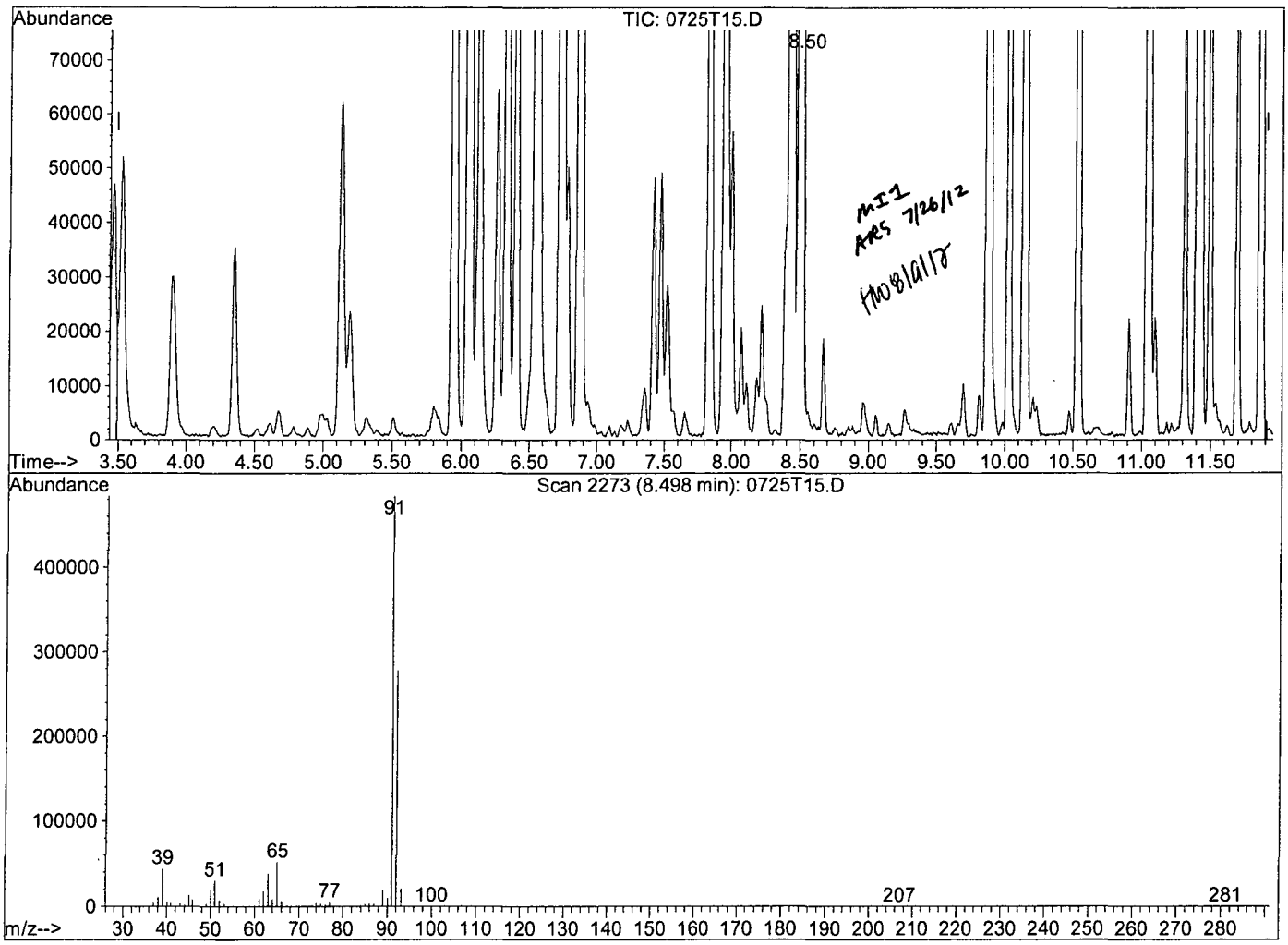
response 17002901

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:23 2012 Quant Results File: temp.res

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



TIC: 0725T15.D

(2) Gasoline (TMHB)

8.50min 290.1640ppb m

response 19535277

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.51#
0.00	0.00	1.47#
0.00	0.00	0.00

Laboratory Control Spike Recovery
EPA 8260B VOCS + GAS WATER

APPL ID: **120719W-65113 LCS - 169517**
Batch ID: #86RHB-120719AT2

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	389	130 #	75-125
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:

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

Printed: 07/31/12 1:07:00 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120719\0719T35.D Vial: 35
Acq On : 20 Jul 12 00:54 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 24 13:37 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 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	943495	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	1050866	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1213947	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	22281600m	389.43424	ppb	100

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

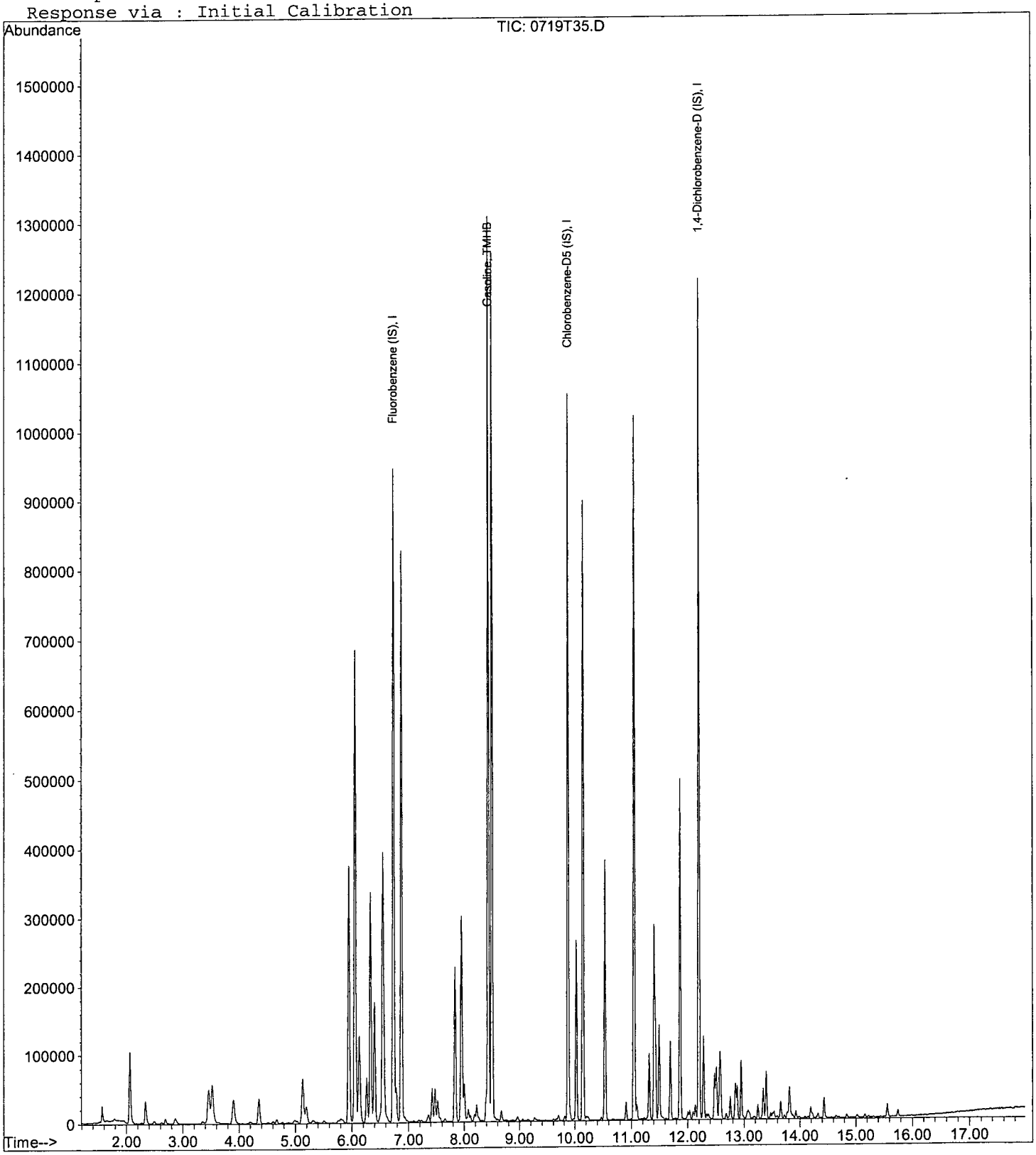
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T35.D
Acq On : 20 Jul 12 00:54
Sample : LCS gas 300ug/L
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 35
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 24 13:37 2012 Quant Results File: TGAS.RES

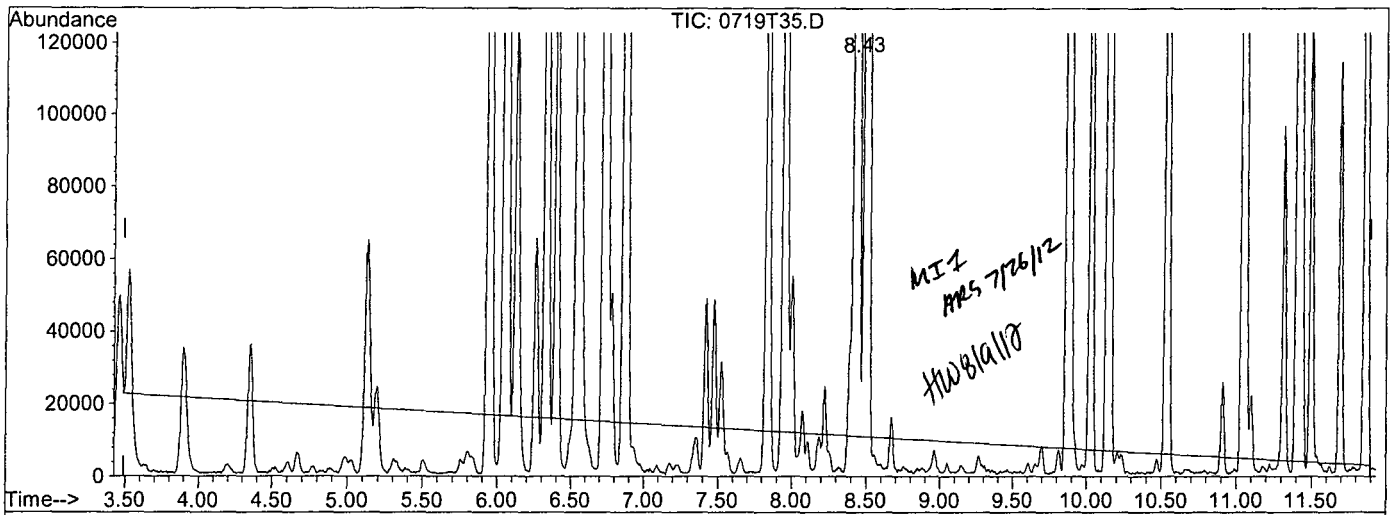
Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Initial Calibration

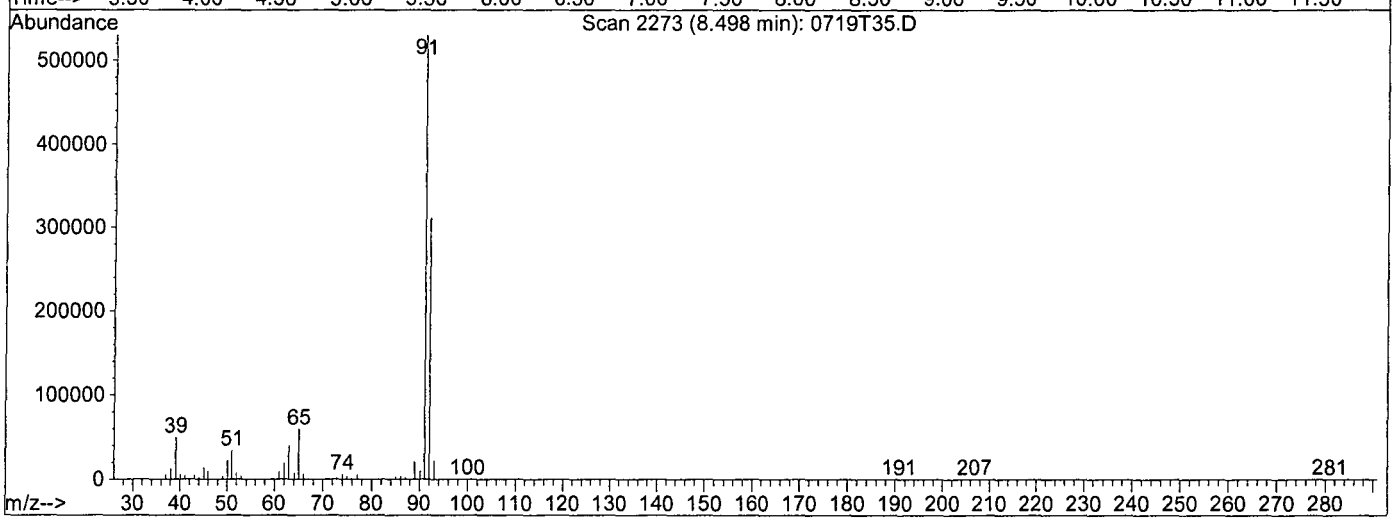


Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T35.D Vial: 35
Acq On : 20 Jul 12 00:54 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:33 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration





TIC: 0719T35.D

(2) Gasoline (TMHB)

8.50min 313.6512ppb m

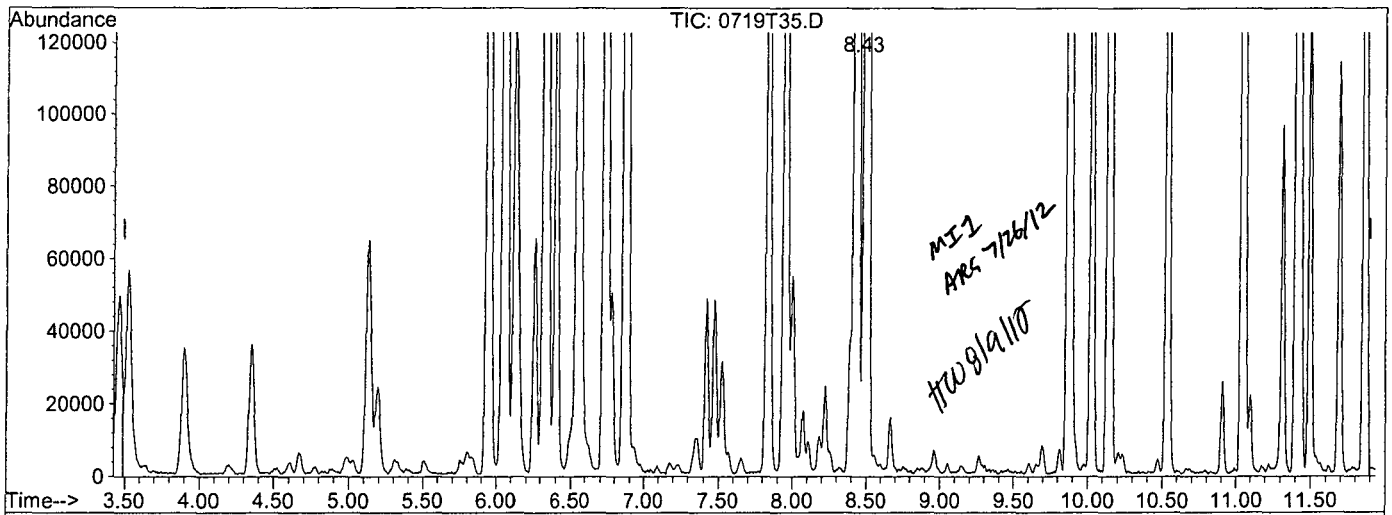
response 19200699

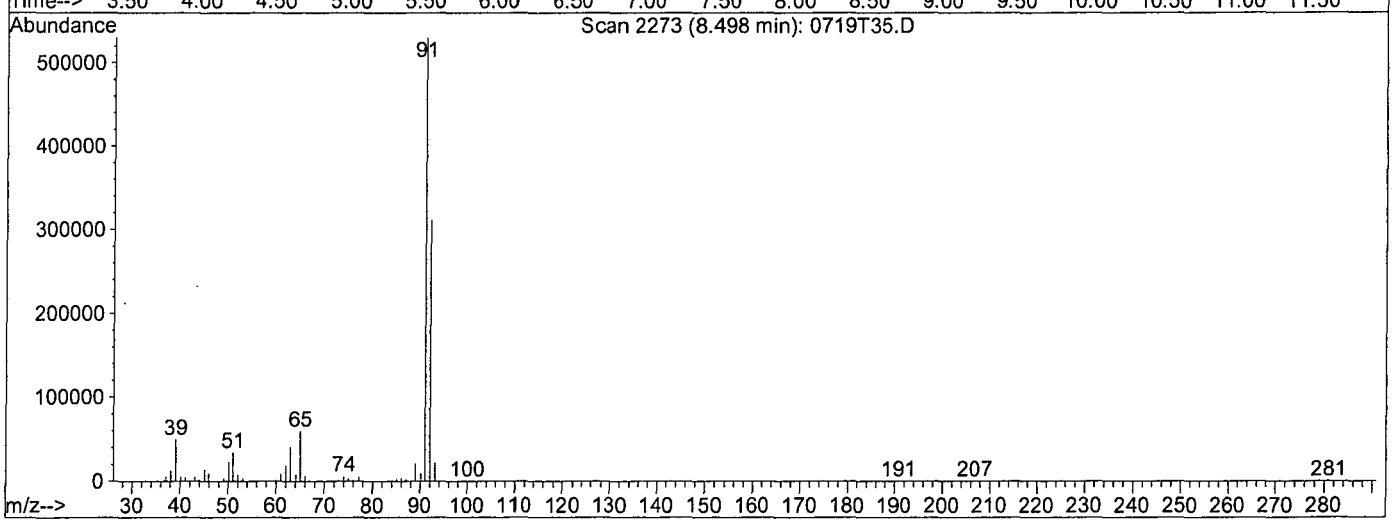
Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.62#
0.00	1.80	1.77#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T35.D Vial: 35
Acq On : 20 Jul 12 00:54 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 24 13:37 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Tue Jul 24 13:31:25 2012
Response via : Single Level Calibration





TIC: 0719T35.D

(2) Gasoline (TMHB)

8.43min 389.4342ppb m

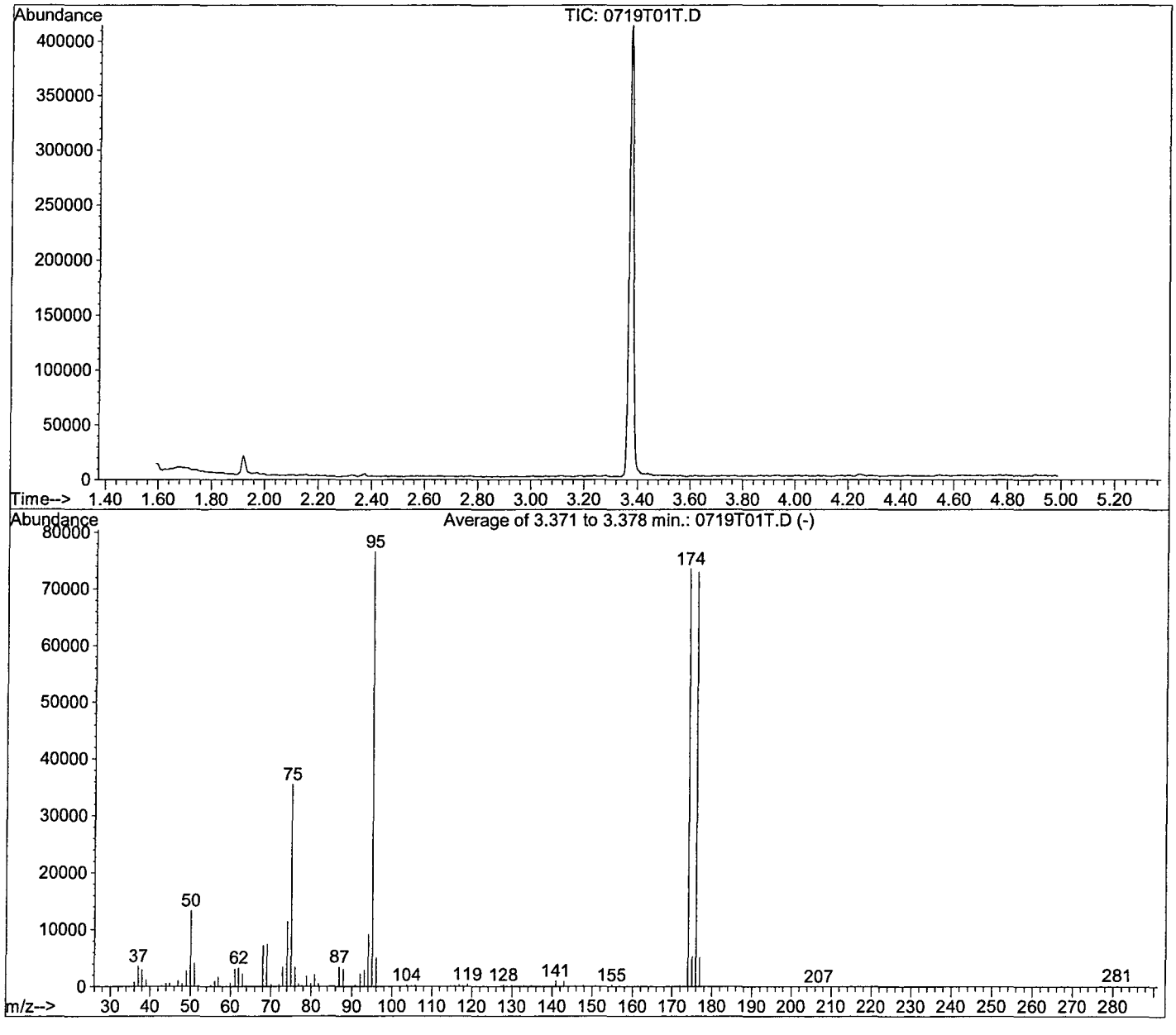
response 22281600

Ion	Exp%	Act%
TIC	100	100
0.00	0.60	0.53#
0.00	1.80	1.52#
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



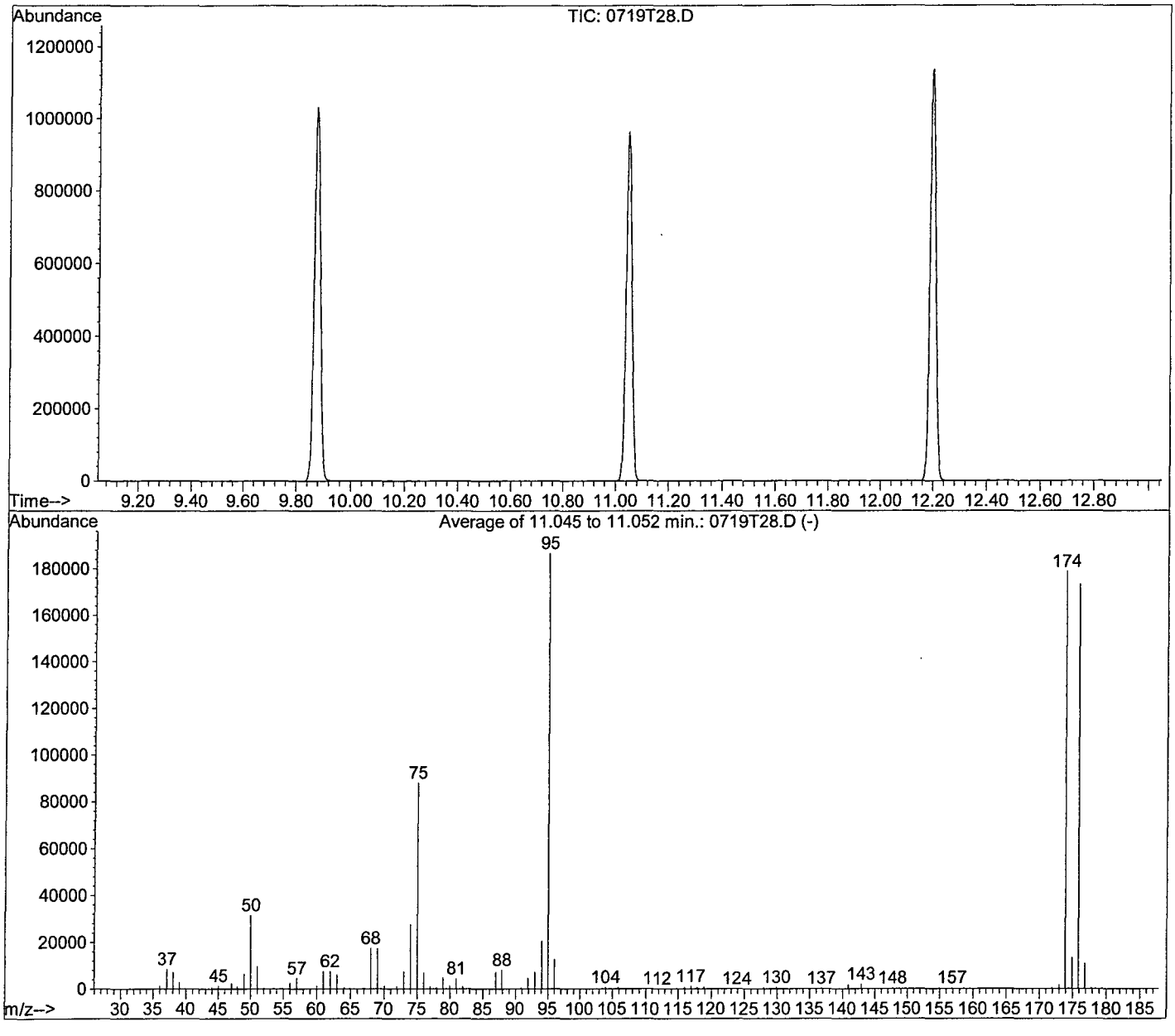
AutoFind: Scans 554, 555, 556; Background Corrected with Scan 544

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



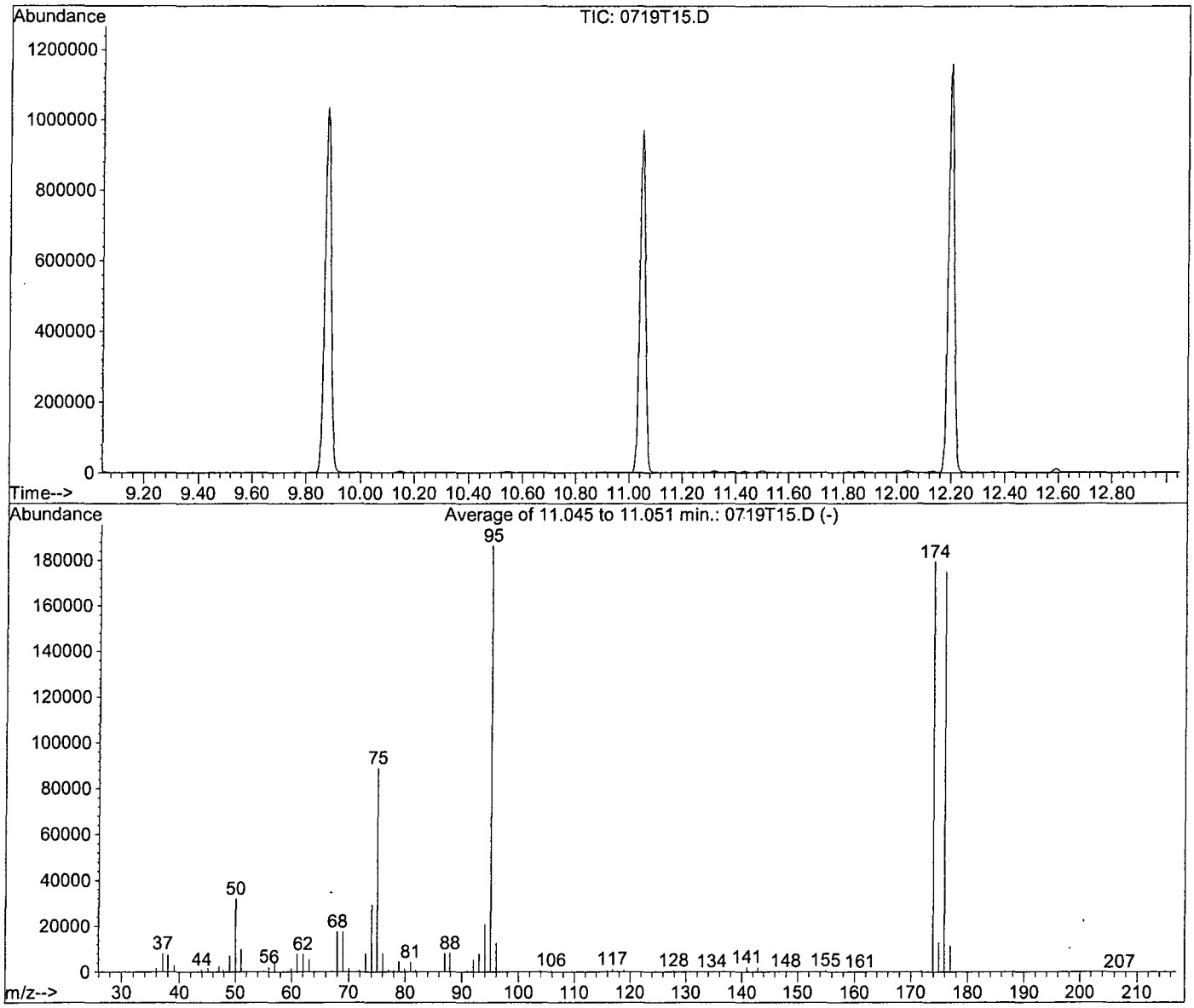
AutoFind: Scans 3065, 3066, 3067; Background Corrected with Scan 3051

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

Data File : M:\THOR\DATA\T120719\0719T15.D
Acq On : 19 Jul 12 15:39
Sample : 5ng-BFB STD 07-16-12B
Misc : 2uL

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

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 11.045 to 11.051 min.

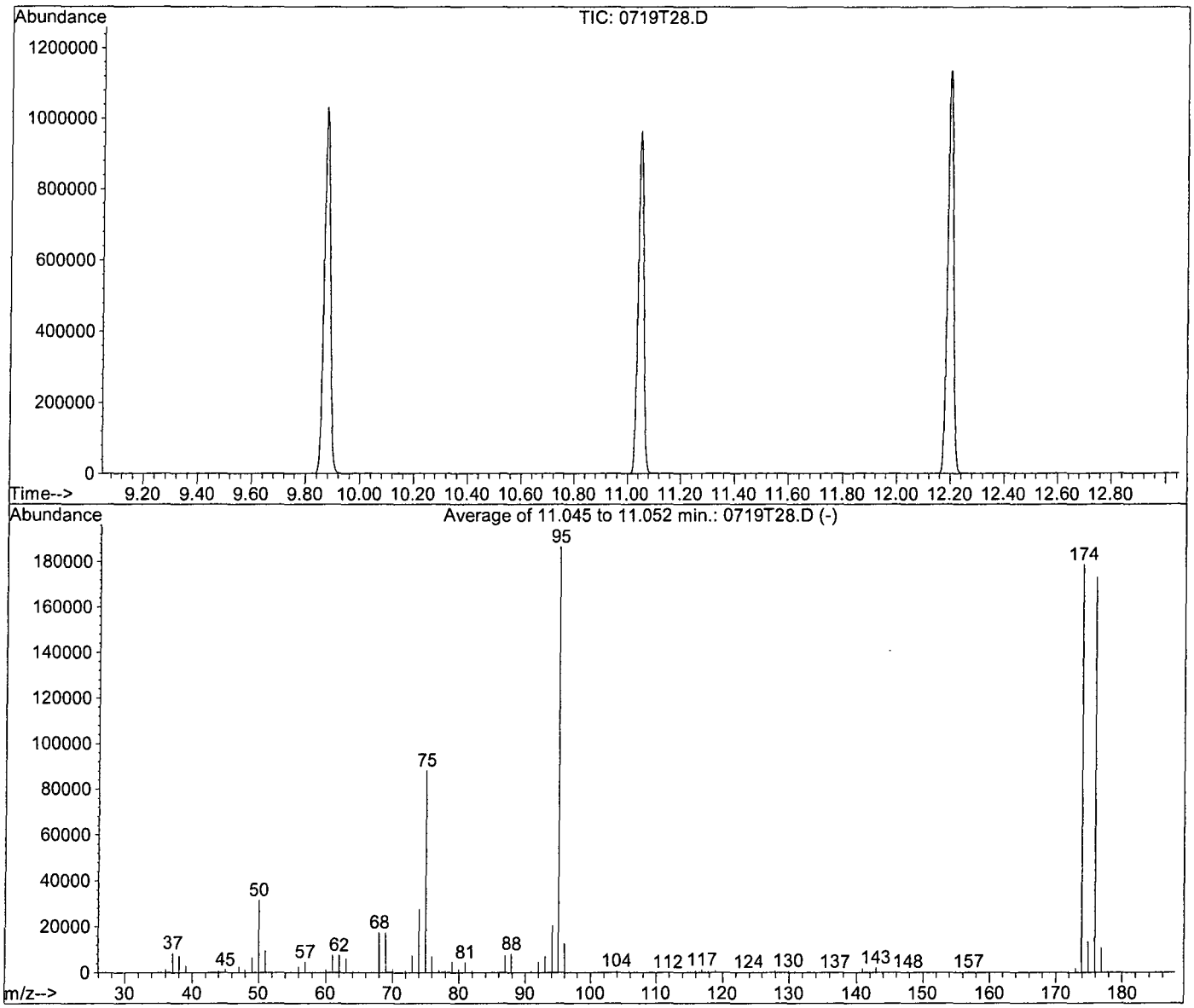
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.2	32016	PASS
75	95	30	60	47.7	88957	PASS
95	95	100	100	100.0	186347	PASS
96	95	5	9	6.8	12727	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	96.2	179243	PASS
175	174	5	9	7.2	12837	PASS
176	174	95	101	97.5	174763	PASS
177	176	5	9	6.6	11511	PASS

BFB

Data File : M:\THOR\DATA\T120719\0719T28.D
Acq On : 19 Jul 12 21:40
Sample : 5ng- BFB Std 07-16-12B
Misc : 2uL

Vial: 28
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T120719\TGAS.M (RTE Integrator)
Title : METHOD 8260B



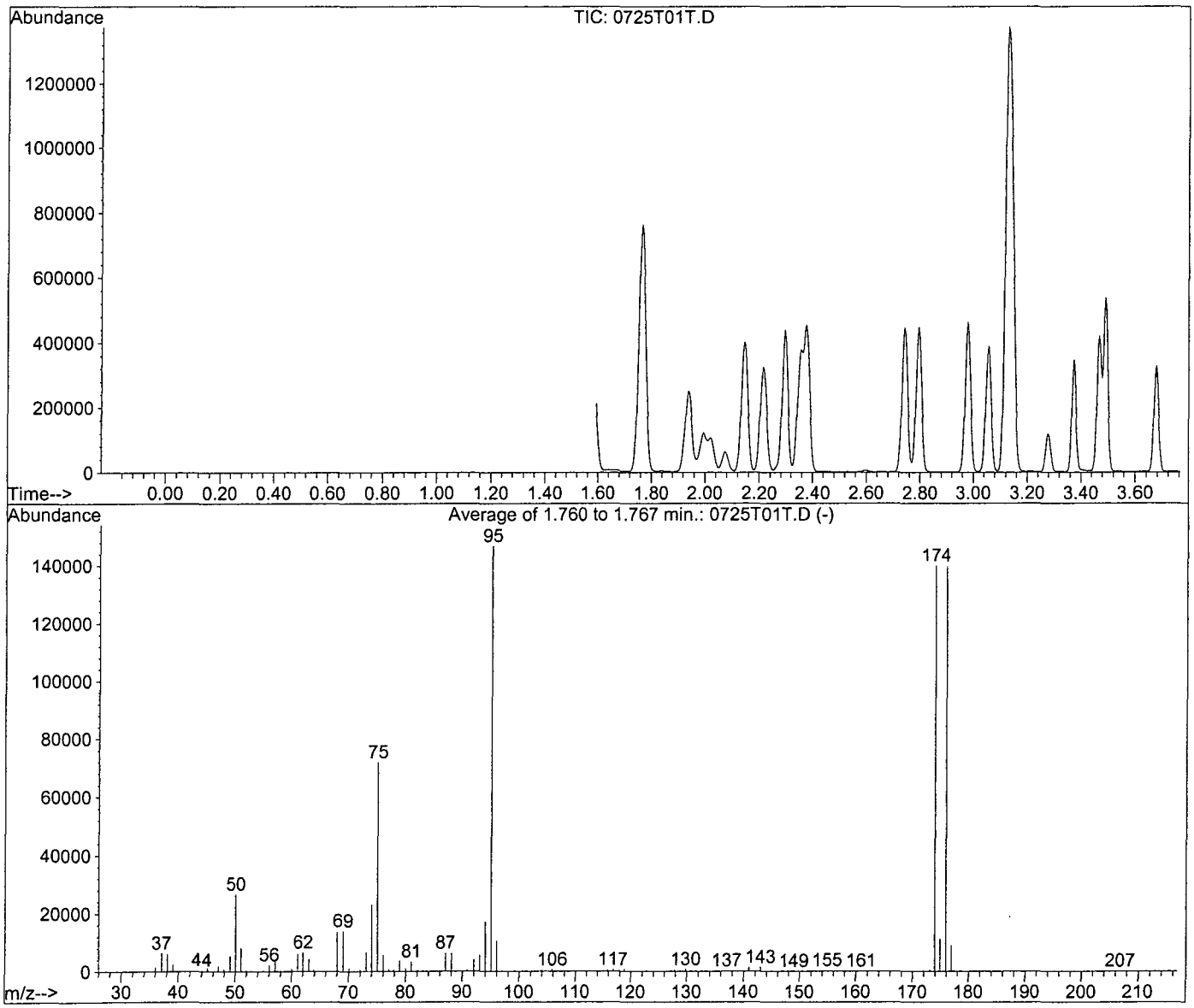
Spectrum Information: Average of 11.045 to 11.052 min.

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

Data File : M:\THOR\DATA\T120725\0725T01T.D
Acq On : 25 Jul 12 9:32
Sample : 5ng- BFB STD 07-16-12B
Misc : 2ul

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

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 1.760 to 1.767 min.

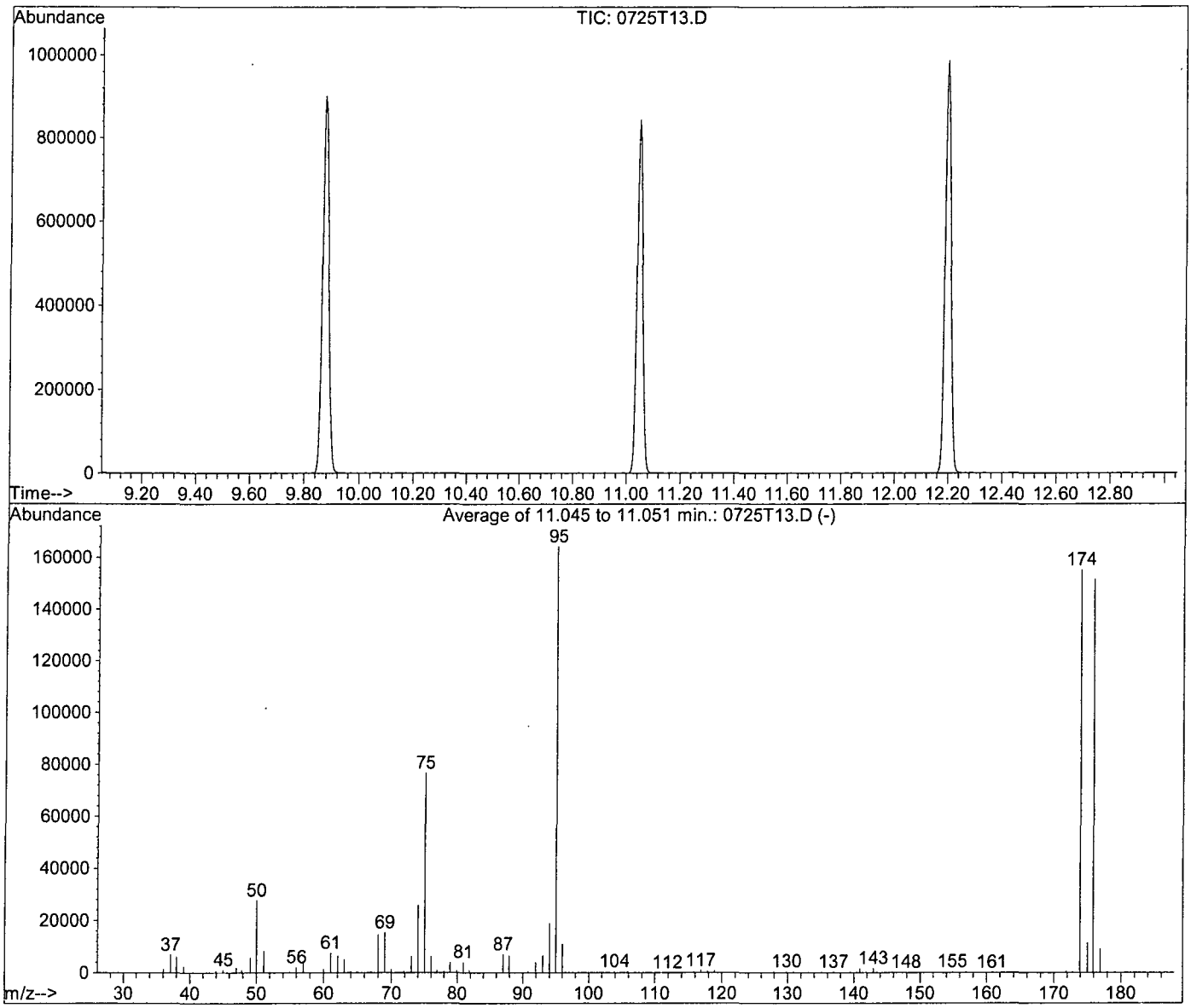
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.1	26589	PASS
75	95	30	60	49.1	72077	PASS
95	95	100	100	100.0	146837	PASS
96	95	5	9	7.2	10518	PASS
173	174	0.00	2	0.4	583	PASS
174	95	50	100	95.3	139968	PASS
175	174	5	9	8.0	11175	PASS
176	174	95	101	99.8	139627	PASS
177	176	5	9	6.3	8859	PASS

0725T01T.D TGAS.M Wed Jul 25 09:41:49 2012

Data File : M:\THOR\DATA\T120725\0725T13.D
Acq On : 25 Jul 12 14:59
Sample : 5ng- BFB STD 07-16-12B
Misc : 2uL

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

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 11.045 to 11.051 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	27811	PASS
75	95	30	60	46.8	76795	PASS
95	95	100	100	100.0	164224	PASS
96	95	5	9	6.7	11042	PASS
173	174	0.00	2	0.3	404	PASS
174	95	50	100	94.5	155157	PASS
175	174	5	9	7.4	11517	PASS
176	174	95	101	97.6	151509	PASS
177	176	5	9	6.1	9224	PASS

GC/MS STANDARD PREPARATION BOOK # _____ PAGE # _____

6/08/12 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA										
	Expiration Date:		06/09/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12
06-08-12A	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
06-08-12B	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
06-08-12C	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
06-08-12D	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
06-08-12E	50	n/a	n/a	5	5	5	n/a	5	n/a	5
06-08-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	10
06-08-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	20

6/11/12 RS

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

6/11/12 RS

06-11-12A							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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 Cur	
	Expiratio
Date	Conc.
Code	µg/L
06-11-12I	0.3
06-11-12J	0.5
06-11-12K	1
06-11-12L	2
06-11-12M	5
06-11-12N	10
06-11-12O	20
06-11-12P	40
06-11-12Q	100

6/11/12 RS

6/11/12 RS. D-

Method 8260 Internal Standard Solution, 2,000 mg/L, 1 ml
120302-03
Lot# 166255 Storage ≤ -10 Degrees C Expiry 11/18/12
Solv: P/T Methanol
solutions®
R&D only, not human consump. Made in the USA

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
020132-02
Lot # 169170 Storage ≤ 6 Degrees C Expiry 2/13/14
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Fluorobenzene
Lot #: 169170 - 28869
Rec: 5/25/11 MFR exp. 02/13/14

RS

Volatile Standard Cu	
	Expiratio
Date	Conc.
Code	µg/L
06-11-12R	2
06-11-12S	5
06-11-12T	10
06-11-12U	20
06-11-12V	50
06-11-12W	100
06-11-12X	200

6/11/12 RS

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

6/11/12 RS

F -

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

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

Lot# 185763 | Storage 120002-01 < 10 Degrees C | Expiry 2/19/15

Solv: P/T Methanol

Method 8260B Surrogate

Lot #: 185763 - 30467

Rec: 2/20/12 MFR exp. 02/19/15

RS

6/11/12 RS

Thor							
06-11-12G							
50ug/ml 8260 Internal Standard			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120302-03	Internal Standard Mix	2000	166255-29275	06-11-12D	12/13/12	375
O2SI	020132-02	Fluorobenzene Standard	2000	169170-28869	06-11-12E	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14250
06-11-12H							
50ug/ml 8260B Surrogate-Thor			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	8260B Surr	Surrogate Standards	2000	178653-30467	06-11-12F	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14625

	ul										
/12	20										
/12	1980										

6/11/12 RS

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

	Expiration Date:		06/12/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp 06-09-12	Exp:06-09-12	Exp:06-09-12	Exp 06-09-12	Exp 06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12
06-11-12I	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
06-11-12J	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
06-11-12K	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
06-11-12L	2	20	40	n/a	n/a	n/a	20	n/a	n/a	20
06-11-12M	5	n/a	n/a	5	5	10	n/a	5	5	n/a
06-11-12N	10	n/a	n/a	10	10	25	n/a	10	10	n/a
06-11-12O	20	n/a	n/a	20	20	40	n/a	20	20	n/a
06-11-12P	40	n/a	n/a	40	40	80	n/a	40	40	n/a
06-11-12Q	100	n/a	n/a	100	100	100	n/a	100	100	n/a

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

6/12/12 RM

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

	Expiration Date:		06/12/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp 06-09-12	Exp:06-09-12	Exp 06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp 06-09-12
06-11-12R	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
06-11-12S	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
06-11-12T	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
06-11-12U	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
06-11-12V	50	n/a	n/a	5	5	5	n/a	5	n/a	5
06-11-12W	100	n/a	n/a	10	10	10	n/a	10	n/a	10
06-11-12X	200	n/a	n/a	20	20	20	n/a	20	n/a	20

250µg/mL TBA	Final Vol
06-02-12AE	w/P&T H2O
Exp:06-09-12	mL
1	5
2	5
3	5
4	5
5	5
6	5
7	5

GC/MS PREPARATION BOOK # ____ PAGE # ____

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

Expiration Date:		07/12/12								
	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Conc.	07-05-12I	07-05-12M	07-05-12E	07-05-12G	07-05-12L	07-05-12J	07-05-12F	07-05-12H	07-05-12K
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
2	2	n/a	n/a	n/a	n/a	2	n/a	2	n/a
5	5	n/a	n/a	n/a	n/a	5	n/a	5	n/a
10	10	n/a	n/a	n/a	n/a	10	n/a	10	n/a
20	20	n/a	n/a	n/a	n/a	20	n/a	20	n/a
n/a	n/a	5	5	5	n/a	5	n/a	n/a	5
n/a	n/a	10	10	10	n/a	10	n/a	n/a	10

250µg/mL TBA	Final Vol
07-05-12N	w/P&T H2O
Exp:07-12-12	mL
1	5
2	5
3	5
4	5
5	5
6	5

CHICO

07-12-12A

50ug/ml 524 Internal Standard w/ Surrogate

			Conc.		Date	Exp.	
			ug/ml	Lot #	Code	Date	uL
02SI	122450-02	524 Fortification Sol	1000	176776-29295	06-07-12A	10/10/12	200
J&T Baker		Purge & Trap MeOH		K14E06-00643	07/09/12	12/22/13	1800

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

Expiration Date:		07/13/12						
		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
Date	Conc.	07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N	w/P&T H2O
Code	µg/L	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	mL
07-12-12B	0.2	2	2	n/a	n/a	n/a	2	50
07-12-12C	0.5	5	5	n/a	n/a	n/a	5	50
07-12-12D	1	10	10	n/a	n/a	n/a	10	50
07-12-12E	2	20	20	n/a	n/a	n/a	15	50
07-12-12F	5	n/a	n/a	5	5	5	20	50
07-12-12G	10	n/a	n/a	10	10	10	25	50
07-12-12H	20	n/a	n/a	20	20	20	30	50
07-12-12I	40	n/a	n/a	40	40	40	35	50
07-02-12H	100	n/a	n/a	100	100	100	40	50

4-Bromofluorobenzene
Solution, 2,500 mg/L, 1 ml
020135-03
Lot # 163173 Storage ≤ -10 Degrees Expiry 8/24/13
Solv: P/T Methanol

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

07-16-12B							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12C							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12D							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12E							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980

7/18/12 RS

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

	Expiration Date:		07/18/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #3
Date	Conc.	07-05-12I	07-05-12M	07-05-12E	07-05-12G	07-05-12L	07-05-12J	07-05-12F	07-05-12H	07-05-12K
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	5
07-17-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	10
07-17-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	20

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

250µg/mL TBA:	Final Vol:
07-05-12N	WP&TA120
Exp:07-12-12	5mL
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/T Methanol

R&D only, not human use/comp. Made in the USA

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/T Methanol

R&D only, not human use/comp. Made in the USA

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/T Methanol

R&D only, not human use/comp. Made in the USA

Benzyl Chloride

Lot #: 176701 - 31019

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

RS

9/18/12 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/T Methanol

R&D only, not human use/comp. Made in the USA

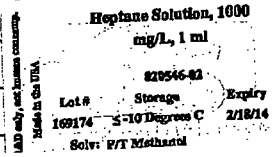
n-Hexane Solution

Lot #: 176773 - 31024

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

RS

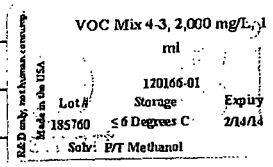
E-



Heptane Solution
Lot #: 169174 - 31039
Rec: 6/19/12 MFR exp. 02/18/14

RS

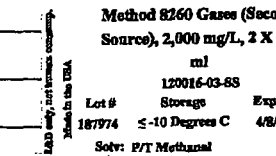
F-



VOC Mix 4-3, 2000mg/L
Lot #: 185760 - 30739
Rec: 5/9/12 MFR exp. 02/14/14

RS

G-



Method 8260 Gases (SS)
Lot #: 187974 - 31061
Rec: 6/19/12 MFR exp. 04/08/15

RS

07-18-12H							
50ug/ml Vol Work Std #7							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	180013-29760	07-18-12A	07/25/12	100
02SI	020049-02	HEXACHLOROETHANE	1000	176700-30724	07-18-12B	08/08/12	200
02SI	020228-02	Benzyl Chloride	1000	176701-31019	07-18-12C	08/08/12	200
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3500
07-18-12I							
50ug/ml Vol Work Std #1							
Exp:07/25/12							
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	176770-29827	06-19-12D	08/08/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1950
07-18-12J							
50ug/ml Vol Work Std #8							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	180114-29786	06-19-12E	08/08/12	100
02SI	120023-03	VOC'S-54 COMP	2000	176392-29207	06-19-12F	08/08/12	100
02SI	020232-02	Vinyl Acetate	2000	189764-30727	06-19-12G	05/13/12	100
02SI	020620-02	n-Hexane	1000	176773-31024	07-18-12D	08/08/12	200
02SI	020546-02	Heptane	1000	169174-31039	07-18-12E	08/08/12	200
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3300
07-18-12K							
50ug/ml Vol Work Std #2							
Exp:07/25/12							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	163375-27145	06-19-12J	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3900

		07-18-12L	Exp:	07/25/12			
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #7		07-18-12H	07/25/12	200	
		50ug/ml Vol Work Std #8		07-18-12J	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1600	
		07-18-12M	Exp:	07/25/12			
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #1		07-18-12I	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1800	
		07-18-12N	Exp:	07/25/12			
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #2		07-18-12K	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1800	
07-18-12O							
50ug/ml 8260 Surrogate			Conc.		Date	Exp	
Exp:07/25/12			ug/ml	Lot #	Code	Date	uL
O2SI	120002-01	8260B Surr Solution	2000	185763-30471	07-05-12B	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3900
07-18-12P			Exp:	07/25/12			
5.0ug/ml 8260 Surrogate			**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml 8260 Surrogate		07-18-12O	07/25/12	200	
J&T Brand		Purge & Trap MeOH		06/18/12	10/08/12	1800	
07-18-12Q							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:07/25/12			Conc.		Date	Exp	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120166-01	Volatile Mix 4-3	2000	185760-30739	07-18-12F	08/08/12	500
O2SI	020229-09	Acrolein	10000	191590-39077	06-19-12L	07/21/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3400

7/18/12 RS

07-18-12R							
50ug/ml VOC Std#5							
Exp:07/25/12							
			Conc.		Date	Exp	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ml
O2SI	120016-03-SS	8260 Gases(SS)	2000	187974-31061	07-18-12G	07/25/12	50
O2SI	020145-02-02-S	2-CEVE	2000	181404-30001	06-19-12N	08/08/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1900
07-18-12S							
50ug/ml VOC Std#6							
Exp:07/25/12							
	ID #	ID	ug/ml	Lot #	Code	Date	uL
O2SI	120023-03-SS	VOC'S 54 COMP.	2000	176822-29269	06-19-12O	08/08/12	50
O2SI	120296-01	Custom 8260 Solution	2000	185766-60426	06-19-12P	08/08/12	50
O2SI	020232-02-SS	Vinyl Acetate(SS)	2000	189765-30729	05-08-12J	08/12/12	50
O2SI	020620-02-SS	n-HEXANE	1000	179199-29616	05-15-12K	08/08/12	100
O2SI	020049-02-SS	HEXACHLOROETHANE	1000	183795-30438	05-15-12L	08/08/12	100
O2SI	020546-02-SS	Heptane(SS)	1000	185762-30448	05-15-12M	08/08/12	1550
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	
07-18-12T							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:07/25/12			Conc.		Date	Exp	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	163778-29840	06-19-12Q	08/08/12	250
O2SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	151591-30979	06-19-12R	07/21/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1700

7/18/12 RS

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

	Expiration Date:		07/18/12					
		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.
Date	Conc.	07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N	w/P&T H2O
Code	µg/L	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	mL
07-17-12A	0.2	2	2	n/a	n/a	n/a	n/a	50
07-17-12B	0.5	5	5	n/a	n/a	n/a	n/a	50
07-17-12C	1	10	10	n/a	n/a	n/a	n/a	50
07-17-12D	2	20	20	n/a	n/a	n/a	n/a	50
07-17-12E	5	n/a	n/a	5	5	5	5	50
07-17-12F	10	n/a	n/a	10	10	10	10	50
07-17-12G	40	n/a	n/a	40	40	40	40	50
07-17-12H	100	n/a	n/a	100	100	100	100	50

7/18/12 RS.

07/19/12A							
2000ug/ml Gasoline						APPL	
			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Supelco	LB82077	Gasoline	20,000	LB82077-29979	01-26-12A	02/01/14	200
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13	1800
07/19/12B							
2000ug/ml Unleaded Gasoline						APPL	
			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Restek	30205	Unleaded Gasoline	50,000	A081012-29980	01-26-12B	02/01/14	80
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13	1920

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

	Expiration Date:	07/20/12								
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-19-12C	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
07-19-12D	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
07-19-12E	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
07-19-12F	2	20	40	n/a	n/a	n/a	20	n/a	n/a	20
07-19-12G	5	n/a	n/a	5	5	10	n/a	5	5	n/a
07-19-12H	10	n/a	n/a	10	10	25	n/a	10	10	n/a
07-19-12I	20	n/a	n/a	20	20	40	n/a	20	20	n/a
07-19-12J	40	n/a	n/a	40	40	80	n/a	40	40	n/a
07-19-12K	100	n/a	n/a	100	100	100	n/a	100	100	n/a

250µg/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	
		50µg/mL Gasoline	Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/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								
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-19-12S	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
07-19-12T	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
07-19-12U	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
07-19-12V	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
07-19-12W	50	n/a	n/a	5	5	5	n/a	5	n/a	5
07-19-12X	100	n/a	n/a	10	10	10	n/a	10	n/a	10
07-19-12Y	200	n/a	n/a	20	20	20	n/a	20	n/a	20

250µg/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								
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-23-12A	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
07-23-12B	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
07-23-12C	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
07-23-12D	5	n/a	n/a	5	5	10	n/a	5	5	n/a
07-23-12E	10	n/a	n/a	10	10	25	n/a	10	10	n/a
07-23-12F	20	n/a	n/a	20	20	40	n/a	20	20	n/a
07-23-12G	40	n/a	n/a	40	40	80	n/a	40	40	n/a
07-23-12H	100	n/a	n/a	100	100	100	n/a	100	100	n/a
07-23-12I	200	n/a	n/a	200	200	125	n/a	200	200	n/a

250µg/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

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

7/24/12 RS

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

	Expiration Date:		07/25/12					
		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
Date	Conc.	07-18-12L	07-18-12N	07-18-12H	07-18-12J	07-18-12K	07-18-12Q	w/P&T H2O
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	mL
07-24-12B	0.2	2	2	n/a	n/a	n/a	2	500
07-24-12C	0.5	5	5	n/a	n/a	n/a	5	500
07-24-12D	1	10	10	n/a	n/a	n/a	10	500
07-24-12E	2	20	20	n/a	n/a	n/a	15	500
07-24-12F	5	n/a	n/a	5	5	5	20	500
07-24-12G	10	n/a	n/a	10	10	10	25	500
07-24-12H	40	n/a	n/a	40	40	40	35	500

7/24/12 RS

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

	Expiration Date:		07/25/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #12	5µg/mL Vol Std #2	50µg/mL Vol Std #2
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12K
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	Exp:07-25-12
07-24-12I	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
07-24-12J	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
07-24-12K	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
07-24-12L	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
07-24-12M	50	n/a	n/a	5	5	5	n/a	5	n/a	5
07-24-12N	100	n/a	n/a	10	10	10	n/a	10	n/a	10
07-24-12O	200	n/a	n/a	20	20	20	n/a	20	n/a	20

7/24/12 RS

	250µg/mL TAPD
	07-18-12Q
	Exp:07-25-12
1	2
2	5
3	10
4	15
5	20
6	25
7	35

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

	Expiration Date:		07/25/12
		50µg/mL Gasoline	Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/L	Exp.01-03-13	mL
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

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

	Expiration Date:		07/26/12
		50µg/mL Gasoline	Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/L	Exp.01-03-13	mL
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

R&D only, not for human consump. Made in the USA

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

122725-03-4PAK

Lot #	Storage	Expiry
181120	≤ -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

Injection Log

Directory: M:\THOR\DATA\T120719

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0719T01T.D	1	5ng- BFB STD 07-16-12B	2ul	07/19/2012 09:15
2	5	0719T05.D	1	0.3ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:01
3	6	0719T06.D	1	0.5ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:29
4	7	0719T07.D	1	1.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:57
5	8	0719T08.D	1	2.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:25
6	9	0719T09.D	1	5.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:53
7	10	0719T10.D	1	10ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:20
8	11	0719T11.D	1	20ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:48
9	12	0719T12.D	1	40ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:16
10	13	0719T13.D	1	100ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:44
11	28	0719T28.D	1	5ng- BFB Std 07-16-12B	2uL	07/19/2012 21:40
12	30	0719T30.D	1	10ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 22:35
13	31	0719T31.D	1	120719A LCS-1WT (SS)	10ml w/5ul of IS&S: 06-7	07/19/2012 23:03
14	38	0719T38.D	1	120719A BLK-1WT	10ml w/5ul of IS&S: 06-7	07/20/2012 02:18
15	42	0719T42.D	1	AY65114W01	10ml w/5ul of IS&S: 06-7	07/20/2012 04:08
16	46	0719T46.D	1	AY65112W01	10ml w/5ul of IS&S: 06-7	07/20/2012 05:59
17	47	0719T47.D	1	AY65113W01	10ml w/5ul of IS&S: 06-7	07/20/2012 06:26

Injection Log

Directory: M:\THOR\DATA\T120719

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	15	0719T15.D	1	5ng-BFB STD 07-16-12B	2uL	07/19/2012 15:39
2	17	0719T17.D	1	VOC MIX MARKER	10ml w/5ul of IS&S: 06-7	07/19/2012 16:35
3	18	0719T18.D	1	20ug/LVol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 17:02
4	19	0719T19.D	1	50ug/LVol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 17:30
5	20	0719T20.D	1	100ug/LVol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 17:58
6	21	0719T21.D	1	300ug/LVol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 18:26
7	22	0719T22.D	1	600ug/LVol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 18:54
8	23	0719T23.D	1	800ug/LVol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 19:21
9	24	0719T24.D	1	1000ug/LVol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 19:49
10	28	0719T28.D	1	5ng- BFB Std 07-16-12B	2uL	07/19/2012 21:40
11	33	0719T33.D	1	CCV gas 300ug/L (SS)	10ml w/5ul of IS&S: 06-7	07/19/2012 23:59
12	34	0719T34.D	1	CCV gas 300ug/L	10ml w/5ul of IS&S: 06-7	07/20/2012 00:27
13	35	0719T35.D	1	LCS gas 300ug/L	10ml w/5ul of IS&S: 06-7	07/20/2012 00:54
14	38	0719T38.D	1	120719A BLK-1WT	10ml w/5ul of IS&S: 06-7	07/20/2012 02:18
15	47	0719T47.D	1	AY65113W01	10ml w/5ul of IS&S: 06-7	07/20/2012 06:26

Injection Log

Directory: M:\THOR\DATA\T120725

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0725T01T.D	1	5ng- BFB STD 07-16-12B	2ul	07/25/2012 09:32
2	2	0725T03.D	1	VOC MIX MARKER	10ml w/5ul of IS&S: 06-7	07/25/2012 10:22
3	3	0725T04.D	1	20ug/L Vol Std 07-25-12	10ml w/5ul of IS&S: 06-7	07/25/2012 10:50
4	4	0725T05.D	1	50ug/L Vol Std 07-25-12	10ml w/5ul of IS&S: 06-7	07/25/2012 11:17
5	5	0725T06.D	1	100ug/L Vol Std 07-25-12	10ml w/5ul of IS&S: 06-7	07/25/2012 11:45
6	6	0725T07.D	1	300ug/L Vol Std 07-25-13	10ml w/5ul of IS&S: 06-7	07/25/2012 12:13
7	7	0725T08.D	1	600ug/L Vol Std 07-25-14	10ml w/5ul of IS&S: 06-7	07/25/2012 12:41
8	8	0725T09.D	1	800ug/L Vol Std 07-25-15	10ml w/5ul of IS&S: 06-7	07/25/2012 13:08
9	9	0725T10.D	1	1000ug/L Vol Std 07-25-16	10ml w/5ul of IS&S: 06-7	07/25/2012 13:36
10	12	0725T13.D	1	5ng- BFB STD 07-16-12B	2uL	07/25/2012 14:59
11	13	0725T14.D	1	CCV gas 300ug/L	10ml w/5ul of IS&S: 06-7	07/25/2012 15:27
12	14	0725T15.D	1	LCS gas 300ug/L (SS)	10ml w/5ul of IS&S: 06-7	07/25/2012 15:55
13	19	0725T20.D	1	120725A BLK-1WT	10ml w/5ul of IS&S: 06-7	07/25/2012 18:14
14	21	0725T22.D	1	AY65114W02	10ml w/5ul of IS&S: 06-7	07/25/2012 19:09
15	22	0725T23.D	1	AY65112W02	10ml w/5ul of IS&S: 06-7	07/25/2012 19:37

METALS

APPL, INC.

METALS
QC Summary

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6020	LEAD (PB) (DISSOL	0.22 U	0.5	0.22	0.11	ug/L	07/23/12	07/23/12	#602D-120723A-AY65167

Printed: 07/24/12 9:38:38 AM
Metals SC-Blank-REG MDLs

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6020	LEAD (PB) (DISSOLVED)	50.0	45.5	91.0	80-120	07/23/12	07/23/12	#602D-120723A-AY65167

Comments:

METALS
Sample Data

APPL, INC.

Metals Analysis

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68258

Sample ID: ES081

APPL ID: AY65112

Sample Collection Date: 07/18/12

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.22 U	0.5	0.22	0.11	ug/L	1	07/23/12	07/23/12

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\029SMPL.D\029SMPL.D#
Date Acquired: Jul 23 2012 02:07 pm
Operator: NBS
Sample Name: AY65112W08
Misc Info: 120723A-3015
Vial Number: 3202
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	0.00	ug/l	0.00	121.58	1000	
11 B	183.20	ug/l	203.54	1.35	1000	
23 Na	82810.00	ug/l	92001.91	0.90	25000	>Cal
24 Mg	25950.00	ug/l	28830.45	0.39	50000	
27 Al	10.32	ug/l	11.47	3.11	20000	
39 K	3233.00	ug/l	3591.86	0.90	20000	
44 Ca	21940.00	ug/l	24375.34	0.95	50000	
47 Ti	0.95	ug/l	1.06	4.20	1000	
51 V	18.78	ug/l	20.86	0.50	1000	
52 Cr	1.08	ug/l	1.20	1.86	1000	
55 Mn	30.96	ug/l	34.40	0.80	1000	
56 Fe	14.46	ug/l	16.07	1.21	20000	
59 Co	0.51	ug/l	0.56	0.36	1000	
60 Ni	3.53	ug/l	3.92	2.51	1000	
63 Cu	1.08	ug/l	1.20	1.92	1000	
65 Cu	1.12	ug/l	1.24	2.83	1000	
66 Zn	11.82	ug/l	13.13	1.67	1000	
75 As	0.88	ug/l	0.97	2.62	1000	
78 Se	0.14	ug/l	0.16	6.00	1000	
78 Se	0.64	ug/l	0.71	18.08	1000	
88 Sr	140.60	ug/l	156.21	0.59	1000	
88 Sr	135.90	ug/l	150.98	1.29	1000	
95 Mo	11.66	ug/l	12.95	0.69	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	0.02	ug/l	0.02	3.84	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	0.06	ug/l	0.07	25.23	1000	
118 Sn	0.11	ug/l	0.12	7.82	#######	
118 Sn	0.12	ug/l	0.13	10.08	#######	
118 Sn	0.12	ug/l	0.13	3.24	1000	
121 Sb	0.12	ug/l	0.14	2.40	1000	
137 Ba	11.60	ug/l	12.89	0.74	1000	
205 Tl	0.08	ug/l	0.09	1.85	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	0.09	ug/l	0.10	3.59	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-45225.24	11.37	-41328.95	109.4	70 - 120	IS Fai
45 Sc	3148469.80	0.29	3008024.30	104.7	70 - 120	
45 Sc	449359.94	0.48	423303.94	106.2	70 - 120	
45 Sc	9289287.00	1.01	8607281.00	107.9	70 - 120	
72 Ge	782338.50	1.59	774468.63	101.0	70 - 120	
72 Ge	284030.81	0.61	282128.91	100.7	70 - 120	
72 Ge	1928524.60	0.26	1882554.90	102.4	70 - 120	
115 In	5452920.50	0.27	5556751.00	98.1	70 - 120	
115 In	2960486.30	0.42	3029632.80	97.7	70 - 120	
115 In	12080720.00	0.71	12097256.00	99.9	70 - 120	
159 Tb	16492033.00	0.96	16269544.00	101.4	70 - 120	
165 Ho	16168885.00	1.08	15819307.00	102.2	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Fail
ISTD: Fail

Metals Analysis

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

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

Sample ID: ES082

Sample Collection Date: 07/18/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68258

APPL ID: AY65113

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.42 J	0.5	0.22	0.11	ug/L	1	07/23/12	07/23/12

J = Estimated value.

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\030SMPL.D\030SMPL.D#
Date Acquired: Jul 23 2012 02:14 pm
Operator: NBS
Sample Name: AY65113W08
Misc Info: 120723A-3015
Vial Number: 3203
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	0.01	ug/l	0.02	30.62	1000	
11 B	109.20	ug/l	121.32	0.88	1000	
23 Na	60620.00	ug/l	67348.82	1.06	25000	>Cal
24 Mg	26470.00	ug/l	29408.17	0.39	50000	
27 Al	14.72	ug/l	16.35	4.62	20000	
39 K	2583.00	ug/l	2869.71	1.75	20000	
44 Ca	14340.00	ug/l	15931.74	0.56	50000	
47 Ti	1.61	ug/l	1.78	7.05	1000	
51 V	1.15	ug/l	1.28	0.48	1000	
52 Cr	0.65	ug/l	0.72	2.39	1000	
55 Mn	1561.00	ug/l	1734.27	0.81	1000	>Cal
56 Fe	1413.00	ug/l	1569.84	0.70	20000	
59 Co	0.32	ug/l	0.35	4.84	1000	
60 Ni	0.36	ug/l	0.40	1.64	1000	
63 Cu	0.32	ug/l	0.36	3.24	1000	
65 Cu	0.34	ug/l	0.37	2.54	1000	
66 Zn	10.49	ug/l	11.65	2.03	1000	
75 As	0.09	ug/l	0.10	6.25	1000	
78 Se	0.02	ug/l	0.03	19.52	1000	
78 Se	0.45	ug/l	0.50	29.48	1000	
88 Sr	121.10	ug/l	134.54	0.95	1000	
88 Sr	117.60	ug/l	130.65	0.37	1000	
95 Mo	0.15	ug/l	0.16	6.58	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	0.00	ug/l	0.00	35.83	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	0.12	ug/l	0.14	14.77	1000	
118 Sn	0.10	ug/l	0.11	2.17	#######	
118 Sn	0.11	ug/l	0.12	16.89	#######	
118 Sn	0.10	ug/l	0.11	10.32	1000	
121 Sb	0.05	ug/l	0.06	5.36	1000	
137 Ba	24.42	ug/l	27.13	0.60	1000	
205 Tl	0.07	ug/l	0.08	2.92	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	0.38	ug/l	0.42	1.21	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-47696.10	12.14	-41328.95	115.4	70 - 120	IS Fai
45 Sc	3209263.00	1.32	3008024.30	106.7	70 - 120	
45 Sc	452598.53	0.38	423303.94	106.9	70 - 120	
45 Sc	9421175.00	0.67	8607281.00	109.5	70 - 120	
72 Ge	796992.69	0.24	774468.63	102.9	70 - 120	
72 Ge	287613.75	0.82	282128.91	101.9	70 - 120	
72 Ge	1967507.10	0.45	1882554.90	104.5	70 - 120	
115 In	5581677.50	0.87	5556751.00	100.4	70 - 120	
115 In	2986463.00	0.38	3029632.80	98.6	70 - 120	
115 In	12343514.00	0.73	12097256.00	102.0	70 - 120	
159 Tb	16930864.00	0.64	16269544.00	104.1	70 - 120	
165 Ho	16544507.00	0.24	15819307.00	104.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Fail
ISTD: Fail

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: 68258 SDG: 68258

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:45	%R(1)	True CCV1	Found 12:05	%R(1)	True CCV1	Found 13:32	%R(1)	
Lead (Pb)	100	99.7	99.7	50	52.39	105	50	51.97	104	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

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

ARF No: 68258 SDG: 68258

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:45	%R(1)	True CCV1	Found 15:07	%R(1)	True	Found	%R(1)	
Lead (Pb)	100	99.7	99.7	50	51.71	103				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

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

ARF No.: 68258 SDG: 68258

Preparation Blank Matrix (soil/water): water

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

Analysis Date: 07/23/12

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C				C	
	11:58		12:12		13:45		15:20				12:58		
Lead (Pb)	.50	U	.50	U	.50	U	.50	U			.50	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.
ARF No.: 68258 SDG: 68258
ICP ID Number: Optimus ICS Source: Environmental Express

Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 12:18	Sol AB 12:25	%R(1)
Lead (Pb)		500	0.4092	437.6	87.5

(1) Control Limits: Metals 80-120

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\12G23k00.B\004CAL
Date Acquired:	Jul 23 2012 11:12 am
Operator:	NBS
Sample Name:	Calibration Blank
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File:	C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update:	Jul 23 2012 11:09 am
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	-41328.94	A	2428.00	5.87
7	(Li)	4659754.00	A	18000.00	0.39
9	Be	44.45	P	5.09	11.46
11	B	13122.80	P	299.70	2.28
23	Na	64072.43	P	449.30	0.70
24	Mg	208.90	P	51.68	24.74
27	Al	91.11	P	10.71	11.75
39	K	42023.77	P	406.10	0.97
44	Ca	376.38	P	20.70	5.50
45	Sc	3008024.00	A	6696.00	0.22
45	Sc	423303.91	A	3421.00	0.81
45	Sc	8607281.00	A	46940.00	0.55
47	Ti	1.78	P	1.54	86.62
51	V	48.45	P	8.57	17.69
52	Cr	424.90	P	14.87	3.50
55	Mn	212.89	P	30.82	14.48
56	Fe	3307.53	P	84.69	2.56
59	Co	83.56	P	8.04	9.62
60	Ni	109.34	P	9.33	8.54
63	Cu	295.56	P	2.04	0.69
65	Cu	135.11	P	17.40	12.88
66	Zn	310.23	P	10.10	3.26
72	Ge	774468.63	A	4129.00	0.53
72	Ge	282128.91	A	1085.00	0.38
72	Ge	1882555.00	A	1994.00	0.11
75	As	27.11	P	4.68	17.27
78	Se	22.89	P	3.27	14.30
78	Se	148.78	P	4.86	3.26
88	Sr	168.90	P	24.12	14.28
88	Sr	598.92	P	5.09	0.85
95	Mo	93.34	P	14.53	15.57
106	(Cd)	3.33	P	3.33	99.99
107	Ag	126.67	P	8.82	6.96
108	(Cd)	5.56	P	5.09	91.65
111	Cd	13.08	P	16.84	128.75
115	In	5556751.00	A	25450.00	0.46
115	In	3029633.00	A	2589.00	0.09
115	In	12097260.00	A	3381.00	0.03
118	Sn	187.79	P	62.04	33.04
118	Sn	96.67	P	8.82	9.12
118	Sn	352.24	P	45.38	12.88
121	Sb	131.12	P	15.75	12.01
137	Ba	72.23	P	27.76	38.44
159	Tb	16269540.00	A	108400.00	0.67
165	Ho	15819310.00	A	42930.00	0.27
205	Tl	195.56	P	65.18	33.33
206	(Pb)	530.03	P	72.19	13.62
207	(Pb)	423.36	P	56.67	13.39
208	Pb	1940.13	P	171.40	8.83

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\005CALS.D\005CALS.D#
Date Acquired: Jul 23 2012 11:18 am
Operator: NBS
Sample Name: 120723 Standard 1
Misc Info:
Vial Number: 1103
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:16 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-41816.46	A	2968.00	7.10	0.0000
7 (Li)	4828315.00	A	24030.00	0.50	0.0000
9 Be	431.13	P	39.49	9.16	0.0000
11 B	13550.97	P	211.20	1.56	0.0000
23 Na	68743.03	P	482.40	0.70	0.0000
24 Mg	1320.10	P	78.40	5.94	0.0000
27 Al	323.35	P	17.64	5.46	0.0000
39 K	42278.87	P	294.60	0.70	0.0000
44 Ca	453.33	P	18.07	3.99	0.0000
45 Sc	2965625.00	A	8375.00	0.28	0.0000
45 Sc	409348.19	A	5583.00	1.36	0.0000
45 Sc	8658112.00	A	37130.00	0.43	0.0000
47 Ti	16.44	P	2.78	16.88	0.0000
51 V	457.35	P	18.04	3.94	0.0000
52 Cr	881.37	P	20.83	2.36	0.0000
55 Mn	432.46	P	14.69	3.40	0.0000
56 Fe	10304.63	P	194.30	1.89	0.0000
59 Co	556.02	P	39.26	7.06	0.0000
60 Ni	221.78	P	29.82	13.45	0.0000
63 Cu	848.93	P	36.62	4.31	0.0000
65 Cu	429.35	P	5.81	1.35	0.0000
66 Zn	473.79	P	16.88	3.56	0.0000
72 Ge	782088.38	A	7482.00	0.96	0.0000
72 Ge	280806.41	A	3743.00	1.33	0.0000
72 Ge	1881152.00	A	8788.00	0.47	0.0000
75 As	89.00	P	5.24	5.89	0.0000
78 Se	46.89	P	2.87	6.13	0.0000
78 Se	154.67	P	3.71	2.40	0.0000
88 Sr	594.48	P	28.74	4.83	0.0000
88 Sr	4045.16	P	130.50	3.23	0.0000
95 Mo	706.71	P	10.00	1.42	0.0000
106 (Cd)	47.78	P	7.70	16.11	0.0000
107 Ag	994.52	P	69.32	6.97	0.0000
108 (Cd)	28.89	P	10.18	35.24	0.0000
111 Cd	397.49	P	77.04	19.38	0.0000
115 In	5449510.00	A	78530.00	1.44	0.0000
115 In	2939285.00	A	18850.00	0.64	0.0000
115 In	11960780.00	A	79640.00	0.67	0.0000
118 Sn	1004.52	P	97.90	9.75	0.0000
118 Sn	555.59	P	7.70	1.39	0.0000
118 Sn	2132.46	P	102.20	4.79	0.0000
121 Sb	1841.30	P	47.65	2.59	0.0000
137 Ba	583.37	P	41.64	7.14	0.0000
159 Tb	16219180.00	A	173500.00	1.07	0.0000
165 Ho	15690520.00	A	6789.00	0.04	0.0000
205 Tl	3149.38	P	120.10	3.81	0.0000
206 (Pb)	1167.88	P	66.20	5.67	0.0000
207 (Pb)	974.52	P	68.35	7.01	0.0000
208 Pb	4646.06	P	99.59	2.14	0.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-41816.47	7.10	-41328.95	101.2	70 -	120	IS Fail
45 Sc	2965624.50	0.28	3008024.30	98.6	70 -	120	
45 Sc	409348.25	1.36	423303.94	96.7	70 -	120	
45 Sc	8658112.00	0.43	8607281.00	100.6	70 -	120	
72 Ge	782088.44	0.96	774468.63	101.0	70 -	120	
72 Ge	280806.38	1.33	282128.91	99.5	70 -	120	
72 Ge	1881152.00	0.47	1882554.90	99.9	70 -	120	
115 In	5449510.50	1.44	5556751.00	98.1	70 -	120	
115 In	2939285.30	0.64	3029632.80	97.0	70 -	120	
115 In	11960782.00	0.67	12097256.00	98.9	70 -	120	
159 Tb	16219185.00	1.07	16269544.00	99.7	70 -	120	
165 Ho	15690520.00	0.04	15819307.00	99.2	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\006CALS.D\006CALS.D#
Date Acquired: Jul 23 2012 11:25 am
Operator: NBS
Sample Name: 120723 Standard 2
Misc Info:
Vial Number: 1104
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:22 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-38271.70	A	2707.00	7.07	0.0000
7 (Li)	4793284.00	A	21050.00	0.44	1.0000
9 Be	4235.18	P	94.10	2.22	1.0000
11 B	14857.80	P	552.40	3.72	1.0000
23 Na	75362.73	P	100.00	0.13	1.0000
24 Mg	10653.06	P	135.80	1.27	1.0000
27 Al	1959.08	P	90.10	4.60	1.0000
39 K	48852.40	P	393.50	0.81	1.0000
44 Ca	1103.45	P	35.31	3.20	1.0000
45 Sc	2946623.00	A	16940.00	0.57	0.0000
45 Sc	412843.69	A	2177.00	0.53	0.0000
45 Sc	8594454.00	A	44450.00	0.52	0.0000
47 Ti	96.00	P	12.22	12.73	1.0000
51 V	2942.12	P	46.06	1.57	1.0000
52 Cr	3650.28	P	70.82	1.94	1.0000
55 Mn	2454.02	P	50.72	2.07	1.0000
56 Fe	62723.29	P	271.00	0.43	1.0000
59 Co	4763.95	P	121.10	2.54	1.0000
60 Ni	1299.19	P	41.19	3.17	1.0000
63 Cu	3529.81	P	57.76	1.64	1.0000
65 Cu	1788.58	P	45.70	2.56	1.0000
66 Zn	1012.94	P	61.69	6.09	1.0000
72 Ge	775596.38	A	1679.00	0.22	0.0000
72 Ge	280488.00	A	3782.00	1.35	0.0000
72 Ge	1879230.00	A	21100.00	1.12	0.0000
75 As	564.46	P	12.53	2.22	1.0000
78 Se	248.34	P	9.84	3.96	1.0000
78 Se	213.11	P	13.02	6.11	1.0000
88 Sr	4516.43	P	56.70	1.26	1.0000
88 Sr	32554.49	P	334.70	1.03	1.0000
95 Mo	6087.07	P	193.60	3.18	1.0000
106 (Cd)	324.46	P	6.94	2.14	1.0000
107 Ag	7810.19	P	109.40	1.40	1.0000
108 (Cd)	241.12	P	50.15	20.80	1.0000
111 Cd	3325.03	P	144.20	4.34	1.0000
115 In	5421674.00	A	15610.00	0.29	0.0000
115 In	2910753.00	A	26240.00	0.90	0.0000
115 In	11770410.00	A	19480.00	0.17	0.0000
118 Sn	4565.35	P	94.32	2.07	1.0000
118 Sn	2638.12	P	42.87	1.63	1.0000
118 Sn	9902.71	P	120.40	1.22	1.0000
121 Sb	13280.07	P	116.80	0.88	1.0000
137 Ba	5013.31	P	58.37	1.16	1.0000
159 Tb	16000270.00	A	160400.00	1.00	0.0000
165 Ho	15559700.00	A	126400.00	0.81	0.0000
205 Tl	28171.76	P	356.80	1.27	1.0000
206 (Pb)	9680.50	P	330.70	3.42	1.0000
207 (Pb)	8091.67	P	204.00	2.52	1.0000
208 Pb	38229.67	P	528.20	1.38	1.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-38271.70	7.07	-41328.95	92.6	70 -	120	IS Fail
45 Sc	2946623.30	0.57	3008024.30	98.0	70 -	120	
45 Sc	412843.72	0.53	423303.94	97.5	70 -	120	
45 Sc	8594454.00	0.52	8607281.00	99.9	70 -	120	
72 Ge	775596.38	0.22	774468.63	100.1	70 -	120	
72 Ge	280488.03	1.35	282128.91	99.4	70 -	120	
72 Ge	1879229.80	1.12	1882554.90	99.8	70 -	120	
115 In	5421673.50	0.29	5556751.00	97.6	70 -	120	
115 In	2910753.50	0.90	3029632.80	96.1	70 -	120	
115 In	11770411.00	0.17	12097256.00	97.3	70 -	120	
159 Tb	16000275.00	1.00	16269544.00	98.3	70 -	120	
165 Ho	15559705.00	0.81	15819307.00	98.4	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\007CALS.D\007CALS.D#
Date Acquired: Jul 23 2012 11:32 am
Operator: NBS
Sample Name: 120723 Standard 3
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:29 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-40141.68	A	5393.00	13.44	0.0000
7 (Li)	4772095.00	A	27750.00	0.58	0.4044
9 Be	208836.70	P	1267.00	0.61	1.0000
11 B	137641.50	P	1350.00	0.98	0.9952
23 Na	561413.63	P	2113.00	0.38	0.8916
24 Mg	524168.31	P	2475.00	0.47	1.0000
27 Al	92849.74	P	461.20	0.50	0.9997
39 K	344469.09	P	2025.00	0.59	0.9939
44 Ca	38040.14	P	664.10	1.75	0.9998
45 Sc	2929570.00	A	29350.00	1.00	0.0000
45 Sc	413552.91	A	3122.00	0.76	0.0000
45 Sc	8628072.00	A	89100.00	1.03	0.0000
47 Ti	4933.33	P	62.99	1.28	0.9984
51 V	135471.50	P	1339.00	0.99	0.9991
52 Cr	158083.50	P	1018.00	0.64	0.9990
55 Mn	112729.30	P	106.60	0.09	1.0000
56 Fe	2648855.00	A	17400.00	0.66	0.9998
59 Co	230427.80	P	180.70	0.08	1.0000
60 Ni	57533.91	P	431.00	0.75	1.0000
63 Cu	155413.50	P	641.40	0.41	0.9973
65 Cu	75685.46	P	891.90	1.18	0.9968
66 Zn	32393.10	P	111.10	0.34	0.9902
72 Ge	768266.81	A	21970.00	2.86	0.0000
72 Ge	277329.91	A	2067.00	0.75	0.0000
72 Ge	1886908.00	A	20910.00	1.11	0.0000
75 As	25744.79	P	105.60	0.41	0.9999
78 Se	10980.96	P	103.00	0.94	1.0000
78 Se	2890.63	P	48.87	1.69	0.9990
88 Sr	209820.50	P	803.00	0.38	1.0000
88 Sr	1454092.00	A	8453.00	0.58	1.0000
95 Mo	293486.50	P	604.00	0.21	1.0000
106 (Cd)	15022.92	P	191.90	1.28	0.9993
107 Ag	377162.50	P	3424.00	0.91	0.9999
108 (Cd)	10984.61	P	170.90	1.56	1.0000
111 Cd	165458.50	P	465.90	0.28	0.9999
115 In	5327447.00	A	55260.00	1.04	0.0000
115 In	2910250.00	A	24200.00	0.83	0.0000
115 In	11944630.00	A	109500.00	0.92	0.0000
118 Sn	198230.09	P	1792.00	0.90	0.9964
118 Sn	115238.30	P	443.30	0.38	0.9969
118 Sn	450003.50	P	3055.00	0.68	0.9966
121 Sb	649268.31	P	6236.00	0.96	0.9996
137 Ba	238687.59	P	2297.00	0.96	1.0000
159 Tb	16069320.00	A	147900.00	0.92	0.0000
165 Ho	15575810.00	A	135900.00	0.87	0.0000
205 Tl	1268132.00	A	1504.00	0.12	1.0000
206 (Pb)	468874.31	P	1209.00	0.26	0.9996
207 (Pb)	395048.69	P	2701.00	0.68	0.9997
208 Pb	1851604.00	P	7982.00	0.43	0.9997

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)			Flag
6 Li	-40141.69	13.44	-41328.95	97.1	70 -		120	IS Fail
45 Sc	2929570.30	1.00	3008024.30	97.4	70 -		120	
45 Sc	413552.91	0.75	423303.94	97.7	70 -		120	
45 Sc	8628072.00	1.03	8607281.00	100.2	70 -		120	
72 Ge	768266.88	2.86	774468.63	99.2	70 -		120	
72 Ge	277329.88	0.75	282128.91	98.3	70 -		120	
72 Ge	1886908.30	1.11	1882554.90	100.2	70 -		120	
115 In	5327447.00	1.04	5556751.00	95.9	70 -		120	
115 In	2910250.50	0.83	3029632.80	96.1	70 -		120	
115 In	11944625.00	0.92	12097256.00	98.7	70 -		120	
159 Tb	16069324.00	0.92	16269544.00	98.8	70 -		120	
165 Ho	15575815.00	0.87	15819307.00	98.5	70 -		120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\008CALS.D\008CALS.D#
Date Acquired: Jul 23 2012 11:39 am
Operator: NBS
Sample Name: 120723 Standard 4
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:36 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-38098.84	A	8974.00	23.56	0.0000
7 (Li)	4836046.00	A	91920.00	1.90	0.0872
9 Be	423835.19	P	6357.00	1.50	1.0000
11 B	267890.91	P	3612.00	1.35	1.0000
23 Na	1070874.00	A	4310.00	0.40	1.0000
24 Mg	1031127.00	A	10470.00	1.02	1.0000
27 Al	188079.59	P	454.70	0.24	1.0000
39 K	660046.19	P	3327.00	0.50	1.0000
44 Ca	76449.13	P	280.60	0.37	1.0000
45 Sc	3012870.00	A	36160.00	1.20	0.0000
45 Sc	415503.00	A	2302.00	0.55	0.0000
45 Sc	8724734.00	A	61090.00	0.70	0.0000
47 Ti	10057.35	P	118.60	1.18	1.0000
51 V	274992.41	P	1358.00	0.49	1.0000
52 Cr	318432.59	P	2283.00	0.72	1.0000
55 Mn	229116.20	P	2629.00	1.15	1.0000
56 Fe	5265441.00	A	60300.00	1.15	1.0000
59 Co	463151.41	P	3143.00	0.68	1.0000
60 Ni	115989.80	P	858.10	0.74	1.0000
63 Cu	312560.19	P	284.40	0.09	1.0000
65 Cu	153215.50	P	1440.00	0.94	1.0000
66 Zn	65080.04	P	448.40	0.69	1.0000
72 Ge	784051.63	A	4382.00	0.56	0.0000
72 Ge	278662.41	A	4547.00	1.63	0.0000
72 Ge	1912165.00	A	7636.00	0.40	0.0000
75 As	52232.86	P	125.80	0.24	1.0000
78 Se	22351.78	P	86.89	0.39	1.0000
78 Se	5691.24	P	66.14	1.16	1.0000
88 Sr	432452.91	P	383.60	0.09	1.0000
88 Sr	2910274.00	A	5311.00	0.18	1.0000
95 Mo	594285.13	P	5554.00	0.93	1.0000
106 (Cd)	30253.12	P	587.80	1.94	1.0000
107 Ag	759463.69	P	6407.00	0.84	1.0000
108 (Cd)	22110.18	P	292.70	1.32	1.0000
111 Cd	329599.69	P	1169.00	0.35	1.0000
115 In	5454744.00	A	67430.00	1.24	0.0000
115 In	2935754.00	A	7842.00	0.27	0.0000
115 In	11935970.00	A	72980.00	0.61	0.0000
118 Sn	405178.81	P	4698.00	1.16	1.0000
118 Sn	234336.80	P	592.90	0.25	1.0000
118 Sn	907635.88	P	8976.00	0.99	1.0000
121 Sb	1204220.00	A	13910.00	1.16	1.0000
137 Ba	475384.59	P	3682.00	0.77	1.0000
159 Tb	16151070.00	A	201800.00	1.25	0.0000
165 Ho	15582170.00	A	199800.00	1.28	0.0000
205 Tl	2472780.00	A	25800.00	1.04	1.0000
206 (Pb)	935228.19	P	12790.00	1.37	1.0000
207 (Pb)	786432.88	P	10080.00	1.28	1.0000
208 Pb	3497400.00	A	34560.00	0.99	1.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-38098.85	23.56	-41328.95	92.2	70 -	120	IS Fail
45 Sc	3012869.50	1.20	3008024.30	100.2	70 -	120	
45 Sc	415502.97	0.55	423303.94	98.2	70 -	120	
45 Sc	8724734.00	0.70	8607281.00	101.4	70 -	120	
72 Ge	784051.56	0.56	774468.63	101.2	70 -	120	
72 Ge	278662.41	1.63	282128.91	98.8	70 -	120	
72 Ge	1912165.40	0.40	1882554.90	101.6	70 -	120	
115 In	5454744.00	1.24	5556751.00	98.2	70 -	120	
115 In	2935754.00	0.27	3029632.80	96.9	70 -	120	
115 In	11935967.00	0.61	12097256.00	98.7	70 -	120	
159 Tb	16151070.00	1.25	16269544.00	99.3	70 -	120	
165 Ho	15582175.00	1.28	15819307.00	98.5	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

QCS QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\009_QCS.D\009_QCS.D#
Date Acquired: Jul 23 2012 11:45 am
Operator: NBS
Sample Name: ICV 120723
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: QCS
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
7 (Li)	--------	ug/l	--------	100.00	90 - 110	
9 Be	100.60	ug/l	0.64	100.00	90 - 110	
11 B	101.80	ug/l	1.22	100.00	90 - 110	
23 Na	2398.00	ug/l	0.47	2500.00	90 - 110	
24 Mg	2487.00	ug/l	0.77	2500.00	90 - 110	
27 Al	2446.00	ug/l	0.17	2500.00	90 - 110	
39 K	2316.00	ug/l	0.48	2500.00	90 - 110	
44 Ca	2406.00	ug/l	0.84	2500.00	90 - 110	
47 Ti	97.92	ug/l	1.55	100.00	90 - 110	
51 V	101.80	ug/l	0.59	100.00	90 - 110	
52 Cr	101.70	ug/l	0.35	100.00	90 - 110	
55 Mn	101.10	ug/l	0.14	100.00	90 - 110	
56 Fe	2430.00	ug/l	0.38	2500.00	90 - 110	
59 Co	99.14	ug/l	0.73	100.00	90 - 110	
60 Ni	101.20	ug/l	0.59	100.00	90 - 110	
63 Cu	99.40	ug/l	0.49	100.00	90 - 110	
65 Cu	99.41	ug/l	0.52	100.00	90 - 110	
66 Zn	101.50	ug/l	1.04	100.00	90 - 110	
75 As	99.15	ug/l	1.09	100.00	90 - 110	
78 Se	99.79	ug/l	0.71	100.00	90 - 110	
78 Se	100.20	ug/l	1.67	100.00	90 - 110	
88 Sr	98.23	ug/l	1.15	100.00	90 - 110	
88 Sr	97.55	ug/l	0.36	100.00	90 - 110	
95 Mo	99.68	ug/l	1.27	100.00	90 - 110	
106 (Cd)	--------	ug/l	--------	100.00	90 - 110	
107 Ag	51.17	ug/l	1.02	50.00	90 - 110	
108 (Cd)	--------	ug/l	--------	100.00	90 - 110	
111 Cd	99.11	ug/l	0.54	100.00	90 - 110	
118 Sn	48.25	ug/l	5.45	50.00	90 - 110	
118 Sn	47.94	ug/l	8.36	50.00	90 - 110	
118 Sn	50.31	ug/l	5.64	50.00	90 - 110	
121 Sb	102.00	ug/l	1.63	100.00	90 - 110	
137 Ba	98.36	ug/l	0.60	100.00	90 - 110	
205 Tl	98.39	ug/l	0.49	100.00	90 - 110	
206 (Pb)	--------	ug/l	--------	100.00	90 - 110	
207 (Pb)	--------	ug/l	--------	100.00	90 - 110	
208 Pb	99.70	ug/l	0.09	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-42030.20	5.53	-41328.95	101.7	70 - 120	IS Fail
45 Sc	3002840.00	1.08	3008024.30	99.8	70 - 120	
45 Sc	417571.03	0.15	423303.94	98.6	70 - 120	
45 Sc	8771717.00	1.09	8607281.00	101.9	70 - 120	
72 Ge	784054.69	1.30	774468.63	101.2	70 - 120	
72 Ge	283383.13	0.95	282128.91	100.4	70 - 120	
72 Ge	1906694.80	0.29	1882554.90	101.3	70 - 120	
115 In	5475908.00	1.09	5556751.00	98.5	70 - 120	
115 In	2925404.50	1.07	3029632.80	96.6	70 - 120	
115 In	12051751.00	0.51	12097256.00	99.6	70 - 120	
159 Tb	16249860.00	0.32	16269544.00	99.9	70 - 120	
165 Ho	15777454.00	0.86	15819307.00	99.7	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Pass
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\011_CCB.D\011_CCB.D#
Date Acquired: Jul 23 2012 11:58 am
Operator: NBS
Sample Name: ICB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	--------	#######	
9 Be	0.01 ug/l	62.17	0.12	
11 B	-0.06 ug/l	103.17	15.00	
23 Na	-8.87 ug/l	28.81	77.10	
24 Mg	-0.02 ug/l	266.60	7.50	
27 Al	0.35 ug/l	64.01	3.96	
39 K	2.17 ug/l	108.79	19.20	
44 Ca	-7.98 ug/l	38.97	90.00	
47 Ti	0.00 ug/l	285.52	0.78	
51 V	0.01 ug/l	77.78	0.21	
52 Cr	-0.02 ug/l	56.40	0.12	
55 Mn	-0.01 ug/l	30.35	0.18	
56 Fe	0.09 ug/l	39.91	40.80	
59 Co	0.01 ug/l	50.79	0.09	
60 Ni	0.00 ug/l	335.93	0.48	
63 Cu	-0.02 ug/l	3.48	0.39	
65 Cu	-0.01 ug/l	79.37	0.39	
66 Zn	0.01 ug/l	415.60	6.90	
75 As	0.01 ug/l	79.94	0.27	
78 Se	0.01 ug/l	150.15	0.30	
78 Se	0.08 ug/l	243.02	0.30	
88 Sr	0.00 ug/l	251.58	0.03	
88 Sr	0.00 ug/l	18.53	0.03	
95 Mo	0.05 ug/l	9.94	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	100.46	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.01 ug/l	54.35	0.06	
118 Sn	0.02 ug/l	75.03	#######	
118 Sn	0.02 ug/l	36.24	#######	
118 Sn	0.02 ug/l	34.99	0.30	
121 Sb	0.03 ug/l	9.49	0.03	
137 Ba	0.00 ug/l	110.58	0.12	
205 Tl	0.01 ug/l	34.92	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.01 ug/l	13.26	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-42072.89	9.05	-41328.95	101.8	70 - 120	IS Fail
45 Sc	3095275.50	0.67	3008024.30	102.9	70 - 120	
45 Sc	425403.59	1.36	423303.94	100.5	70 - 120	
45 Sc	8639370.00	1.70	8607281.00	100.4	70 - 120	
72 Ge	799887.75	0.92	774468.63	103.3	70 - 120	
72 Ge	283411.25	0.73	282128.91	100.5	70 - 120	
72 Ge	1897265.50	1.53	1882554.90	100.8	70 - 120	
115 In	5586231.50	0.97	5556751.00	100.5	70 - 120	
115 In	3015473.30	1.15	3029632.80	99.5	70 - 120	
115 In	12146847.00	1.16	12097256.00	100.4	70 - 120	
159 Tb	16155302.00	0.85	16269544.00	99.3	70 - 120	
165 Ho	15737558.00	0.71	15819307.00	99.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Pass
ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\012_CCV.D\012_CCV.D#
Date Acquired: Jul 23 2012 12:05 pm
Operator: NBS
Sample Name: CCV 120723
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
7 (Li)	--------	ug/l	--------	50.00	90 - 110	
9 Be	49.60	ug/l	0.79	50.00	90 - 110	
11 B	51.10	ug/l	0.98	50.00	90 - 110	
23 Na	1238.00	ug/l	0.52	1250.00	90 - 110	
24 Mg	2526.00	ug/l	0.49	2500.00	90 - 110	
27 Al	990.40	ug/l	1.09	1000.00	90 - 110	
39 K	995.20	ug/l	0.67	1000.00	90 - 110	
44 Ca	2466.00	ug/l	0.42	2500.00	90 - 110	
47 Ti	48.94	ug/l	2.27	50.00	90 - 110	
51 V	49.00	ug/l	0.21	50.00	90 - 110	
52 Cr	49.04	ug/l	0.15	50.00	90 - 110	
55 Mn	48.94	ug/l	0.22	50.00	90 - 110	
56 Fe	993.80	ug/l	0.50	1000.00	90 - 110	
59 Co	49.21	ug/l	0.92	50.00	90 - 110	
60 Ni	49.66	ug/l	0.93	50.00	90 - 110	
63 Cu	49.23	ug/l	0.47	50.00	90 - 110	
65 Cu	48.96	ug/l	0.26	50.00	90 - 110	
66 Zn	49.71	ug/l	0.73	50.00	90 - 110	
75 As	49.67	ug/l	0.20	50.00	90 - 110	
78 Se	50.01	ug/l	1.21	50.00	90 - 110	
78 Se	49.30	ug/l	1.29	50.00	90 - 110	
88 Sr	50.00	ug/l	0.67	50.00	90 - 110	
88 Sr	49.73	ug/l	0.36	50.00	90 - 110	
95 Mo	49.04	ug/l	0.81	50.00	90 - 110	
106 (Cd)	--------	ug/l	--------	50.00	90 - 110	
107 Ag	24.88	ug/l	1.17	25.00	90 - 110	
108 (Cd)	--------	ug/l	--------	50.00	90 - 110	
111 Cd	49.56	ug/l	1.10	50.00	90 - 110	
118 Sn	49.77	ug/l	1.17	---	##### - #####	
118 Sn	49.48	ug/l	0.73	---	##### - #####	
118 Sn	49.50	ug/l	0.78	50.00	90 - 110	
121 Sb	52.78	ug/l	0.89	50.00	90 - 110	
137 Ba	49.50	ug/l	0.92	50.00	90 - 110	
205 Tl	51.14	ug/l	0.85	50.00	90 - 110	
206 (Pb)	--------	ug/l	--------	50.00	90 - 110	
207 (Pb)	--------	ug/l	--------	50.00	90 - 110	
208 Pb	52.39	ug/l	0.44	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-36962.72	9.13	-41328.95	89.4	70 - 120	IS Fail
45 Sc	3048428.00	0.52	3008024.30	101.3	70 - 120	
45 Sc	425742.41	0.55	423303.94	100.6	70 - 120	
45 Sc	8837992.00	0.79	8607281.00	102.7	70 - 120	
72 Ge	786063.00	1.03	774468.63	101.5	70 - 120	
72 Ge	283188.31	1.08	282128.91	100.4	70 - 120	
72 Ge	1919384.60	0.76	1882554.90	102.0	70 - 120	
115 In	5483121.50	0.63	5556751.00	98.7	70 - 120	
115 In	2961335.00	0.42	3029632.80	97.7	70 - 120	
115 In	12216251.00	0.54	12097256.00	101.0	70 - 120	
159 Tb	16140742.00	0.69	16269544.00	99.2	70 - 120	
165 Ho	15761536.00	0.35	15819307.00	99.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Pass
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\013_CCB.D\013_CCB.D#
Date Acquired: Jul 23 2012 12:12 pm
Operator: NBS
Sample Name: CCB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	--------	#######	
9 Be	0.01 ug/l	28.98	0.12	
11 B	-0.01 ug/l	2028.40	15.00	
23 Na	-9.93 ug/l	20.37	77.10	
24 Mg	0.41 ug/l	44.14	7.50	
27 Al	0.58 ug/l	23.47	3.96	
39 K	2.52 ug/l	104.72	19.20	
44 Ca	-7.69 ug/l	34.34	90.00	
47 Ti	0.02 ug/l	43.51	0.78	
51 V	0.01 ug/l	46.98	0.21	
52 Cr	-0.02 ug/l	32.90	0.12	
55 Mn	-0.01 ug/l	25.20	0.18	
56 Fe	0.13 ug/l	28.25	40.80	
59 Co	0.02 ug/l	14.80	0.09	
60 Ni	-0.01 ug/l	143.54	0.48	
63 Cu	-0.02 ug/l	29.44	0.39	
65 Cu	-0.02 ug/l	45.72	0.39	
66 Zn	0.03 ug/l	109.32	6.90	
75 As	0.00 ug/l	13.81	0.27	
78 Se	0.00 ug/l	1935.10	0.30	
78 Se	0.36 ug/l	43.44	0.30	Fail
88 Sr	0.02 ug/l	61.41	0.03	
88 Sr	0.01 ug/l	24.52	0.03	
95 Mo	0.08 ug/l	10.75	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	33.45	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.01 ug/l	112.87	0.06	
118 Sn	0.08 ug/l	13.90	#######	
118 Sn	0.08 ug/l	11.98	#######	
118 Sn	0.04 ug/l	14.86	0.30	
121 Sb	0.09 ug/l	3.60	0.03	Fail
137 Ba	0.01 ug/l	23.15	0.12	
205 Tl	0.01 ug/l	16.07	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.01 ug/l	14.05	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-41365.11	4.11	-41328.95	100.1	70 - 120	IS Fail
45 Sc	3109463.00	0.74	3008024.30	103.4	70 - 120	
45 Sc	436584.66	0.71	423303.94	103.1	70 - 120	
45 Sc	8702714.00	0.34	8607281.00	101.1	70 - 120	
72 Ge	794512.25	1.02	774468.63	102.6	70 - 120	
72 Ge	289162.22	1.20	282128.91	102.5	70 - 120	
72 Ge	1910565.90	0.18	1882554.90	101.5	70 - 120	
115 In	5651735.50	0.41	5556751.00	101.7	70 - 120	
115 In	3029258.30	0.13	3029632.80	100.0	70 - 120	
115 In	12209930.00	0.36	12097256.00	100.9	70 - 120	
159 Tb	16410115.00	0.53	16269544.00	100.9	70 - 120	
165 Ho	15792125.00	0.38	15819307.00	99.8	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Fail
ISTD: Fail

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\014SMPL.D\014SMPL.D#
Date Acquired: Jul 23 2012 12:18 pm
Operator: NBS
Sample Name: ICSA 120723
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.00
Total Dil Factor: 1.00

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	0.01	ug/l	0.01	16.22	1000	
11 B	1.24	ug/l	1.24	1.37	1000	
23 Na	89610.00	ug/l	89610.00	0.85	25000	>Cal
24 Mg	89070.00	ug/l	89070.00	0.41	50000	>Cal
27 Al	88750.00	ug/l	88750.00	0.72	20000	>Cal
39 K	87880.00	ug/l	87880.00	0.71	20000	>Cal
44 Ca	92120.00	ug/l	92120.00	0.78	50000	>Cal
47 Ti	1718.00	ug/l	1718.00	0.37	1000	>Cal
51 V	0.10	ug/l	0.10	8.87	1000	
52 Cr	1.58	ug/l	1.58	15.00	1000	
55 Mn	5.76	ug/l	5.76	1.34	1000	
56 Fe	90820.00	ug/l	90820.00	0.70	20000	>Cal
59 Co	1.94	ug/l	1.94	1.83	1000	
60 Ni	1.97	ug/l	1.97	2.48	1000	
63 Cu	0.75	ug/l	0.75	1.21	1000	
65 Cu	0.79	ug/l	0.79	3.08	1000	
66 Zn	1.40	ug/l	1.40	1.13	1000	
75 As	0.28	ug/l	0.28	2.03	1000	
78 Se	0.13	ug/l	0.13	8.50	1000	
78 Se	0.77	ug/l	0.77	9.40	1000	
88 Sr	1.32	ug/l	1.32	5.56	1000	
88 Sr	1.37	ug/l	1.37	1.25	1000	
95 Mo	1875.00	ug/l	1875.00	1.20	1000	>Cal
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	0.07	ug/l	0.07	5.89	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	0.88	ug/l	0.88	1.42	1000	
118 Sn	0.21	ug/l	0.21	1.97	#######	
118 Sn	0.22	ug/l	0.22	18.96	#######	
118 Sn	0.23	ug/l	0.23	1.31	1000	
121 Sb	1.18	ug/l	1.18	1.23	1000	
137 Ba	2.58	ug/l	2.58	5.35	1000	
205 Tl	0.08	ug/l	0.08	2.29	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	0.41	ug/l	0.41	1.41	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-37598.05	8.88	-41328.95	91.0	70 - 120	IS Fai
45 Sc	3054391.50	0.51	3008024.30	101.5	70 - 120	
45 Sc	436433.34	0.64	423303.94	103.1	70 - 120	
45 Sc	8890298.00	0.21	8607281.00	103.3	70 - 120	
72 Ge	769231.75	0.38	774468.63	99.3	70 - 120	
72 Ge	281075.50	0.23	282128.91	99.6	70 - 120	
72 Ge	1923643.30	0.95	1882554.90	102.2	70 - 120	
115 In	5221821.50	1.14	5556751.00	94.0	70 - 120	
115 In	2776903.00	0.79	3029632.80	91.7	70 - 120	
115 In	11448044.00	0.61	12097256.00	94.6	70 - 120	
159 Tb	16053537.00	0.92	16269544.00	98.7	70 - 120	
165 Ho	15595900.00	0.15	15819307.00	98.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

8 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

ICS-AB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\015ICSB.D\015ICSB.D#
Date Acquired: Jul 23 2012 12:25 pm
Acq. Method: 62A0723A.M
Operator: NBS
Sample Name: ICSAB 120723
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal. Update: Jul 23 2012 11:42 am
Sample Type: ICSAB
Dilution Factor: 1.00

Data Results:
Analytes: Pass
ISTD: Fail

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
7 (Li)	---	3	---	---	---		-	
9 Be	45	3	241.10	0.75	250	96.4	80 - 120	
11 B	45	3	0.86	13.58	---		-	
23 Na	45	2	90140.00	1.67	---		-	
24 Mg	45	2	89040.00	1.39	---		-	
27 Al	45	2	88440.00	0.98	---		-	
39 K	45	2	88130.00	1.12	---		-	
44 Ca	45	2	91870.00	1.53	---		-	
47 Ti	45	2	1696.00	1.02	2000	84.8	80 - 120	
51 V	45	2	250.80	1.85	250	100.3	80 - 120	
52 Cr	45	2	238.10	1.41	250	95.2	80 - 120	
55 Mn	45	2	243.80	1.56	250	97.5	80 - 120	
56 Fe	45	2	89920.00	1.53	---		-	
59 Co	45	2	212.60	1.90	250	85.0	80 - 120	
60 Ni	45	2	449.60	1.55	500	89.9	80 - 120	
63 Cu	45	2	219.60	1.42	250	87.8	80 - 120	
65 Cu	45	2	219.10	1.07	250	87.6	80 - 120	
66 Zn	115	2	488.00	0.51	500	97.6	80 - 120	
75 As	115	2	263.10	0.67	250	105.2	80 - 120	
78 Se	115	1	254.90	1.16	250	102.0	80 - 120	
78 Se	115	2	253.80	0.63	250	101.5	80 - 120	
88 Sr	115	2	1.28	2.80	---		-	
88 Sr	115	3	1.41	0.61	---		-	
95 Mo	115	3	2133.00	1.20	2000	106.7	80 - 120	
106 (Cd)	---	3	---	---	---		-	
107 Ag	115	3	479.00	7.77	500	95.8	80 - 120	
108 (Cd)	---	3	---	---	---		-	
111 Cd	115	3	450.60	0.21	500	90.1	80 - 120	
118 Sn	115	1	0.21	7.95	---		-	
118 Sn	115	2	0.22	9.45	---		-	
118 Sn	115	3	0.23	3.94	---		-	
121 Sb	115	3	249.30	1.10	250	99.7	80 - 120	
137 Ba	115	3	241.40	0.52	250	96.6	80 - 120	
205 Tl	159	3	227.20	0.05	250	90.9	80 - 120	
206 (Pb)	---	3	---	---	---		-	
207 (Pb)	---	3	---	---	---		-	
208 Pb	159	3	437.60	0.77	500	87.5	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3	-35443	14.51	-41329	85.8	70 - 120	IS Fail
45 Sc	1	3173175	2.09	3008024	105.5	70 - 120	
45 Sc	2	445878	1.47	423304	105.3	70 - 120	
45 Sc	3	8959869	1.06	8607281	104.1	70 - 120	
72 Ge	1	787580	1.18	774469	101.7	70 - 120	
72 Ge	2	286166	0.66	282129	101.4	70 - 120	
72 Ge	3	1957866	0.62	1882555	104.0	70 - 120	
115 In	1	5428667	1.26	5556751	97.7	70 - 120	
115 In	2	2857644	0.53	3029633	94.3	70 - 120	
115 In	3	11548093	0.63	12097256	95.5	70 - 120	
159 Tb	3	15976363	0.50	16269544	98.2	70 - 120	
165 Ho	3	15533992	0.96	15819307	98.2	70 - 120	

Tune File# 1 c:\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\12G23k00.B\004CALB.D\004CALB.D#

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

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\024_CCV.D\024_CCV.D#
Date Acquired: Jul 23 2012 01:32 pm
Operator: NBS
Sample Name: CCV 120723
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	Expected	QC Range(%)	Flag
7 (Li)	-------- ug/l	--------	50.00	90 - 110	
9 Be	49.44 ug/l	0.67	50.00	90 - 110	
11 B	49.03 ug/l	0.99	50.00	90 - 110	
23 Na	1218.00 ug/l	2.36	1250.00	90 - 110	
24 Mg	2498.00 ug/l	1.95	2500.00	90 - 110	
27 Al	977.70 ug/l	2.12	1000.00	90 - 110	
39 K	985.10 ug/l	2.42	1000.00	90 - 110	
44 Ca	2430.00 ug/l	1.38	2500.00	90 - 110	
47 Ti	47.89 ug/l	1.44	50.00	90 - 110	
51 V	48.79 ug/l	2.43	50.00	90 - 110	
52 Cr	49.04 ug/l	1.97	50.00	90 - 110	
55 Mn	48.80 ug/l	1.39	50.00	90 - 110	
56 Fe	973.20 ug/l	2.18	1000.00	90 - 110	
59 Co	48.59 ug/l	1.75	50.00	90 - 110	
60 Ni	48.69 ug/l	1.92	50.00	90 - 110	
63 Cu	48.38 ug/l	2.01	50.00	90 - 110	
65 Cu	48.32 ug/l	1.36	50.00	90 - 110	
66 Zn	50.19 ug/l	0.70	50.00	90 - 110	
75 As	49.86 ug/l	0.81	50.00	90 - 110	
78 Se	49.64 ug/l	1.15	50.00	90 - 110	
78 Se	50.19 ug/l	1.35	50.00	90 - 110	
88 Sr	50.53 ug/l	0.83	50.00	90 - 110	
88 Sr	50.45 ug/l	0.55	50.00	90 - 110	
95 Mo	50.00 ug/l	0.20	50.00	90 - 110	
106 (Cd)	-------- ug/l	--------	50.00	90 - 110	
107 Ag	24.84 ug/l	0.45	25.00	90 - 110	
108 (Cd)	-------- ug/l	--------	50.00	90 - 110	
111 Cd	49.60 ug/l	0.95	50.00	90 - 110	
118 Sn	49.74 ug/l	1.06	---	##### - #####	
118 Sn	49.48 ug/l	1.45	---	##### - #####	
118 Sn	49.65 ug/l	0.60	50.00	90 - 110	
121 Sb	53.03 ug/l	0.38	50.00	90 - 110	
137 Ba	49.68 ug/l	1.02	50.00	90 - 110	
205 Tl	50.98 ug/l	0.55	50.00	90 - 110	
206 (Pb)	-------- ug/l	--------	50.00	90 - 110	
207 (Pb)	-------- ug/l	--------	50.00	90 - 110	
208 Pb	51.97 ug/l	0.08	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-37208.29	23.54	-41328.95	90.0	70 - 120	IS Fail
45 Sc	3207763.50	0.47	3008024.30	106.6	70 - 120	
45 Sc	451396.47	1.87	423303.94	106.6	70 - 120	
45 Sc	9114044.00	0.70	8607281.00	105.9	70 - 120	
72 Ge	820047.81	0.42	774468.63	105.9	70 - 120	
72 Ge	296744.84	1.32	282128.91	105.2	70 - 120	
72 Ge	1965454.80	0.50	1882554.90	104.4	70 - 120	
115 In	5736711.50	0.79	5556751.00	103.2	70 - 120	
115 In	3076324.30	1.59	3029632.80	101.5	70 - 120	
115 In	12421903.00	0.30	12097256.00	102.7	70 - 120	
159 Tb	16660003.00	0.38	16269544.00	102.4	70 - 120	
165 Ho	16160466.00	0.80	15819307.00	102.2	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Pass
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\026_CCB.D\026_CCB.D#
Date Acquired: Jul 23 2012 01:45 pm
Operator: NBS
Sample Name: CCB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	--------	#######	
9 Be	0.00 ug/l	68.10	0.12	
11 B	-1.57 ug/l	8.40	15.00	
23 Na	-19.39 ug/l	9.24	77.10	
24 Mg	-0.11 ug/l	32.48	7.50	
27 Al	0.65 ug/l	37.42	3.96	
39 K	-0.55 ug/l	422.51	19.20	
44 Ca	-13.14 ug/l	10.64	90.00	
47 Ti	0.05 ug/l	190.52	0.78	
51 V	0.00 ug/l	97.27	0.21	
52 Cr	-0.06 ug/l	3.59	0.12	
55 Mn	-0.02 ug/l	39.89	0.18	
56 Fe	0.03 ug/l	92.73	40.80	
59 Co	-0.01 ug/l	5.06	0.09	
60 Ni	-0.05 ug/l	20.94	0.48	
63 Cu	-0.03 ug/l	12.14	0.39	
65 Cu	-0.03 ug/l	27.56	0.39	
66 Zn	0.01 ug/l	522.05	6.90	
75 As	0.00 ug/l	201.72	0.27	
78 Se	-0.02 ug/l	28.35	0.30	
78 Se	0.30 ug/l	54.24	0.30	
88 Sr	0.01 ug/l	28.85	0.03	
88 Sr	0.00 ug/l	46.66	0.03	
95 Mo	0.04 ug/l	11.71	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.01 ug/l	25.03	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.00 ug/l	126.59	0.06	
118 Sn	0.02 ug/l	23.26	#######	
118 Sn	0.01 ug/l	84.96	#######	
118 Sn	0.01 ug/l	36.38	0.30	
121 Sb	0.03 ug/l	13.44	0.03	Fail
137 Ba	0.01 ug/l	47.38	0.12	
205 Tl	0.01 ug/l	3.62	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.02 ug/l	7.77	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-46601.30	1.93	-41328.95	112.8	70 - 120	IS Fail
45 Sc	3258366.00	1.08	3008024.30	108.3	70 - 120	
45 Sc	452200.25	0.37	423303.94	106.8	70 - 120	
45 Sc	8993459.00	0.85	8607281.00	104.5	70 - 120	
72 Ge	834886.63	1.35	774468.63	107.8	70 - 120	
72 Ge	300371.97	0.87	282128.91	106.5	70 - 120	
72 Ge	1964668.50	0.86	1882554.90	104.4	70 - 120	
115 In	5902867.00	0.62	5556751.00	106.2	70 - 120	
115 In	3136632.50	0.75	3029632.80	103.5	70 - 120	
115 In	12490374.00	0.82	12097256.00	103.2	70 - 120	
159 Tb	16903932.00	1.12	16269544.00	103.9	70 - 120	
165 Ho	16315825.00	1.13	15819307.00	103.1	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Fail
ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\038_CCV.D\038_CCV.D#
Date Acquired: Jul 23 2012 03:07 pm
Operator: NBS
Sample Name: CCV 120723
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)		Flag
7 (Li)	--------	ug/l	--------	50.00	90 -	110	
9 Be	50.82	ug/l	0.70	50.00	90 -	110	
11 B	60.80	ug/l	0.41	50.00	90 -	110	Fail
23 Na	1289.00	ug/l	0.40	1250.00	90 -	110	
24 Mg	2570.00	ug/l	0.63	2500.00	90 -	110	
27 Al	1010.00	ug/l	0.91	1000.00	90 -	110	
39 K	1010.00	ug/l	0.97	1000.00	90 -	110	
44 Ca	2527.00	ug/l	0.75	2500.00	90 -	110	
47 Ti	48.23	ug/l	2.50	50.00	90 -	110	
51 V	48.21	ug/l	1.09	50.00	90 -	110	
52 Cr	47.74	ug/l	1.05	50.00	90 -	110	
55 Mn	48.54	ug/l	0.37	50.00	90 -	110	
56 Fe	970.00	ug/l	0.78	1000.00	90 -	110	
59 Co	47.62	ug/l	0.81	50.00	90 -	110	
60 Ni	47.79	ug/l	0.59	50.00	90 -	110	
63 Cu	47.35	ug/l	1.79	50.00	90 -	110	
65 Cu	47.08	ug/l	0.91	50.00	90 -	110	
66 Zn	51.38	ug/l	0.35	50.00	90 -	110	
75 As	51.04	ug/l	0.81	50.00	90 -	110	
78 Se	50.77	ug/l	0.44	50.00	90 -	110	
78 Se	51.66	ug/l	0.32	50.00	90 -	110	
88 Sr	51.25	ug/l	1.09	50.00	90 -	110	
88 Sr	50.81	ug/l	1.01	50.00	90 -	110	
95 Mo	50.10	ug/l	0.93	50.00	90 -	110	
106 (Cd)	--------	ug/l	--------	50.00	90 -	110	
107 Ag	24.99	ug/l	1.82	25.00	90 -	110	
108 (Cd)	--------	ug/l	--------	50.00	90 -	110	
111 Cd	49.92	ug/l	1.71	50.00	90 -	110	
118 Sn	49.95	ug/l	0.31	---	##### -	#####	
118 Sn	49.60	ug/l	0.56	---	##### -	#####	
118 Sn	50.19	ug/l	1.41	50.00	90 -	110	
121 Sb	53.47	ug/l	2.63	50.00	90 -	110	
137 Ba	49.86	ug/l	1.62	50.00	90 -	110	
205 Tl	50.30	ug/l	0.77	50.00	90 -	110	
206 (Pb)	--------	ug/l	--------	50.00	90 -	110	
207 (Pb)	--------	ug/l	--------	50.00	90 -	110	
208 Pb	51.71	ug/l	0.38	50.00	90 -	110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-46384.73	10.88	-41328.95	112.2	70 -	120	IS Fail
45 Sc	3148572.80	0.41	3008024.30	104.7	70 -	120	
45 Sc	455889.47	1.12	423303.94	107.7	70 -	120	
45 Sc	9181851.00	0.79	8607281.00	106.7	70 -	120	
72 Ge	809349.19	0.46	774468.63	104.5	70 -	120	
72 Ge	291443.75	0.37	282128.91	103.3	70 -	120	
72 Ge	1986232.80	0.29	1882554.90	105.5	70 -	120	
115 In	5566992.00	0.59	5556751.00	100.2	70 -	120	
115 In	2998159.00	0.95	3029632.80	99.0	70 -	120	
115 In	12443523.00	1.27	12097256.00	102.9	70 -	120	
159 Tb	16734999.00	0.75	16269544.00	102.9	70 -	120	
165 Ho	16223907.00	0.28	15819307.00	102.6	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Fail
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\040_CCB.D\040_CCB.D#
Date Acquired: Jul 23 2012 03:20 pm
Operator: NBS
Sample Name: CCB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	--------	#######	
9 Be	0.00	ug/l	628.28	0.12	
11 B	5.64	ug/l	2.47	15.00	
23 Na	6.28	ug/l	27.52	77.10	
24 Mg	0.40	ug/l	37.54	7.50	
27 Al	1.14	ug/l	18.54	3.96	
39 K	8.76	ug/l	45.49	19.20	
44 Ca	-12.54	ug/l	13.15	90.00	
47 Ti	0.02	ug/l	59.79	0.78	
51 V	0.01	ug/l	43.11	0.21	
52 Cr	-0.06	ug/l	3.00	0.12	
55 Mn	-0.03	ug/l	20.84	0.18	
56 Fe	0.03	ug/l	109.87	40.80	
59 Co	-0.01	ug/l	52.61	0.09	
60 Ni	-0.05	ug/l	20.44	0.48	
63 Cu	-0.03	ug/l	13.37	0.39	
65 Cu	-0.02	ug/l	31.00	0.39	
66 Zn	0.05	ug/l	67.78	6.90	
75 As	0.00	ug/l	140.00	0.27	
78 Se	-0.02	ug/l	104.66	0.30	
78 Se	0.46	ug/l	14.69	0.30	Fail
88 Sr	0.02	ug/l	51.01	0.03	
88 Sr	0.01	ug/l	6.84	0.03	
95 Mo	0.03	ug/l	27.08	0.21	
106 (Cd)	--------	ug/l	--------	#######	
107 Ag	0.00	ug/l	53.78	0.09	
108 (Cd)	--------	ug/l	--------	#######	
111 Cd	0.01	ug/l	63.57	0.06	
118 Sn	0.01	ug/l	44.20	#######	
118 Sn	0.02	ug/l	55.29	#######	
118 Sn	0.01	ug/l	8.30	0.30	
121 Sb	0.03	ug/l	16.15	0.03	Fail
137 Ba	0.01	ug/l	76.73	0.12	
205 Tl	0.01	ug/l	6.79	0.03	
206 (Pb)	--------	ug/l	--------	#######	
207 (Pb)	--------	ug/l	--------	#######	
208 Pb	-0.02	ug/l	2.57	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-45872.62	15.67	-41328.95	111.0	70 - 120	IS Fail
45 Sc	3225425.30	0.94	3008024.30	107.2	70 - 120	
45 Sc	455256.84	0.90	423303.94	107.5	70 - 120	
45 Sc	9025179.00	0.84	8607281.00	104.9	70 - 120	
72 Ge	829819.56	0.95	774468.63	107.1	70 - 120	
72 Ge	294491.41	1.41	282128.91	104.4	70 - 120	
72 Ge	1986792.00	0.34	1882554.90	105.5	70 - 120	
115 In	5757836.50	0.31	5556751.00	103.6	70 - 120	
115 In	3079085.80	1.03	3029632.80	101.6	70 - 120	
115 In	12604958.00	0.38	12097256.00	104.2	70 - 120	
159 Tb	16666065.00	1.06	16269544.00	102.4	70 - 120	
165 Ho	16233445.00	0.44	15819307.00	102.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Fail
ISTD: Fail

METALS
Raw Data

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6020	LEAD (PB) (DISSOL	0.22 U	0.5	0.22	0.11	ug/L	07/23/12	07/23/12	#602D-120723A-AY65167

Printed: 07/24/12 9:38:38 AM
Metals SC-Blank-REG MDLs

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\019SMPL.D\019SMPL.D#
Date Acquired: Jul 23 2012 12:58 pm
Operator: NBS
Sample Name: 120723A-3015-BLK
Misc Info: 120723A-3015
Vial Number: 3101
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	#VALUE!	--------	0	
9 Be	0.00 ug/l	0.00	101.03	1000	
11 B	-0.54 ug/l	-0.60	23.92	1000	
23 Na	-9.48 ug/l	-10.53	24.91	25000	
24 Mg	0.68 ug/l	0.75	15.39	50000	
27 Al	0.72 ug/l	0.80	27.58	20000	
39 K	3.46 ug/l	3.84	104.28	20000	
44 Ca	-9.56 ug/l	-10.62	23.29	50000	
47 Ti	0.11 ug/l	0.13	61.04	1000	
51 V	0.00 ug/l	0.00	187.34	1000	
52 Cr	0.09 ug/l	0.10	2.59	1000	
55 Mn	0.03 ug/l	0.04	24.16	1000	
56 Fe	2.25 ug/l	2.50	6.31	20000	
59 Co	0.25 ug/l	0.28	8.41	1000	
60 Ni	-0.03 ug/l	-0.03	21.25	1000	
63 Cu	0.06 ug/l	0.06	14.62	1000	
65 Cu	0.05 ug/l	0.05	41.40	1000	
66 Zn	0.25 ug/l	0.28	16.07	1000	
75 As	0.01 ug/l	0.01	13.09	1000	
78 Se	0.01 ug/l	0.01	54.14	1000	
78 Se	0.64 ug/l	0.71	8.48	1000	
88 Sr	0.00 ug/l	0.00	164.49	1000	
88 Sr	0.00 ug/l	0.00	197.18	1000	
95 Mo	0.23 ug/l	0.26	3.93	1000	
106 (Cd)	-------- ug/l	#VALUE!	--------	#######	
107 Ag	0.82 ug/l	0.91	7.30	500	
108 (Cd)	-------- ug/l	#VALUE!	--------	#######	
111 Cd	0.04 ug/l	0.04	6.12	1000	
118 Sn	0.13 ug/l	0.14	7.71	#######	
118 Sn	0.13 ug/l	0.14	3.28	#######	
118 Sn	0.11 ug/l	0.12	9.34	1000	
121 Sb	0.13 ug/l	0.14	5.45	1000	
137 Ba	0.00 ug/l	0.00	121.47	1000	
205 Tl	0.08 ug/l	0.09	3.11	1000	
206 (Pb)	-------- ug/l	#VALUE!	--------	#######	
207 (Pb)	-------- ug/l	#VALUE!	--------	#######	
208 Pb	-0.02 ug/l	-0.03	3.12	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-41515.17	17.03	-41328.95	100.5	70 - 120	IS Fai
45 Sc	3134014.50	1.22	3008024.30	104.2	70 - 120	
45 Sc	431622.16	0.76	423303.94	102.0	70 - 120	
45 Sc	9041910.00	1.00	8607281.00	105.0	70 - 120	
72 Ge	790204.25	0.87	774468.63	102.0	70 - 120	
72 Ge	281787.47	2.04	282128.91	99.9	70 - 120	
72 Ge	1936014.10	0.17	1882554.90	102.8	70 - 120	
115 In	5556259.00	0.49	5556751.00	100.0	70 - 120	
115 In	2981638.30	0.15	3029632.80	98.4	70 - 120	
115 In	12374886.00	0.94	12097256.00	102.3	70 - 120	
159 Tb	16686016.00	0.57	16269544.00	102.6	70 - 120	
165 Ho	16112874.00	0.15	15819307.00	101.9	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Pass
ISTD: Fail

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6020	LEAD (PB) (DISSOLVED)	50.0	45.5	91.0	80-120	07/23/12	07/23/12	#602D-120723A-AY65167

Comments: _____

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\021SMPL.D\021SMPL.D#
Date Acquired: Jul 23 2012 01:11 pm
Operator: NBS
Sample Name: 120723A-3015-LCS
Misc Info: 120723A-3015
Vial Number: 3103
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	#VALUE!	--------	0	
9 Be	7.49 ug/l	8.32	1.00	1000	
11 B	37.46 ug/l	41.62	1.36	1000	
23 Na	3667.00 ug/l	4074.04	1.15	25000	
24 Mg	3760.00 ug/l	4177.36	1.30	50000	
27 Al	307.00 ug/l	341.08	1.70	20000	
39 K	767.90 ug/l	853.14	1.74	20000	
44 Ca	3952.00 ug/l	4390.67	2.20	50000	
47 Ti	47.17 ug/l	52.41	2.99	1000	
51 V	39.18 ug/l	43.53	1.78	1000	
52 Cr	38.95 ug/l	43.27	1.71	1000	
55 Mn	39.16 ug/l	43.51	1.76	1000	
56 Fe	172.60 ug/l	191.76	1.33	20000	
59 Co	38.06 ug/l	42.28	1.55	1000	
60 Ni	38.05 ug/l	42.27	1.84	1000	
63 Cu	37.17 ug/l	41.30	1.89	1000	
65 Cu	37.09 ug/l	41.21	2.15	1000	
66 Zn	75.57 ug/l	83.96	0.44	1000	
75 As	36.26 ug/l	40.28	0.94	1000	
78 Se	33.81 ug/l	37.56	0.78	1000	
78 Se	34.37 ug/l	38.19	1.94	1000	
88 Sr	39.64 ug/l	44.04	0.91	1000	
88 Sr	39.14 ug/l	43.48	1.36	1000	
95 Mo	46.06 ug/l	51.17	1.69	1000	
106 (Cd)	-------- ug/l	#VALUE!	--------	#######	
107 Ag	17.93 ug/l	19.92	1.04	500	
108 (Cd)	-------- ug/l	#VALUE!	--------	#######	
111 Cd	7.41 ug/l	8.23	1.74	1000	
118 Sn	47.18 ug/l	52.42	0.07	#######	
118 Sn	47.95 ug/l	53.27	1.12	#######	
118 Sn	47.76 ug/l	53.06	1.40	1000	
121 Sb	48.00 ug/l	53.33	1.91	1000	
137 Ba	38.21 ug/l	42.45	1.63	1000	
205 Tl	39.51 ug/l	43.90	0.49	1000	
206 (Pb)	-------- ug/l	#VALUE!	--------	#######	
207 (Pb)	-------- ug/l	#VALUE!	--------	#######	
208 Pb	40.96 ug/l	45.51	1.51	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-42417.97	6.61	-41328.95	102.6	70 - 120	IS Fai
45 Sc	3132146.50	0.85	3008024.30	104.1	70 - 120	
45 Sc	438590.66	1.66	423303.94	103.6	70 - 120	
45 Sc	8973542.00	0.43	8607281.00	104.3	70 - 120	
72 Ge	781391.50	0.41	774468.63	100.9	70 - 120	
72 Ge	283396.16	0.60	282128.91	100.4	70 - 120	
72 Ge	1916729.60	0.53	1882554.90	101.8	70 - 120	
115 In	5655188.50	0.79	5556751.00	101.8	70 - 120	
115 In	2993471.00	0.53	3029632.80	98.8	70 - 120	
115 In	12415622.00	1.62	12097256.00	102.6	70 - 120	
159 Tb	16697993.00	0.82	16269544.00	102.6	70 - 120	
165 Ho	16175574.00	0.28	15819307.00	102.3	70 - 120	

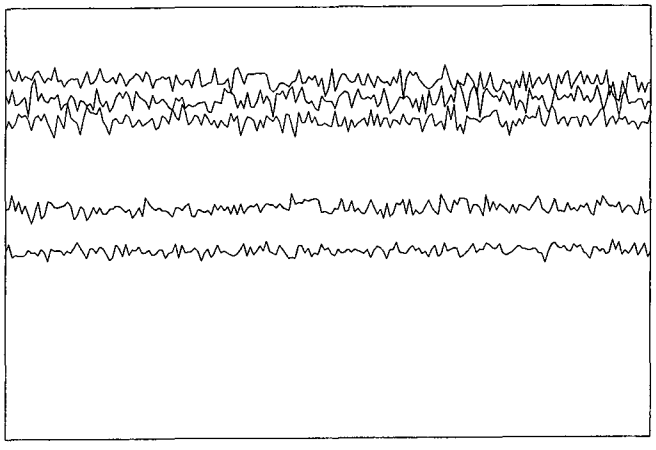
ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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

Data Results:
Analytes: Pass
ISTD: Fail

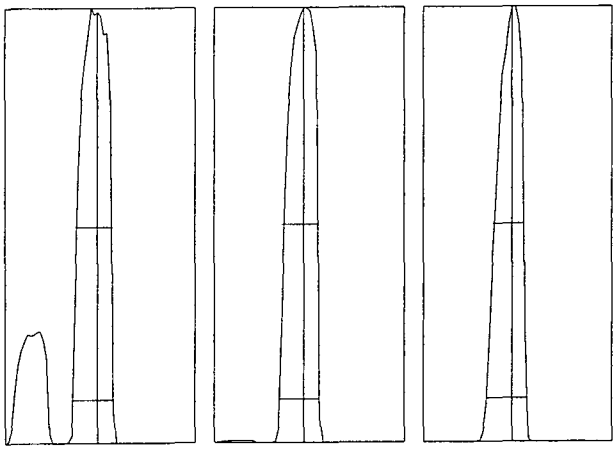
Tune Report

Tune File : NG_HMI.u
Comment : 120723



Integration Time:	0.1000 sec	
Sampling Period:	0.7200 sec	
n:	200	
Oxide:	156/140	0.740%
Doubly Charged:	70/140	0.995%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	16367.0	16532.4	2.08	2.20
89	50,000	37552.0	36668.9	2.15	2.80
205	50,000	26129.0	26508.7	2.48	7.40
156/140	2	0.770%	0.719%	7.34	
70/140	2	0.962%	0.970%	5.65	
140	50,000	38464.0	39095.6	2.26	4.80
59	50,000	21370.0	21531.4	2.38	2.70



m/z:	7	89	205
Height:	16,163	37,021	26,702
Axis:	7.00	88.95	204.95
W-50%:	0.60	0.60	0.50
W-10%:	0.6500	0.6500	0.6500

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Jul 23, 2012 10:45:06
Printed : Jul 23, 2012 10:45:08

Tune Report

Tune File : NG_HMI.u
Comment : 120723

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	128
RF Matching	:	1.7 V	Extract 2	:	-140 V	AMU Offset	:	129
Smpl Depth	:	8 mm	Omega Bias-ce	:	-24 V	Axis Gain	:	0.9999
Torch-H	:	0.2 mm	Omega Lens-ce	:	-0.4 V	Axis Offset	:	-0.05
Torch-V	:	-0.2 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.5 L/min	QP Focus	:	5 V			
Makeup Gas	:	0.5 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1720 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1350 V
S/C Temp	:	2 degC	OctP Bias	:	-6 V			

===Reaction Cell===								
Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

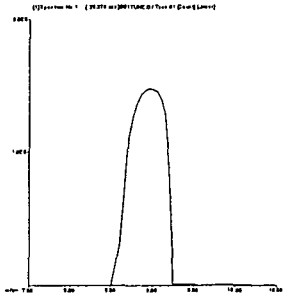
Generated : Jul 23, 2012 10:45:06
Printed : Jul 23, 2012 10:45:10

200.8 QC Tune Report

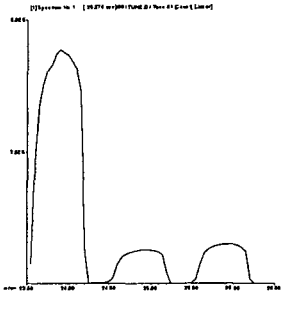
Data File: C:\ICPCHEM\1\DATA\12G23k00.B\001TUNE.D
Date Acquired: Jul 23 2012 10:53 am
Acq. Method: TN200_8.M
Operator: NBS
Sample Name: 100ppb Tune sol
Misc Info:
Vial Number: 1303
Current Method: C:\ICPCHEM\1\METHODS\TN200_8.M

RSD (%)

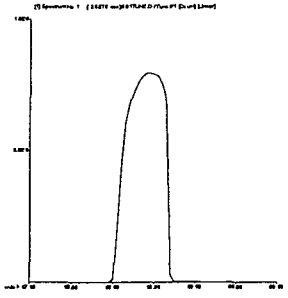
Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
9 Be	789604	786311	783280	790871	795505	792052	**0.90**	5.00	
24 Mg	2414013	2388869	2415273	2402944	2433304	2429676	**1.48**	5.00	
59 Co	4416874	4413714	4443242	4412276	4404885	4410252	**0.67**	5.00	
115 In	22042886	22072398	22207138	21950680	22067872	21916340	**0.77**	5.00	
208 Pb	3431875	3417255	3453186	3434662	3446885	3407388	**0.70**	5.00	



9 Be
Mass Calib.
Actual: 8.95
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



24 Mg
Mass Calib.
Actual: 23.95
Required: 23.90 - 24.10
Flag:
Peak Width
Actual: 0.60
Required: 0.80
Flag:



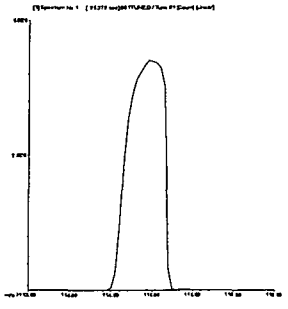
59 Co

Mass Calib.

Actual:	58.95		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



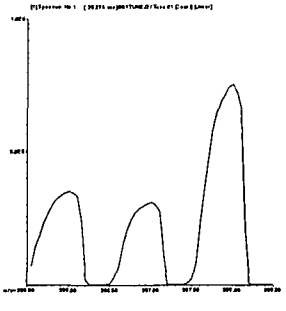
115 In

Mass Calib.

Actual:	115.00		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.80		
Flag:			

Tune Result: Pass

054

Metals Standards Log Book # 35 Page # 055

SAM 7/16/12
6020 / 6020A
(A)

ICP-MS STANDARDS 6020/6020A/3015/3051A
Today's Date: 07/16/12
Expires: 07/23/12
Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL Di Water
Lot #L08023
20mL HCL / 2000mL Di Water
Lot #51305
Expires: 07/23/12

Internal Standard Mix: Prep 07/12/2012

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 07/17/12

Standard 3 07/23/12

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 07/17/12

Intermediate-Sb 07/23/12
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL
ICV-Sb 07/23/12
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL

SAM 7/16/12

Standard 2 07/23/12

Amount	STD	
500 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

Standard 1 07/23/12

Amount	STD	
50 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

ICP-MS ICV 07/23/12

Amount	STD		
50 uL	QCS ICV A	CPI	11C184-30611
50 uL	QCS ICV B	CPI	11C184-30612

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/16/12

ICSA Prep: 07/23/12

1 mL	ICSA	CPI	12E134

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/16/12

ICSAB Prep: 07/23/12

1mL	ICSA	CPI	12E134
0.025mL	INT	O2SI	1032370-30265

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/16/12

ICP-LDR 07/23/12

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 07/16/12

RJS 7/16/12

Hg WORKING STANDARD

1ml X 10ug/ml Hg STOCK STD. (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
1ml X 10ug/ml Hg STOCK ICV (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
Final concentration is 50 ug/L. Expires.....7/16/12.....

.02030

SAM 7/17/12
6020 / 6020A
(A)

ICP-MS STANDARDS 6020/6020A/3015/3051A
Today's Date: 07/17/12
Expires: 07/24/12
Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL Di Water
Lot #L08023
20mL HCL / 2000mL Di Water
Lot #51305
Expires: 07/24/12

Internal Standard Mix: Prep 07/12/2012 NBS 07/18/12

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 07/17/12

Standard 3 07/24/12

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 07/17/12

Intermediate-Sb 07/24/12
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL
ICV-Sb 07/24/12
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL

SAM 7/17/12

Standard 2 07/24/12

Amount	STD	
500 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

Standard 1 07/24/12

Amount	STD	
50 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

ICP-MS ICV 07/24/12

Amount	STD		
50 uL	QCS ICV A	CPI	11C184-30611
50 uL	QCS ICV B	CPI	11C184-30612

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

ICSA Prep: 07/24/12

1 mL	ICSA	CPI	12E134

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/17/12

ICSAB Prep: 07/24/12

1mL	ICSA	CPI	12E134
0.025mL	INT	O2Si	1032370-30265

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/17/12

ICP-LDR 07/24/12

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 07/17/12

SAM 7/17/12

SAM 7/17/12

Internal Standard Concentration

Amt	STD	Element	Vendor	Lot#	Final Conc. in Std	Expires
500uL	1000 ug/mL	Li	CPI	10L079-27839	5000 ug/L	06/10/12
500uL	1000 ug/mL	In	CPI	10J155-28574	5000 ug/L	09/25/12
500uL	1000 ug/mL	Ho	CPI	10A107-28576	5000 ug/L	09/25/12
500uL	1000 ug/mL	Tb	CPI	11B054-28575	5000 ug/L	09/25/12
500uL	1000 ug/mL	Sc	o2si	1024073-28527	5000 ug/L	08/18/12
500uL	1000 ug/mL	Ge	Environmental Express	1116011-29381	5000 ug/L	02/08/13

Prep:	07/17/12	NBS	Prep in -	1%HNO3/1.0%HCL:	Lot #L08023/51305	in 100mL
Expires:	08/16/12					

Metals Standards Log Book # 35 Page # 059

NBS 07/23/12

ICP-MS STANDARDS 6020/6020A/3015/3051A
Today's Date: 07/23/12
Expires: 07/30/12
Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL DI Water
Lot #L08023
20mL HCL / 2000mL DI Water
Lot #51305
Expires: 07/30/12

Internal Standard Mix: Prep 07/17/2012

Standard 4

Amount	STD	Manufacturer	Lot #
50 uL	CCV-A	ABS 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 07/23/12

Standard 3 07/30/12

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 07/23/12

Intermediate-Sb 07/30/12
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL
ICV-Sb 07/30/12
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL

Standard 2 07/30/12

Amount	STD	
500 uL	Standard 4	07/23/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/23/12

Standard 1 07/30/12

Amount	STD	
50 uL	Standard 4	07/23/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/23/12

ICP-MS ICV 07/30/12

Amount	STD		
50 uL	QCS ICV A	CPI	11C184-30611
50 uL	QCS ICV B	CPI	11C184-30612

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/23/12

ICSA Prep: 07/30/12

1 mL	ICSA	CPI	12E134

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/23/12

ICSAB Prep: 07/30/12

1mL	ICSA	CPI	12E134
0.025mL	INT	O2SI	1032370-30265

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/23/12

ICP-LDR 07/30/12

Amount	STD		
50 uL	CCV-A	ABS 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 07/23/12

1%HNO3 / 5%HCl BLK

AMT.	REAGENT	MANUFACTURER	LOT	OPEN DATE
100 mL	HCL	EMD	51258	07/13/12
20 mL	HNO3	JT BAKER	L10023	07/12/12

Prepared in 2000 ml DI Water

STD 1 / LDL 6010B/6010C

AMT.	STD	MANUFACTURER	LOT	EXP DATE
0.5 mL	6010 LDL	ABSOLUTE	091409-25205	09/14/12

Prepared in 50 ml 1%HNO3/5%HCl

STD 3 / HDL 6010B/6010C

1ML	CCV-A	ABSOLUTE	012512-30306	01/25/15
1ML	CCV-B	ABSOLUTE	021312-30339	02/13/15
1ML	CCV-C	ABSOLUTE	012512-30307	01/25/15

Prepared in 100 ml 1%HNO3 / 5%HCl

STD 2 / CCV1 6010B/6010C/6010C

AMT.	STD	PREP DATE	EXP DATE
25mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

CCV2 6010B/6010C

AMT.	STD	PREP DATE	EXP DATE
15mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

6010B/6010C ICSA

AMT.	STD	MANUFACTURER	LOT	EXP DATE
1mL	Al	CPI	11J015-30092	05/28/13
1mL	Ca	CPI	11J031-29989	05/14/13
1mL	Mg	CPI	11K178-30093	05/28/13
1mL	Fe	O2SI	1030787-30616	05/17/13

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICSAB

1mL	Al	CPI	11J015-30092	05/28/13
1mL	Ca	CPI	11J031-29989	05/14/13
1mL	Mg	CPI	11K178-30093	05/28/13
1mL	Fe	O2SI	1030787-30616	05/17/13
0.5mL	INT SPECIAL MIX	O2SI	1032370-30265	02/01/13

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICV

0.5ML	QCS ICV A	CPI	12C184-30611	09/20/13
0.5ML	QCS ICV B	CPI	12C184-30612	09/20/13

Prepared in 50ml 1%HNO3/5%HCl

YITTRIUM INTERNAL STANDARD

2.0 mL	Yittrium	O2SI	1035051-30566	09/28/13

Prepared in 2000 ml 1%HNO3/5%HCl

BA 7-23-12

2%HNO3 / 2%HCl BLK

AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
40 mL	HCL	BDH	51258	07/13/12
40 mL	HNO3	JT BAKER	L10023	07/12/12

Prepared in 2000 ml DI Water

STD 1 / LDL 200.7

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.250 mL	200.7 LDL	O2SI	1028857-29667	11/01/12

Prepared in 50 ml 2%HNO3/2%HCl

STD 3 / HDL 200.7

0.5 mL	CCV-A	ABSOLUTE	012512-30306	01/25/15
0.5 mL	CCV-B	ABSOLUTE	021312-30339	02/13/15
0.5 mL	CCV-C	ABSOLUTE	012512-30307	01/25/15

Prepared in 100 ml 2%HNO3/2%HCl

STD 2 / CCV1 200.7

AMOUNT	STD	PREP DATE	EXP DATE
25mL	STD 3	TODAY	1 WEEK
25mL	2%HNO3/2%HCl	TODAY	1 WEEK

CCV2 200.7

15mL	STD 3	TODAY	1 WEEK
25mL	2%HNO3/2%HCl	TODAY	1 WEEK

200.7 ICV

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.25ML	QCS ICV A	CPI	12C184-30611	09/20/13
0.25ML	QCS ICV B	CPI	12C184-30612	09/20/13

Prepared in 50ml 2%HNO3/2%HCl

200.7 ICSA

0.5mL	Al	CPI	11J015-30092	05/28/13
0.5mL	Ca	CPI	11J031-29989	05/14/13
0.5mL	Mg	CPI	11K178-30093	05/28/13
0.5mL	Fe	O2SI	1030787-30616	05/17/13

Prepared in 50 ml 2%HNO3/2%HCl

200.7 ICSAB

0.5mL	Al	CPI	11J015-30092	05/28/13
0.5mL	Ca	CPI	11J031-29989	05/14/13
0.5mL	Mg	CPI	11K178-30093	05/28/13
0.5mL	Fe	O2SI	1030787-30616	05/17/13
0.25mL	INT SPECIAL MIX	O2SI	1032370-30265	2/1/13

Prepared in 50 ml 2%HNO3/2%HCl

Metals Digestion Worksheet

Method Name 3015 Digestion **Prep Method** M3015 **Set** 120723A **Units** mL

Spikes	
Spiked ID 1	LCSW LOT# 1036660-30911
Spiked ID 2	LCSW LOT# 1036821-30981
Spiked ID 3	
Spiked ID 4	
Spiked By	NM Date: 07/23/12 9:00:00 AM
Witnessed By	LO Date: 07/23/12 9:00:00 AM

Starting Temp:	20 c
Ending Temp:	170 c
Temperature Type:	Microwave
Sufficient Vol for Matrix QC:	Yes
End Date/Time	07/23/12 10:00

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	120723A Blk				45mL	50mL	07/23/12 9:00	equip: Venus
2	120723A LCS		90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
3	AY64692	AY64692W06			45mL	50mL	07/23/12 9:00	equip: Venus
4	AY65112	AY65112W08			45mL	50mL	07/23/12 9:00	equip: Venus
5	AY65113	AY65113W08			45mL	50mL	07/23/12 9:00	equip: Venus
6	AY65144	AY65144W23			45mL	50mL	07/23/12 9:00	equip: Venus
7	AY65144 MS	AY65144W24	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
8	AY65144 MSD	AY65144W24	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
9	AY65145	AY65145W08			45mL	50mL	07/23/12 9:00	equip: Venus
10	AY65146	AY65146W08			45mL	50mL	07/23/12 9:00	equip: Venus
11	AY65147	AY65147W08			45mL	50mL	07/23/12 9:00	equip: Venus
12	AY65148	AY65148W08			45mL	50mL	07/23/12 9:00	equip: Venus
13	AY65149	AY65149W08			45mL	50mL	07/23/12 9:00	equip: Venus
14	AY65150	AY65150W08			45mL	50mL	07/23/12 9:00	equip: Venus
15	AY65151	AY65151W08			45mL	50mL	07/23/12 9:00	equip: Venus
16	AY65166	AY65166W08			45mL	50mL	07/23/12 9:00	equip: Venus
17	AY65167	AY65167W15			45mL	50mL	07/23/12 9:00	equip: Venus
18	AY65167 MS	AY65167W16	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
19	AY65167 MSD	AY65167W16	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus

Solvent and Lot#
HNO3 J.T.B L10023 0229

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	JA
Date	7-23-12
Time	10:00
Moved to	metals

Technician's Initials	
Scanned By	lo
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	07/23/12 8:25:49 AM

Reviewed By: JA **Date:** 7-23-12

6020/200.8 Injection Log

Directory: K:\ICP-MS Optimus\raw data output csv\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	23 Jul 2012	11:12	Calibration Blank		120723Arev	1.
2	23 Jul 2012	11:18	120723 Standard 1		120723Arev	1.
3	23 Jul 2012	11:25	120723 Standard 2		120723Arev	1.
4	23 Jul 2012	11:32	120723 Standard 3		120723Arev	1.
5	23 Jul 2012	11:39	120723 Standard 4		120723Arev	1.
6	23 Jul 2012	11:45	ICV 120723		120723Arev	1.
8	23 Jul 2012	11:58	ICB 120723		120723Arev	1.
9	23 Jul 2012	12:05	CCV 120723		120723Arev	1.
10	23 Jul 2012	12:12	CCB 120723		120723Arev	1.
11	23 Jul 2012	12:18	ICSA 120723		120723Arev	1.
12	23 Jul 2012	12:25	ICSAB 120723		120723Arev	1.
13	23 Jul 2012	12:58	120723A-3015-BLK		120723Arev	1.
15	23 Jul 2012	13:11	120723A-3015-LCS		120723Arev	1.
18	23 Jul 2012	13:32	CCV 120723		120723Arev	1.
19	23 Jul 2012	13:45	CCB 120723		120723Arev	1.
21	23 Jul 2012	14:07	AY65112W08		120723Arev	1.
22	23 Jul 2012	14:14	AY65113W08		120723Arev	1.
30	23 Jul 2012	15:07	CCV 120723		120723Arev	1.
31	23 Jul 2012	15:20	CCB 120723		120723Arev	1.

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

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

Data Validatable Report

August 13, 2012

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

Attn: Max Solmssen

Title: Report of Data: Case 68268

Project: LTM Red Hill/1022-024

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

Dear Mr. Solmssen:

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

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

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

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



Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/cm
Enclosure
cc: File

Number of pages in this report: 389

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

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Raw Data 374

SAMPLE RECEIPT INFORMATION

Sample receipt information

ARF: 68268

Project: Red Hill/1022-024

Sample Receipt Information:

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

Sample Table

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

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

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

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

Measurement uncertainty can be reported upon request.

CASE NARRATIVE

EPA Method 8270D SIM

Polynuclear Aromatic Hydrocarbons

Sample Preparation:

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

Sample Analysis Information:

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

Quality Control/Assurance

Calibrations:

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

Blanks:

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

Spikes:

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

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

Surrogates

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

Tuning:

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

Internal Standards

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All method criteria were met.

Summary:

No problem was encountered.

EPA Method 8015B

Total Petroleum Hydrocarbons – Diesel

Sample Preparation:

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

Sample Analysis Information:

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

Quality Control/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.

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

Surrogates:

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

Summary:

No problem was encountered

EPA Method 8260B
Volatile Organic Analysis

Sample Preparation:

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

Sample Analysis Information:

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

Quality Control/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.

Blanks:

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

Spikes:

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

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

Surrogates:

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

Tuning:

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

Internal Standards:

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

Summary:

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

EPA Method 6020
Dissolved Lead

Digestion Information:

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

Analysis Information:

Samples:

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

Calibrations:

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

Blanks:

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

Spikes:

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

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

Summary:

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

Abbreviations and Flags

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

CHAIN OF CUSTODY,
ARF, CRF, AND
CLIENT COMMUNICATION

APPL - Analysis Request Form 68268

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

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

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
EDD ADR A1/A3 (ADR 8.3a unchecked) to OSDas@ VDupra@ & MSolmssen@environetinc.com
metals 6020: report Lead with 0.5ug/L RL
TPH-Diesel only; VOCs: include gasoline by 8260B
No analysis was requested on COC; Extra volume for ES084 - is it for MS/MSD

Sample Distribution:
GC: 2-$SIMHC12W, 2-$TPETD2
Extractions: 2-_SEP004S, 2-_SEP011
VOA: 3-$86RHBF
Metals: 2-$602D(Pb)
Other: 2-_M3015

Charges:

Invoice To:
same

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

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

APPL Sample Receipt Form

ARF# **68268**

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

Sample	Container Type	Count	pH

68260
3.0

APPL LABS

CHAIN OF CUSTODY RECORD

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

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

C.O.C. 36498

Report to: PLEASE PRINT	Invoice to: A-P PLEASE PRINT
Company Name: Environet, Inc. Phone: 808-833-2225	Company Name: Environet, Inc. Phone: 808-833-2225
Address: 650 Iwilei Rd, Suite 204 Honolulu, HI 96817 Fax:	Address: 650 Iwilei Rd, Suite 204 Honolulu, HI 96817 Fax:
Attn: Max Solmssen / msolmssen@environetinc.com	Attn: A. P

Project Name/Number	Sampler (Print)	Date Shipped: 7/19/12
Red Hill / 1022-024	Max Solmssen	Carrier: FEDEX
Purchase Order Number	Sampler (Signature) Max R Sol	Waybill No.: 876412433173
		Comments: * Lead sample was field-filtered. Preserved w/ HNO_3

Analysis Requested/Method Number

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil		TPH-GRO (8260B)	VOCs (8260B)	TPH-DRO (8015B)	PAHs (8270C SIM)	lead* (6020)							
ES083	Red Hill	7/19/12	1130	HI	8	X															
ES084 MS/MSD	↓	↓	1300	↓	16	↓															
ES086 trip Blank	↓	↓	800	↓	3	↓															

Shuttle Temperature:

Turnaround Requested: Check one
☑ Standard 2-3wk ☐ One week ☐ 24/48 Hrs. ☐ Other

Sample Disposal:
☐ Return to client ☑ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
MS	7/19/12	14:20					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					7/20/12	1130	[signature]

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

COOLER RECEIPT FORM

1) Project: Red Hill / 1022-024 Date Received: 7/20/12

2) Coolers: Number of Coolers: 2

3) YES NO Were coolers and samples screened for radioactivity?

4) YES NO Were custody seals on outside of cooler? How many?_____ Date on seal? _____

5) Name on seal? _____

6) YES NO NA Were custody seals unbroken and intact at the time of arrival?

7) YES NO Did the cooler come with a shipping slip (air bill, etc.)? Carrier name: Fed Ex

8) Shipping slip numbers: 1) 874641243317 3 2) _____ 3) _____

9) YES NO NA Was the shipping slip scanned into the database?

10) YES NO NA If cooler belongs to APPL, has it been logged into the ice chest database?

11) Describe type of packing in cooler (bubble wrap, popcorn, type of ice, etc.): _____
Bubble Bag wet ice

12) YES NO NA For hand delivered samples was sufficient ice present to start the cooling process?

13) YES NO Was a temperature blank included in the cooler? EW 7/20/12

14) Serial number of certified NIST thermometer used: A39267 Correction factor: 0

15) Cooler temp(s): 1) 3.0 2) 3.0 3) _____ 4) _____ 5) _____ 6) _____ 7) _____ 8) _____

Chain of custody:

16) YES NO Was a chain of custody received?

17) YES NO Were the custody papers signed in the appropriate places?

18) YES NO Was the project identifiable from custody papers?

19) YES NO Did the chain of custody include date and time of sampling?

20) YES NO Is location where sample was taken listed on the chain of custody?

Sample Labels:

21) YES NO Were container labels in good condition?

22) YES NO Was the client ID on the label?

23) YES NO Was the date of sampling on the label?

24) YES NO Was the time of sampling on the label?

25) YES NO Did all container labels agree with custody papers?

Sample Containers:

26) YES NO Were all containers sealed in separate bags?

27) YES NO Did all containers arrive unbroken?

28) YES NO Was there any leakage from samples?

29) YES NO Were any of the lids cracked or broken?

30) YES NO Were correct containers used for the tests indicated?

31) YES NO Was a sufficient amount of sample sent for tests indicated? N 7/20/12

32) YES NO NA Were bubbles present in volatile samples? If yes, the following were received with air bubbles:
Larger than a pea: _____
Smaller than a pea: Ay 65167 WDS-WD6

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? _____ EW 7/20/12

38) YES NO NA Are unpreserved VOA vials noted in the ADD TEST FIELD on the ARF? _____ 7/20/12 EW

Lab notified if pH was not adequate: _____

Deficiencies: No analysis were marked on C.O.C. and the WS/WD was included in the Sample ID.

Signature of personnel receiving samples: _____ Second reviewer: _____

Signature of project manager notified: Renee Date and Time of notification: 7-23-12

Name of client notified: _____ Date and Time of notification: _____

Information given to client: _____

_____ by whom (Initials): _____

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons

APPL, INC.

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

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

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

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

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GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 07/25/12

Matrix: WATER Instrument: Linus

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

Comments: Batch: #SIMHC-120725A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 07/25/12

Matrix: WATER Instrument: Linus

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

Comments: Batch: #SIMHC-120725A

Laboratory Control Spike Recovery

EPA 8270D SIM

APPL ID: **120725W-65167 LCS - 169430**
Batch ID: #SIMHC-120725A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

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

Comments: _____

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

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APPL Standard LCS

Matrix Spike Recoveries

EPA 8270D SIM

APPL ID: **120725W-65167 MS - 169430**
Batch ID: #SIMHC-120725A
Sample ID: AY65167
Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

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

Comments: _____

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

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APPL MSD SCII

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 07/25/12

Matrix: WATER Instrument: Linus

Blank ID: 120725A-BLK Time Analyzed: 1857

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

Comments: Batch: #SIMHC-120725A

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Form 4, Blank Summary

Form 5
Tune Summary

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

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

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

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 68268

Lab File ID (Standard): 0613L007.D Date Analyzed: 06/13/12

Instrument ID: Linus Time Analyzed: 15:33

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

		Napthalene-D8(IS)		Acenaphthene-D10(IS)		Phenanthrene-D10(IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2713	6.09	1189	8.10	2090	9.82
	UPPER LIMIT	5426	6.59	2378	8.60	4180	10.32
	LOWER LIMIT	1357	5.59	595	7.60	1045	9.32
	SAMPLE NO.						
01	120725A BLK 1/1000	2466	6.08	1141	8.08	2211	9.82
02	120725A LCS-1 1/1000	2533	6.08	1174	8.08	2346	9.82
03	AY65166W07 1/1050	2664	6.08	1300	8.08	2321	9.82
04	AY65167W10 MS-1 1/1(	2599	6.08	1231	8.08	2370	9.81
05	AY65167W13 MSD-1 1/	2688	6.08	1301	8.08	2439	9.81
06	AY65167W09 1/1000	2692	6.08	1243	8.08	2404	9.82
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

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

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

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 68268

Lab File ID (Standard): 0613L007.D Date Analyzed: 06/13/12

Instrument ID: Linus Time Analyzed: 15:33

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

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2430	12.91	2133	14.52		
	UPPER LIMIT	4860	13.41	4266	15.02		
	LOWER LIMIT	1215	12.41	1067	14.02		
	SAMPLE NO.						
01	120725A BLK 1/1000	2672	12.91	2109	14.53		
02	120725A LCS-1 1/1000	2948	12.90	2233	14.52		
03	AY65166W07 1/1050	2815	12.91	2195	14.54		
04	AY65167W10 MS-1 1/1(	2864	12.90	2186	14.52		
05	AY65167W13 MSD-1 1/	3020	12.90	2405	14.52		
06	AY65167W09 1/1000	2934	12.91	2291	14.54		
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

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

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

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Sample Data

APPL, INC.

EPA 8270D SIM

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

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

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

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

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

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

Quantitation Report (QT Reviewed)

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

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

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

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2664	2.50000 ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1300	2.50000 ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2321	2.50000 ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2815	2.50000 ppb	0.01
22) Perylene-D12(IS)	14.54	264	2195	2.50000 ppb	0.00
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.32	82	685	1.30955 ppb	-0.01
Spiked Amount 1.905			Recovery = 68.775%		
7) Surrogate Recovery (FBP)	7.32	172	1548	1.21139 ppb	-0.05
Spiked Amount 1.905			Recovery = 63.578%		
18) Surrogate Recovery (TPH)	11.69	244	3120	2.10997 ppb	-0.05
Spiked Amount 1.905			Recovery = 110.775%		

Target Compounds Qvalue

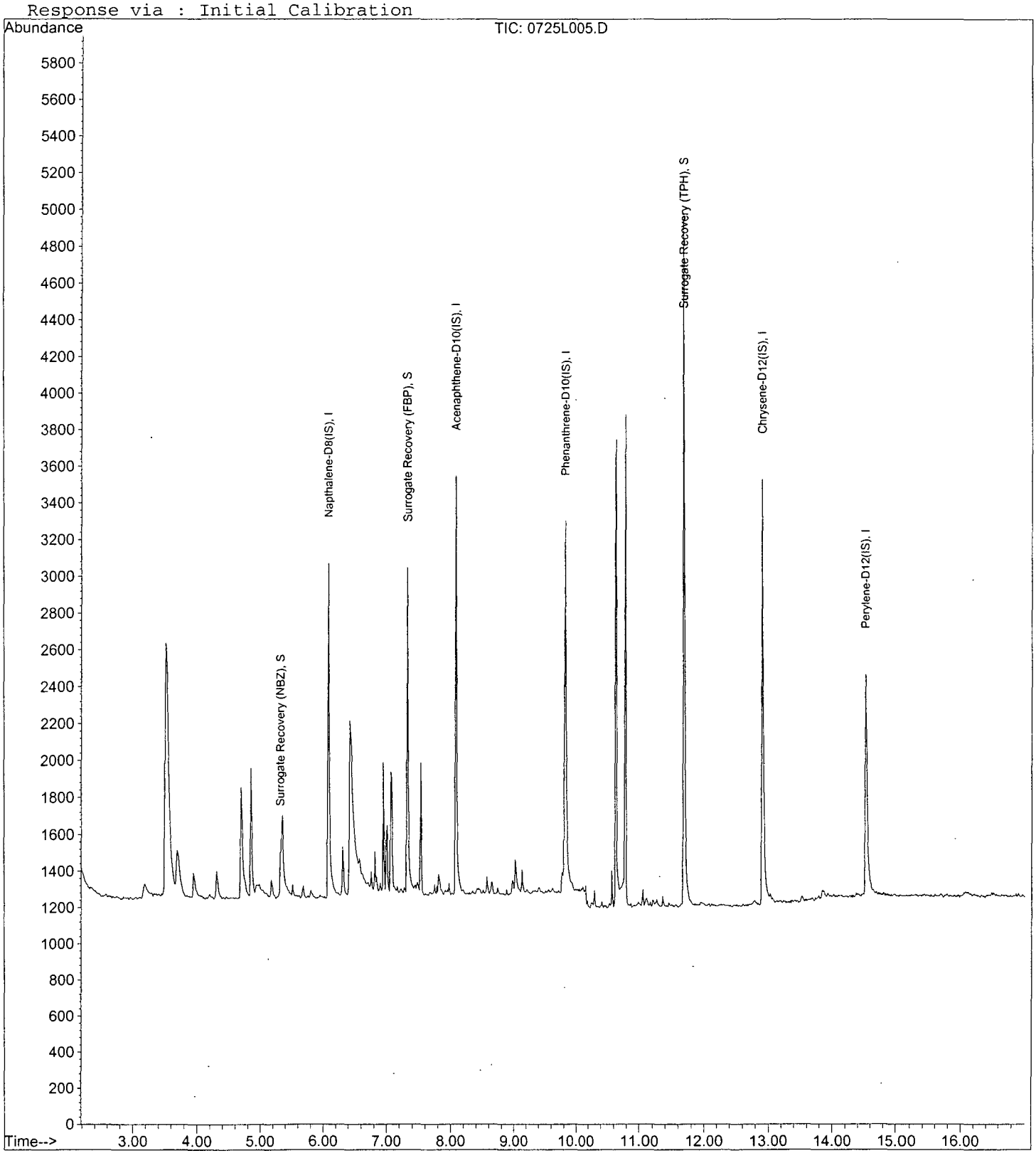
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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

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



EPA 8270D SIM

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

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

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

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

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

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

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

Quantitation Report (QT Reviewed)

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

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

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

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2692	2.50000 ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1243	2.50000 ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2404	2.50000 ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2934	2.50000 ppb	0.01
22) Perylene-D12(IS)	14.53	264	2291	2.50000 ppb	0.00
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.33	82	560	1.11242 ppb	0.00
Spiked Amount 2.000			Recovery = 55.600%		
7) Surrogate Recovery (FBP)	7.32	172	1256	1.07935 ppb	-0.05
Spiked Amount 2.000			Recovery = 53.950%		
18) Surrogate Recovery (TPH)	11.69	244	2814	1.91714 ppb	-0.05
Spiked Amount 2.000			Recovery = 95.850%		

Target Compounds Qvalue

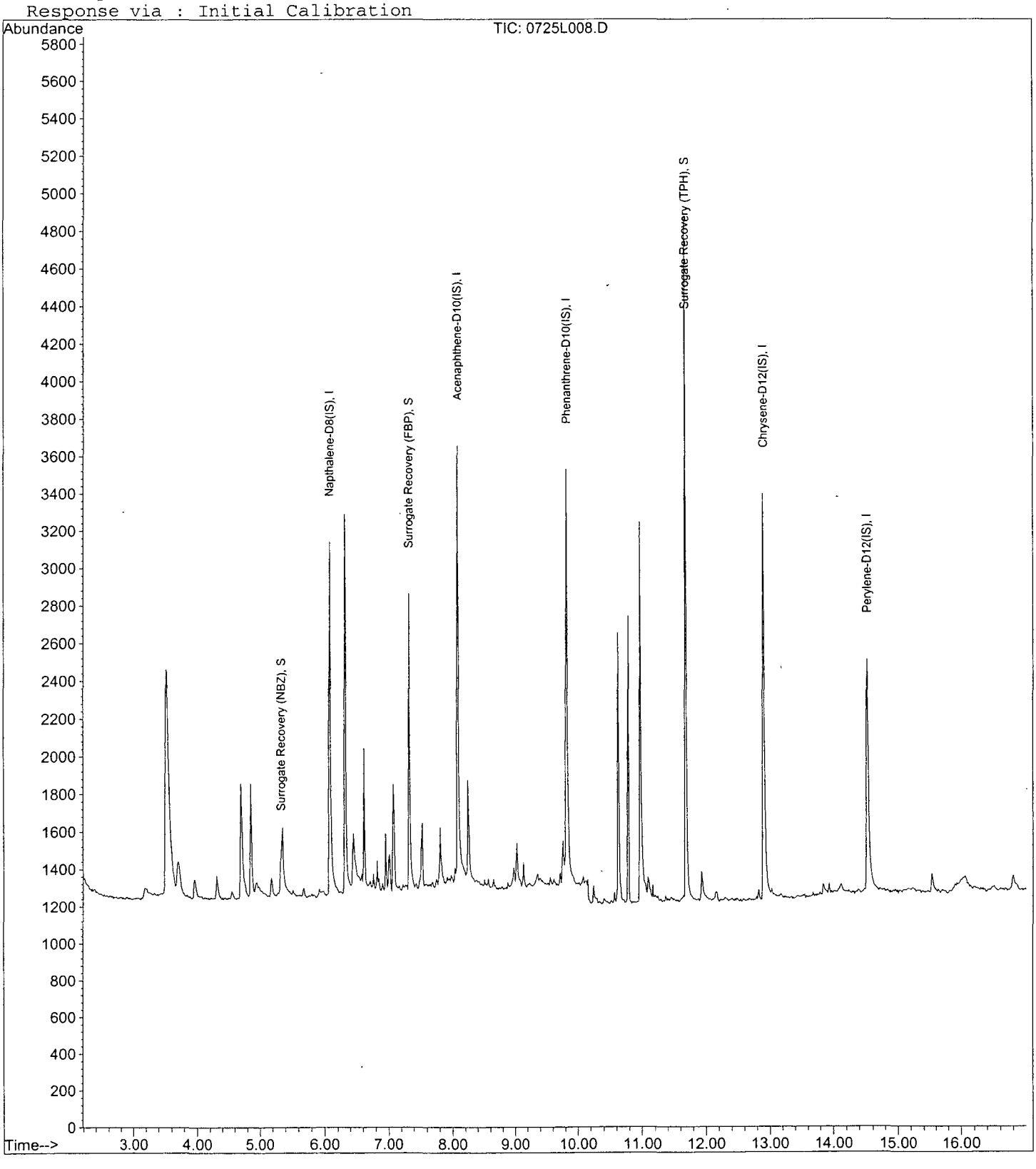
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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

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

APPL, INC.

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68268
Case No: Initial Cal. Date: 06/13/12
Matrix: Instrument: Linus Initials:

		Compound	0613L003.D 0.1	0613L004.D 0.2	0613L005.D 0.5	0613L006.D 1	0613L007.D 5	0613L008.D 10	0613L009.D 50	0613L010.D 100			Avg	%RSD		
1	I	Napthalene-D8(IS)														
2	S	Surrogate Recovery (NBZ)	0.4582	0.4160	0.5318	0.4779	0.4460	0.4748	0.4769	0.4584			0.47	7.1	S	
3	TM	Naphthalene	1.842	1.750	1.792	1.659	1.423	1.727	1.409	1.279			1.6	13	TM	
4	TM	2-Methylnaphthalene	1.241	1.076	1.116	1.120	0.9307	1.112	0.9262	0.8257			1.0	13	TM	
5	TM	1-Methylnaphthalene	1.126	1.172	1.203	1.088	0.8644	1.036	0.8585				1.0	13	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	2.582	2.805	2.664	2.529	2.150	2.143	1.969	1.882			2.3	15	S	
8	TM	1,1'-Biphenyl	2.787	2.890	2.770	2.823	2.494	2.718	2.250	2.042			2.6	12	TM	
9	TM	Acenaphthylene	3.955	4.033	3.713	3.520	3.060	3.526	2.830	2.701			3.4	15	TM	
10	*TM	Acenaphthene	2.090	2.180	2.070	2.027	1.756	1.959	1.627	1.454			1.9	13	*TM	
11	TM	Fluorene	2.398	2.371	2.439	2.352	2.050	2.300	1.873	1.659			2.2	13	TM	
12	I	Phenanthrene-D10(IS)														
13	TM	Phenanthrene	2.047	1.950	2.033	1.897	1.652	1.874	1.503	1.377			1.8	14	TM	
14	TM	Anthracene	2.130	1.841	1.997	1.890	1.692	1.793	1.496	1.348			1.8	14	TM	
15	*TM	Fluoranthene	3.076	2.754	2.876	2.744	2.354	2.691	2.122	2.002			2.6	15	*TM	
16	I	Chrysene-D12(IS)														
17	TM	Pyrene	2.479	2.491	2.445	2.361	2.151	2.307	1.879	1.969			2.3	10	TM	
18	S	Surrogate Recovery (TPH)	1.440	1.456	1.389	1.283	1.203	1.197	0.9916	1.046			1.3	14	S	
19	TM	Benz (a) anthracene	2.260	2.204	2.209	2.058	1.786	1.987	1.662	1.724			2.0	12	TM	
20	TM	Chrysene	2.088	2.135	2.151	2.031	1.970	1.967	1.407	1.602			1.9	14	TM	
21	TM	Indeno (1,2,3-cd) pyrene	2.365	2.214	2.159	2.037	1.899	2.069	1.653	1.810			2.0	11	TM	
22	I	Perylene-D12(IS)														
23	TM	Benzo (b) fluoranthene	2.382	2.407	2.462	2.408	1.885	2.105	2.227	1.721			2.2	12	TM	
24	TM	Benzo (k) fluoranthene	2.745	2.558	2.205	2.115	2.223	2.494	1.828	1.795			2.2	15	TM	
25	*TM	Benzo (a) pyrene	2.358	2.547	2.297	2.164	1.908	2.189	1.901	1.547			2.1	15	*TM	
26	TM	Dibenz (a,h) anthracene	2.206	2.196	2.054	1.889	1.755	1.968	1.762	1.529			1.9	12	TM	
27	TM	Benzo (g,h,i) perylene	2.288	2.284	2.189	1.980	1.781	2.022	1.834	1.643			2.0	12	TM	
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L003.D Vial: 3
Acq On : 13 Jun 12 13:51 Operator: LF
Sample : 0.1ug/ml PAH 06-13-12 Inst : Linus
Misc : 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) Napthalene-D8(IS)	6.09	136	2619	2.50000 ppb		-0.02
6) Acenaphthene-D10(IS)	8.10	164	1220	2.50000 ppb		-0.04
12) Phenanthrene-D10(IS)	9.83	188	2113	2.50000 ppb		-0.02
16) Chrysene-D12(IS)	12.91	240	2622	2.50000 ppb		-0.01
22) Perylene-D12(IS)	14.52	264	2131	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.35	82	48	0.18668 ppb		0.01
Spiked Amount 2.000			Recovery = 9.350%			
7) Surrogate Recovery (FBP)	7.34	172	126	0.16296 ppb		-0.04
Spiked Amount 2.000			Recovery = 8.150%			
18) Surrogate Recovery (TPH)	11.70	244	151	0.18456 ppb		-0.03
Spiked Amount 2.000			Recovery = 9.250%			
Target Compounds						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

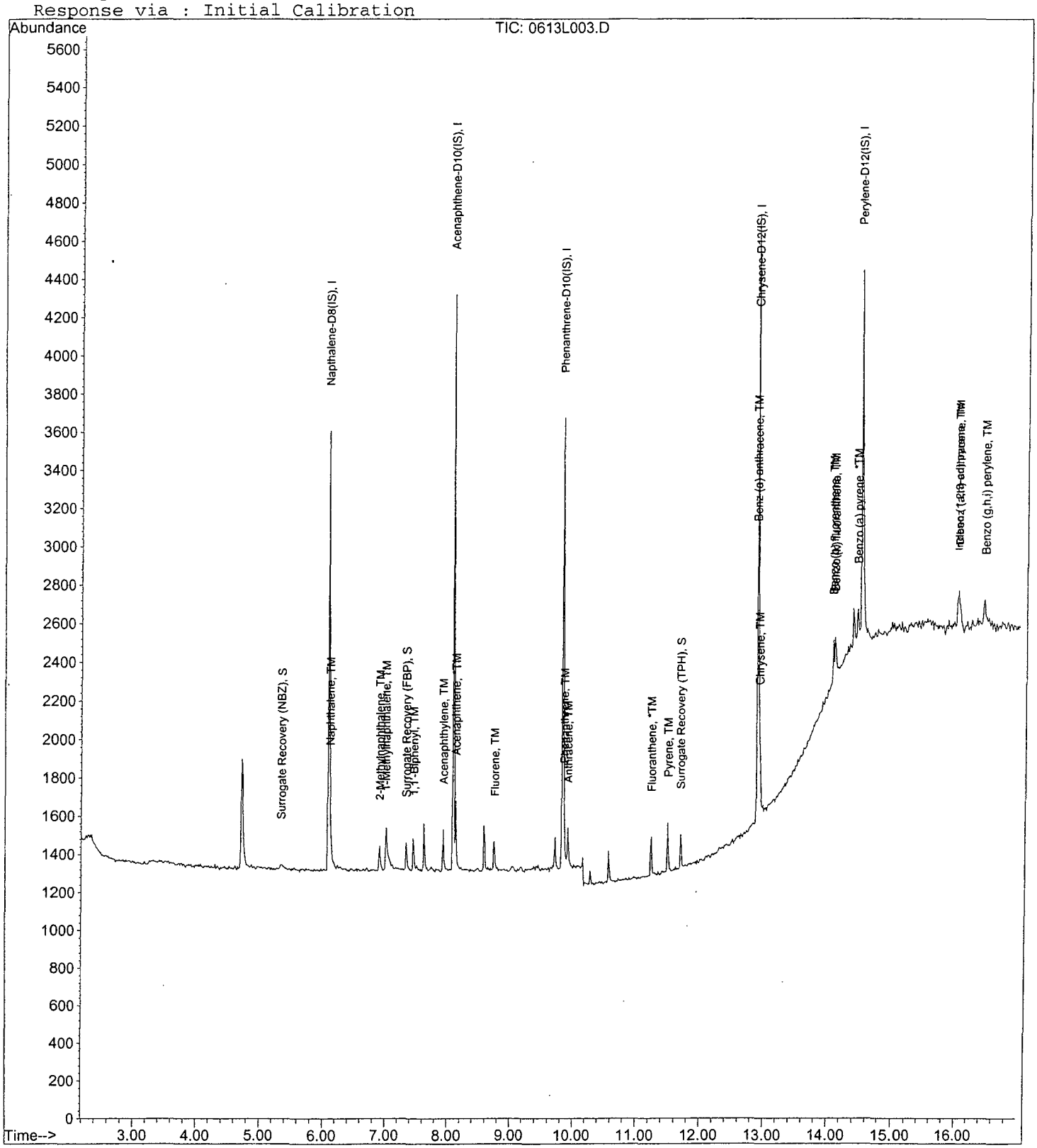
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L003.D 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

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



Quantitation Report (QT Reviewed)

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

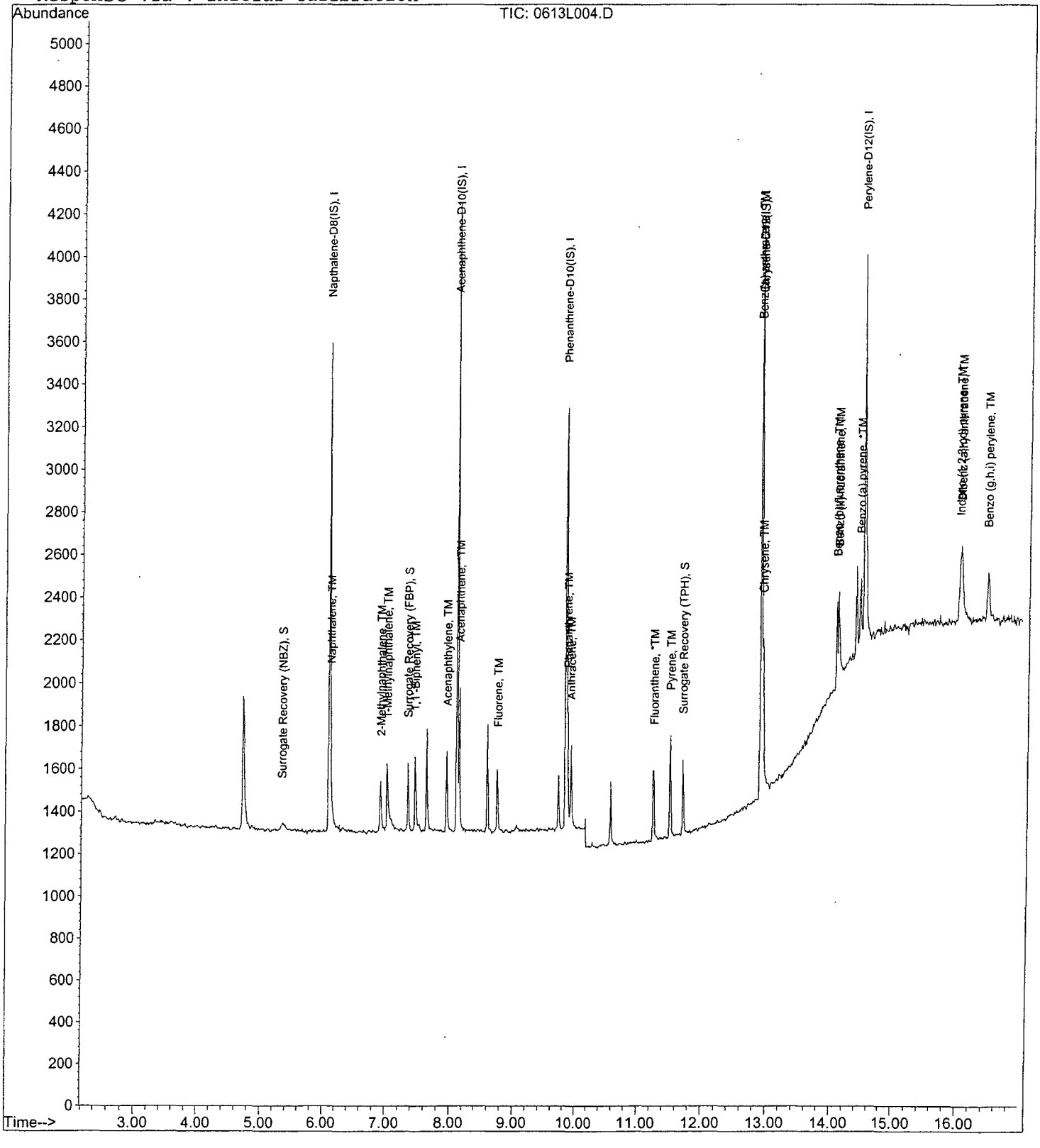
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L004.D Vial: 4
Acq On : 13 Jun 12 14:16 Operator: LF
Sample : 0.2ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L005.D Vial: 5
Acq On : 13 Jun 12 14:41 Operator: LF
Sample : 0.5ug/ml PAH Inst : Linus
Misc : 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							
2) Surrogate Recovery (NBZ)	5.33	82	274	0.60835	ppb		0.00
Spiked Amount 2.000			Recovery = 30.400%				
7) Surrogate Recovery (FBP)	7.34	172	650	0.49453	ppb		-0.04
Spiked Amount 2.000			Recovery = 24.750%				
18) Surrogate Recovery (TPH)	11.70	244	714	0.47952	ppb		-0.03
Spiked Amount 2.000			Recovery = 24.000%				
Target Compounds							Qvalue
3) Naphthalene	6.12	128	923	0.49869	ppb		100
4) 2-Methylnaphthalene	6.90	142	575	0.48172	ppb		100
5) 1-Methylnaphthalene	7.01	142	620	0.52369	ppb		94
8) 1,1'-Biphenyl	7.44	154	676	0.48807	ppb	#	94
9) Acenaphthylene	7.94	152	906	0.46486	ppb		99
10) Acenaphthene	8.13	154	505	0.48464	ppb		91
11) Fluorene	8.74	166	595	0.51139	ppb		99
13) Phenanthrene	9.86	178	847	0.50863	ppb		98
14) Anthracene	9.92	178	832	0.50291	ppb		96
15) Fluoranthene	11.23	202	1198	0.49327	ppb	#	86
17) Pyrene	11.50	202	1257	0.49186	ppb	#	89
19) Benz (a) anthracene	12.90	228	1136	0.49495	ppb		98
20) Chrysene	12.94	228	1106	0.50938	ppb	#	93
21) Indeno (1,2,3-cd) pyrene	16.00	276	1110	0.47150	ppb	#	92
23) Benzo (b) fluoranthene	14.08	252	1093	0.51930	ppb	#	90
24) Benzo (k) fluoranthene	14.11	252	979	0.42017	ppb	#	95
25) Benzo (a) pyrene	14.45	252	1020	0.47286	ppb	#	95
26) Dibenz (a,h) anthracene	16.03	278	912	0.47138	ppb	#	95
27) Benzo (g,h,i) perylene	16.44	276	972	0.41115	ppb		93

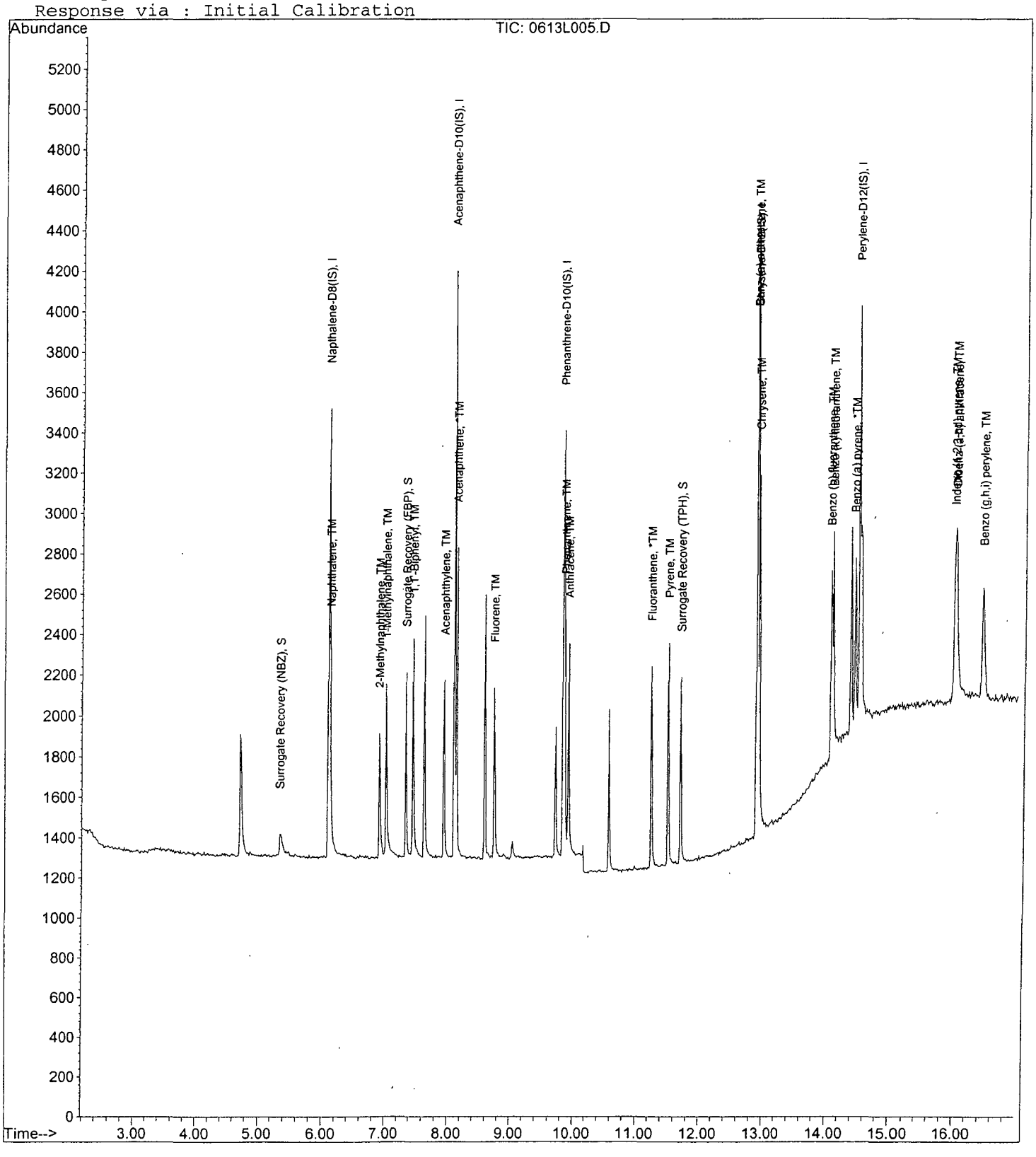
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L006.D Vial: 6
Acq On : 13 Jun 12 15:07 Operator: LF
Sample : 1.0ug/ml PAH Inst : Linus
Misc : 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						
2) Surrogate Recovery (NBZ)	5.33	82	501	1.01960 ppb		0.00
Spiked Amount 2.000			Recovery = 51.000%			
7) Surrogate Recovery (FBP)	7.34	172	1215	0.94245 ppb		-0.04
Spiked Amount 2.000			Recovery = 47.100%			
18) Surrogate Recovery (TPH)	11.70	244	1327	0.89865 ppb		-0.03
Spiked Amount 2.000			Recovery = 44.950%			
Target Compounds						Qvalue
3) Naphthalene	6.12	128	1739	0.92424 ppb		99
4) 2-Methylnaphthalene	6.90	142	1174	0.97858 ppb		98
5) 1-Methylnaphthalene	7.01	142	1141	0.93248 ppb		94
8) 1,1'-Biphenyl	7.45	154	1356	1.00249 ppb	#	91
9) Acenaphthylene	7.94	152	1691	0.90251 ppb		99
10) Acenaphthene	8.13	154	974	0.95935 ppb		89
11) Fluorene	8.74	166	1130	0.97914 ppb		98
13) Phenanthrene	9.86	178	1612	0.94390 ppb		99
14) Anthracene	9.92	178	1606	0.95018 ppb		98
15) Fluoranthene	11.23	202	2331	0.94550 ppb	#	88
17) Pyrene	11.50	202	2441	0.95516 ppb	#	88
19) 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

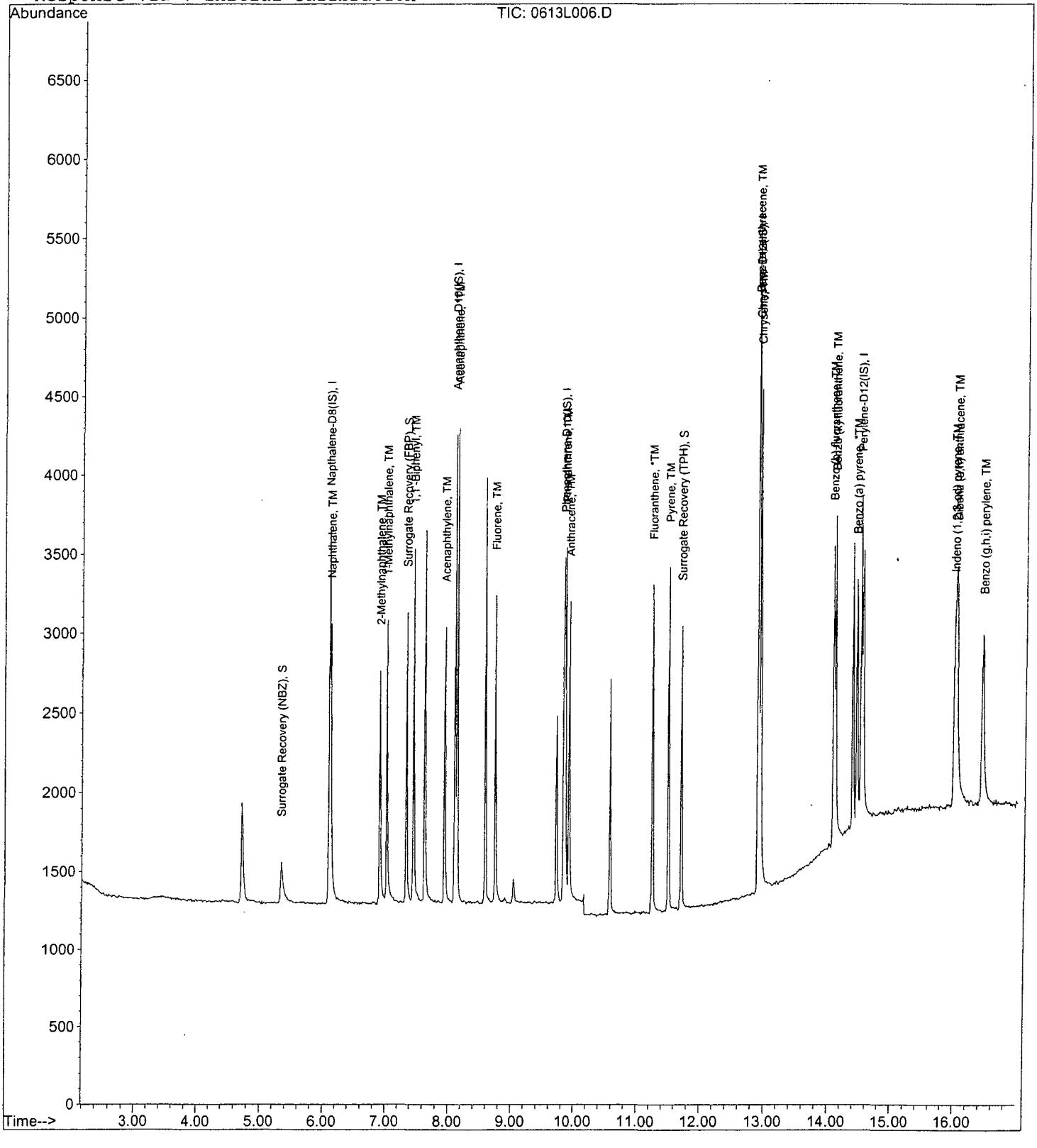
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L007.D Vial: 7
Acq On : 13 Jun 12 15:33 Operator: LF
Sample : 5.0ug/ml PAH Inst : Linus
Misc : 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) Napthalene-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						Qvalue
3) Naphthalene	6.12	128	7720	4.04041 ppb		100
4) 2-Methylnaphthalene	6.90	142	5050	4.08854 ppb		95
5) 1-Methylnaphthalene	7.01	142	4690	3.76651 ppb		93
8) 1,1'-Biphenyl	7.45	154	5931	4.42630 ppb	#	89
9) Acenaphthylene	7.93	152	7276	4.02049 ppb		97
10) Acenaphthene	8.13	154	4176	4.19734 ppb		93
11) Fluorene	8.74	166	4875	4.28917 ppb		98
13) Phenanthrene	9.86	178	6907	4.16861 ppb		99
14) Anthracene	9.92	178	7071	4.30520 ppb		98
15) Fluoranthene	11.23	202	9839	4.11183 ppb		95
17) Pyrene	11.49	202	10454	4.40089 ppb	#	90
19) Benz (a) anthracene	12.90	228	8681	4.09173 ppb		96
20) Chrysene	12.94	228	9575	4.68837 ppb	#	96
21) Indeno (1,2,3-cd) pyrene	15.99	276	9227	4.32779 ppb	#	88
23) Benzo (b) fluoranthene	14.08	252	8043	3.92370 ppb	#	84
24) Benzo (k) fluoranthene	14.12	252	9483	4.64656 ppb	#	92
25) Benzo (a) pyrene	14.45	252	8141	4.09554 ppb		98
26) Dibenz (a,h) anthracene	16.02	278	7487	4.22884 ppb	#	91
27) Benzo (g,h,i) perylene	16.43	276	7598	3.75225 ppb		96

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

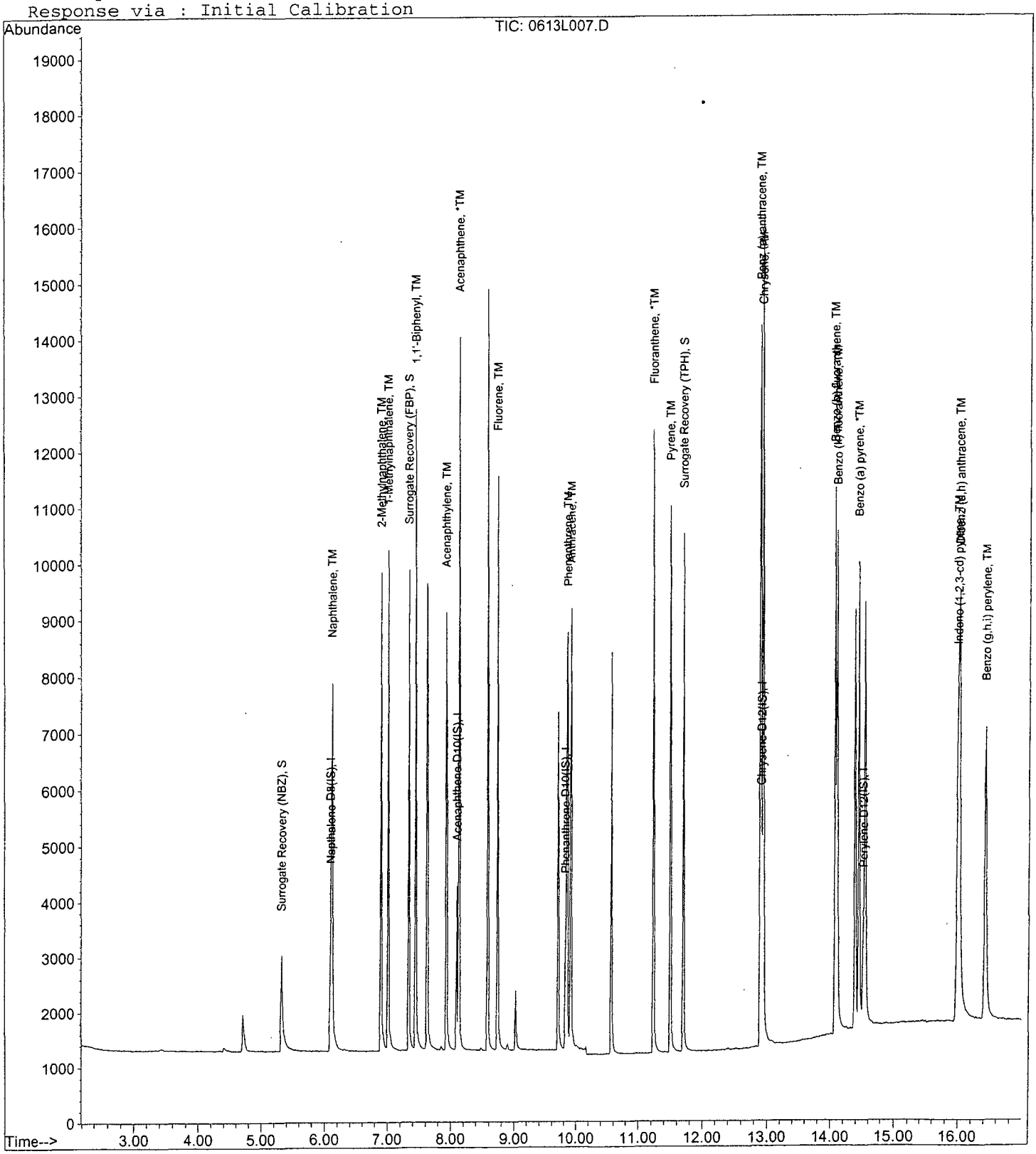
Quantitation Report

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

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

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

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



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L008.D Vial: 8
Acq On : 13 Jun 12 15:59 Operator: LF
Sample : 10ug/ml PAH Inst : Linus
Misc : 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						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

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

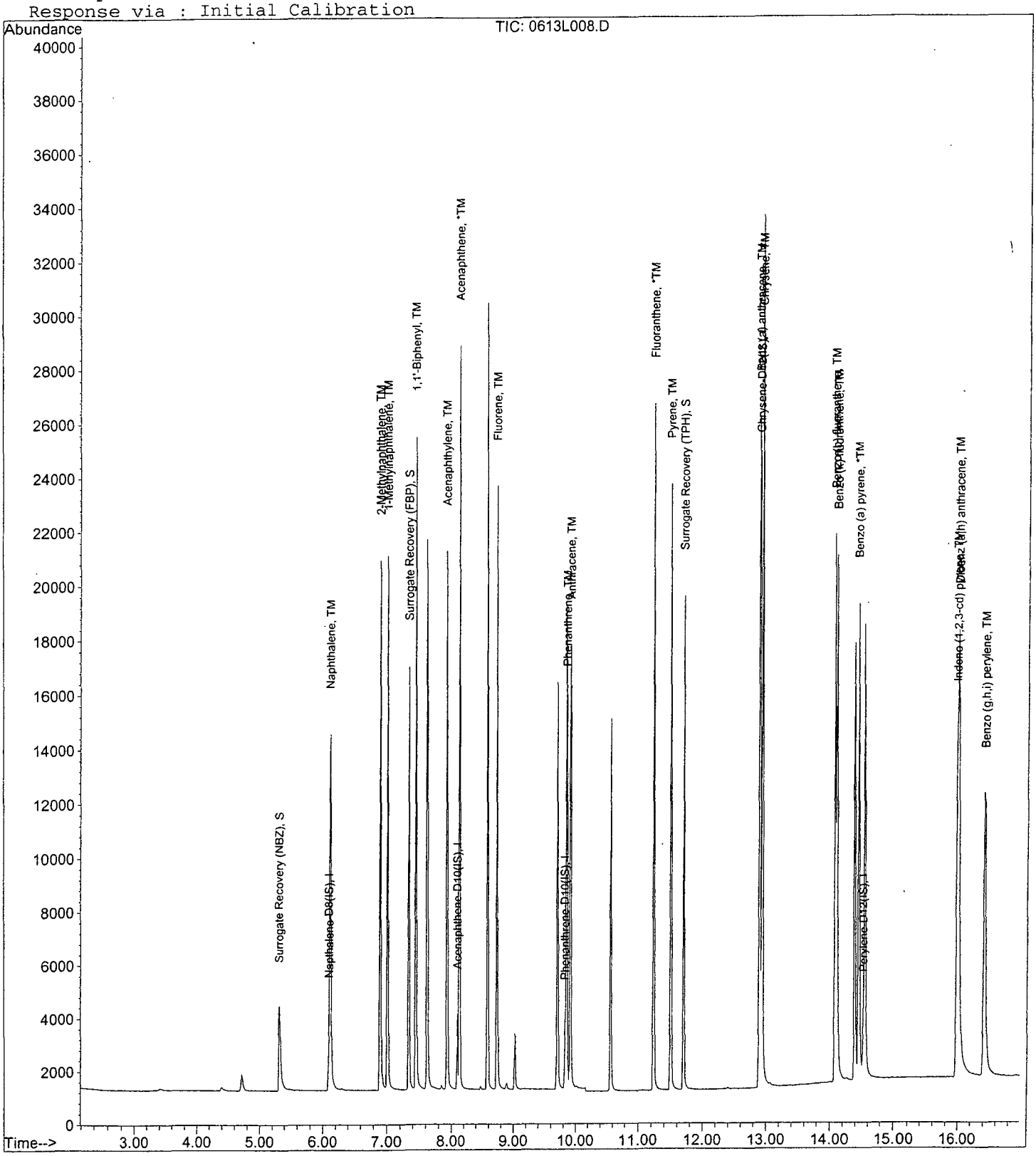
Quantitation Report

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

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

Quant Time: Jun 13 17:35 2012 Quant Results File: SIMB.RES

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



Quantitation Report (QT Reviewed)

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

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

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

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

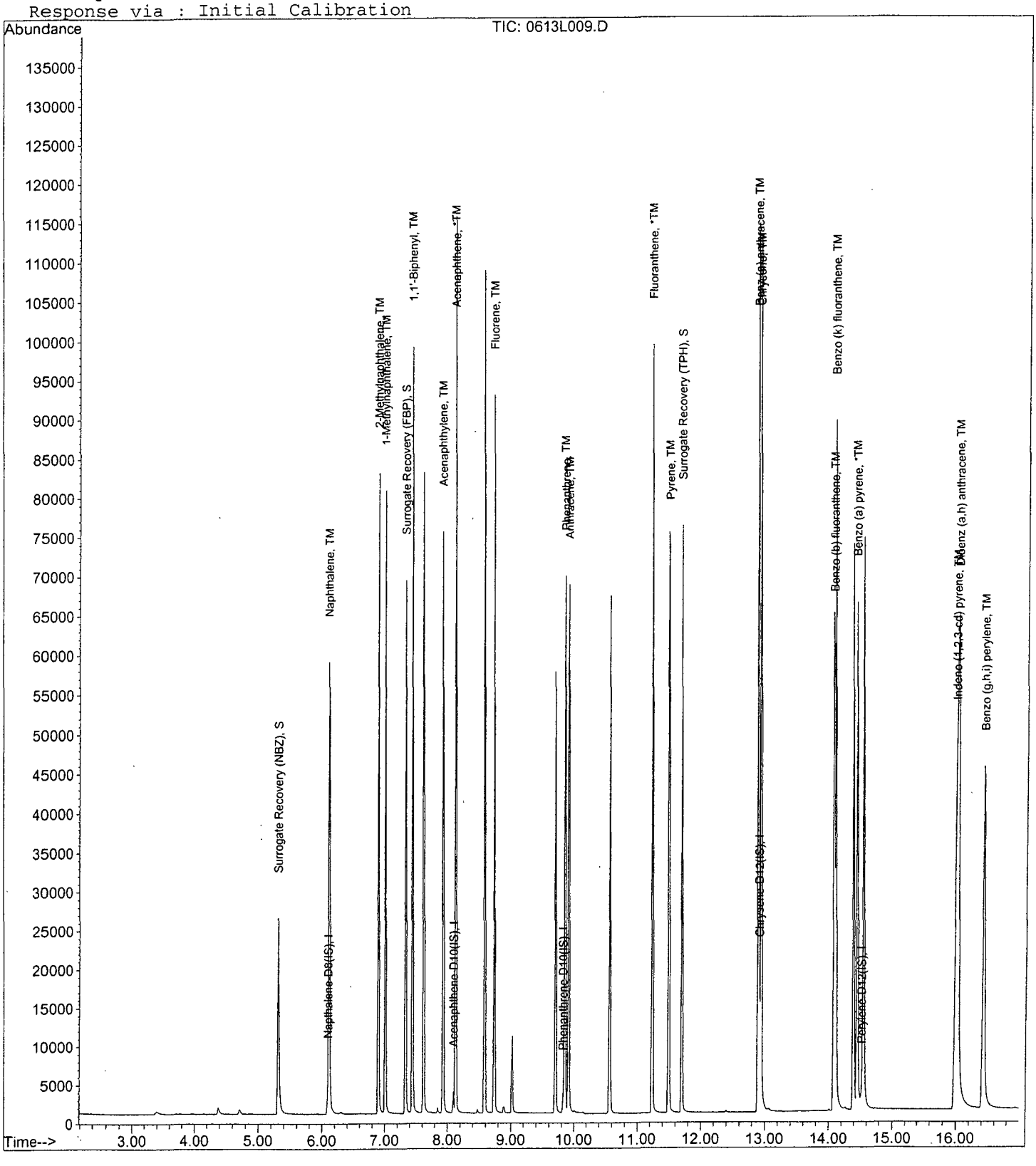
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



Quantitation Report (QT Reviewed)

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

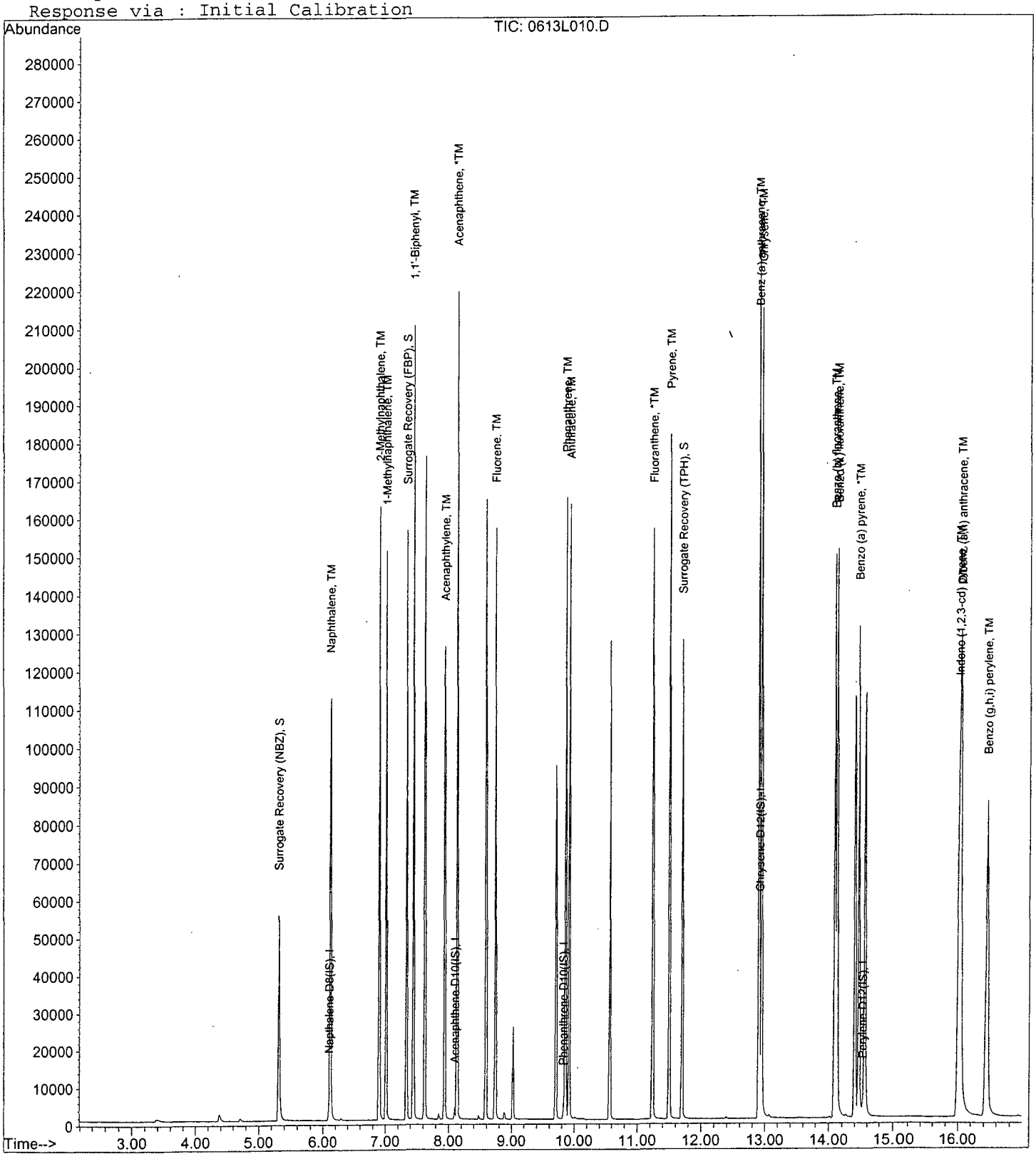
Quantitation Report

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



Form 7

Second Source Calibration

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

SDG No: 68268
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	
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.8		

Quantitation Report (QT Reviewed)

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

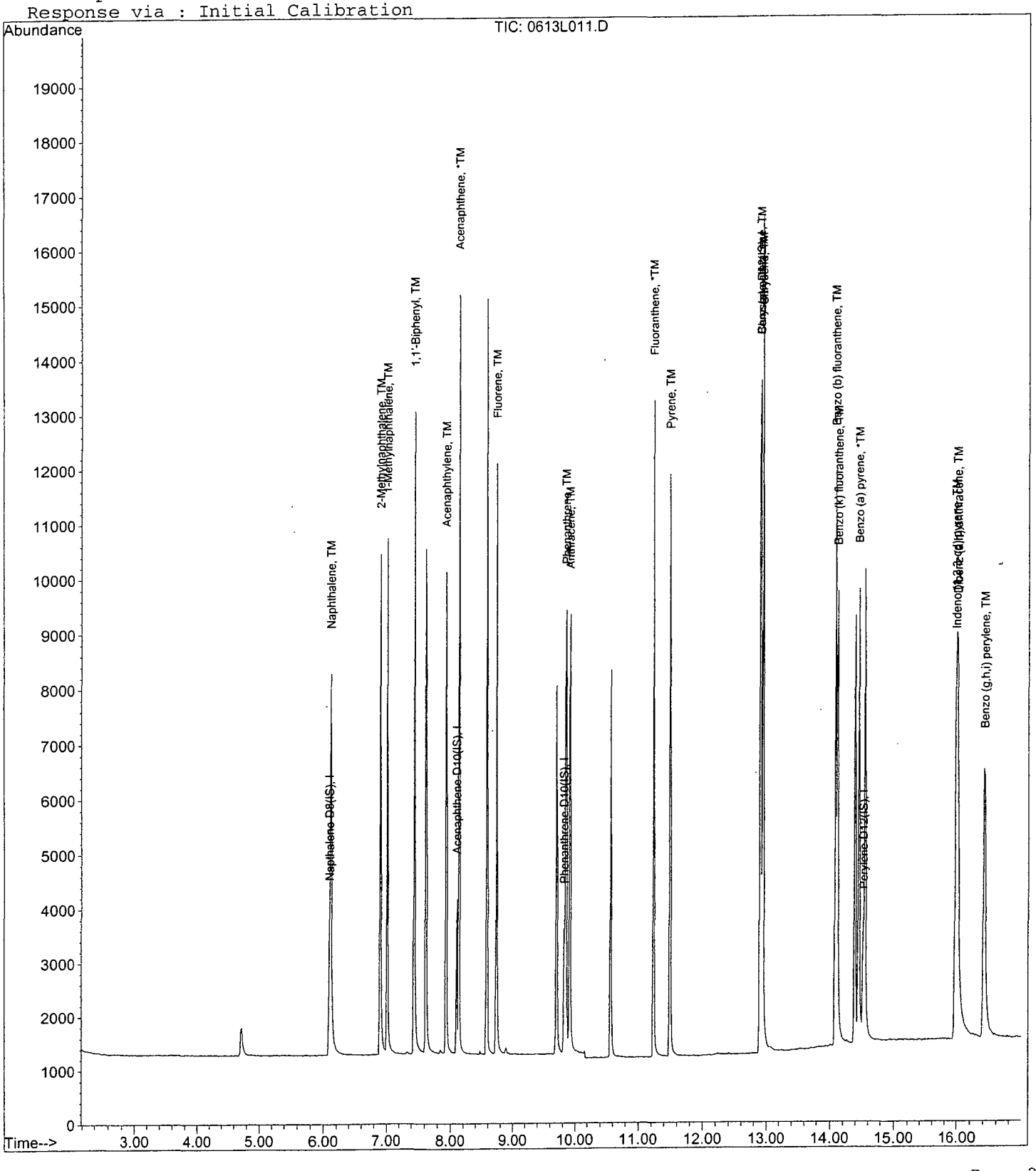
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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



Form 7

Continuing Calibration

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

SDG No: 608268
Date Analyzed: 07/25/12
Instrument: Linus
Initial Cal. Date: 06/13/12
Data File: 0725L002.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	S	Surrogate Recovery (NBZ)	0.4675	0.5118	9.5	S	
3	TM	Naphthalene	1.610	1.911	19	TM	
4	TM	2-Methylnaphthalene	1.043	1.175	13	TM	
5	TM	1-Methylnaphthalene	1.050	1.211	15	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	2.340	2.780	19	S	
8	TM	1,1'-Biphenyl	2.597	3.072	18	TM	
9	TM	Acenaphthylene	3.417	3.974	16	TM	
10	*TM	Acenaphthene	1.896	2.203	16	*TM	
11	TM	Fluorene	2.180	2.582	18	TM	
12	I	Phenanthrene-D10(IS)	ISTD			I	
13	TM	Phenanthrene	1.792	2.084	16	TM	
14	TM	Anthracene	1.773	2.065	16	TM	
15	*TM	Fluoranthene	2.577	2.914	13	*TM	
16	I	Chrysene-D12(IS)	ISTD			I	
17	TM	Pyrene	2.260	2.386	5.6	TM	
18	S	Surrogate Recovery (TPH)	1.251	1.390	11	S	
19	TM	Benz (a) anthracene	1.986	1.812	8.8	TM	
20	TM	Chrysene	1.919	2.072	8.0	TM	
21	TM	Indeno (1,2,3-cd) pyrene	2.025	1.789	12	TM	
22	I	Perylene-D12(IS)	ISTD			I	
23	TM	Benzo (b) fluoranthene	2.200	2.001	9.0	TM	
24	TM	Benzo (k) fluoranthene	2.246	2.411	7.4	TM	
25	*TM	Benzo (a) pyrene	2.114	2.010	4.9	*TM	
26	TM	Dibenz (a,h) anthracene	1.920	1.773	7.7	TM	
27	TM	Benzo (g,h,i) perylene	2.003	1.853	7.5	TM	
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			12.3		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L002.D Vial: 2
Acq On : 25 Jul 12 18:31 Operator: LF
Sample : 5.0ug/ml PAH 06-13-12 Inst : Linus
Misc : Multiplr: 1.00

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

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

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2501	2.50000 ppb		-0.04
6) Acenaphthene-D10(IS)	8.08	164	1116	2.50000 ppb		-0.05
12) Phenanthrene-D10(IS)	9.81	188	1962	2.50000 ppb		-0.05
16) Chrysene-D12(IS)	12.90	240	2496	2.50000 ppb		0.00
22) Perylene-D12(IS)	14.52	264	2012	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	2560	5.47373 ppb		-0.01
Spiked Amount 2.000			Recovery	= 273.700%		
7) Surrogate Recovery (FBP)	7.32	172	6206	5.94009 ppb		-0.05
Spiked Amount 2.000			Recovery	= 297.000%		
18) Surrogate Recovery (TPH)	11.69	244	6938	5.55622 ppb		-0.05
Spiked Amount 2.000			Recovery	= 277.800%		
Target Compounds						Qvalue
3) Naphthalene	6.09	128	9558	5.93382 ppb		98
4) 2-Methylnaphthalene	6.89	142	5878	5.63092 ppb		92
5) 1-Methylnaphthalene	7.00	142	6058	5.76845 ppb		98
8) 1,1'-Biphenyl	7.43	154	6857	5.91556 ppb	#	89
9) Acenaphthylene	7.92	152	8870	5.81469 ppb		98
10) Acenaphthene	8.12	154	4918	5.81209 ppb		95
11) Fluorene	8.72	166	5764	5.92274 ppb		97
13) Phenanthrene	9.85	178	8177	5.81518 ppb		99
14) Anthracene	9.91	178	8103	5.82225 ppb		98
15) Fluoranthene	11.22	202	11435	5.65361 ppb	#	91
17) Pyrene	11.49	202	11913	5.27934 ppb	#	89
19) Benz (a) anthracene	12.89	228	9044	4.56046 ppb		98
20) Chrysene	12.94	228	10343	5.39893 ppb	#	99
21) Indeno (1,2,3-cd) pyrene	16.02	276	8931	4.41642 ppb		78
23) Benzo (b) fluoranthene	14.08	252	8054	4.54976 ppb		84
24) Benzo (k) fluoranthene	14.11	252	9701	5.36801 ppb	#	92
25) Benzo (a) pyrene	14.45	252	8090	4.75550 ppb		99
26) Dibenz (a,h) anthracene	16.03	278	7133	4.61667 ppb		92
27) Benzo (g,h,i) perylene	16.45	276	7456	4.62630 ppb		92

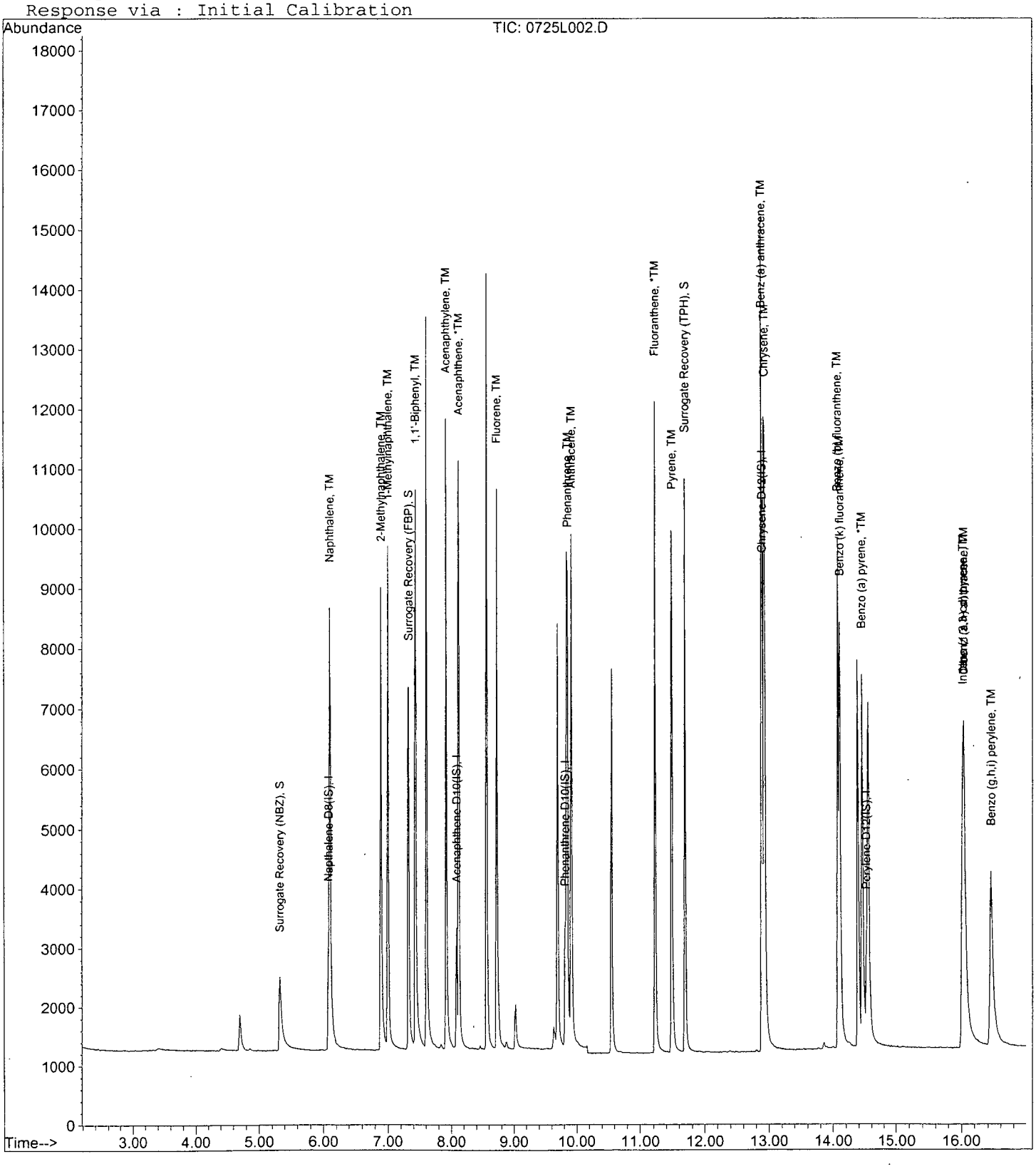
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0725L002.D Vial: 2
Acq On : 25 Jul 12 18:31 Operator: LF
Sample : 5.0ug/ml PAH 06-13-12 Inst : Linus
Misc : Multiplr: 1.00

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

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



EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

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

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

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

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

Quantitation Report (QT Reviewed)

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

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

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

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2466	2.50000 ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1141	2.50000 ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2211	2.50000 ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2672	2.50000 ppb	0.01
22) Perylene-D12(IS)	14.53	264	2109	2.50000 ppb	0.00
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.32	82	655	1.42038 ppb	-0.01
Spiked Amount 2.000			Recovery = 71.000%		
7) Surrogate Recovery (FBP)	7.32	172	1563	1.46325 ppb	-0.05
Spiked Amount 2.000			Recovery = 73.150%		
18) Surrogate Recovery (TPH)	11.69	244	2997	2.24202 ppb	-0.05
Spiked Amount 2.000			Recovery = 112.100%		

Target Compounds Qvalue

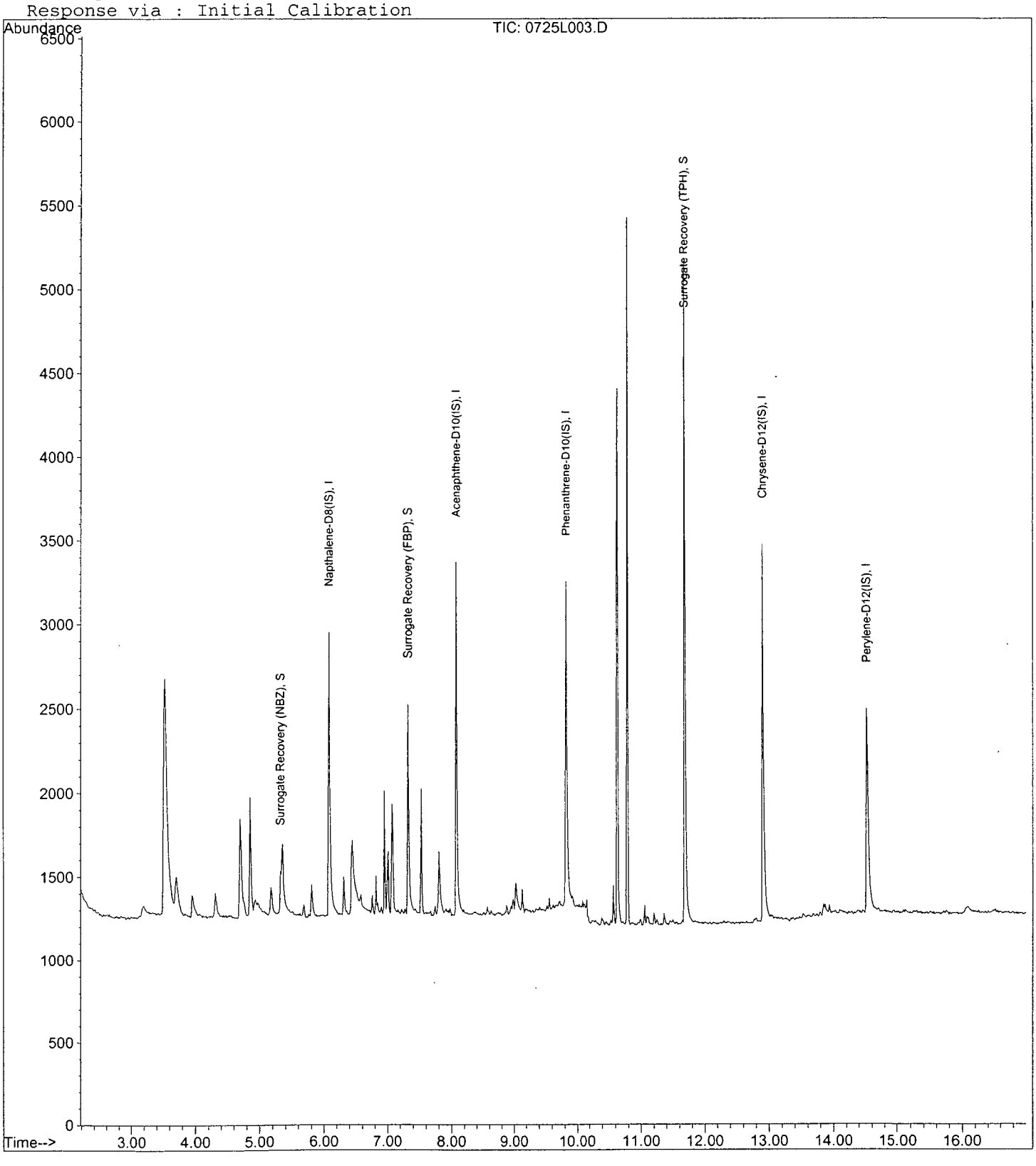
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

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

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



Laboratory Control Spike Recovery
EPA 8270D SIM

APPL ID: **120725W-65167 LCS - 169430**
Batch ID: #SIMHC-120725A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

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

Comments: _____

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

Printed: 07/27/12 12:15:01 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L004.D Vial: 4
Acq On : 25 Jul 12 19:23 Operator: LF
Sample : 120725A LCS-1 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:24 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2533 ✔	2.50000	ppb ✔		-0.04
6) Acenaphthene-D10(IS)	8.08	164	1174	2.50000	ppb		-0.05
12) Phenanthrene-D10(IS)	9.82	188	2346	2.50000	ppb		-0.04
16) Chrysene-D12(IS)	12.90	240	2948	2.50000	ppb		0.00
22) Perylene-D12(IS)	14.52	264	2233	2.50000	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.32	82	659	1.39126	ppb		-0.01
Spiked Amount 2.000			Recovery =	69.550%			
7) Surrogate Recovery (FBP)	7.32	172	1394	1.26835	ppb		-0.05
Spiked Amount 2.000			Recovery =	63.400%			
18) Surrogate Recovery (TPH)	11.69	244	2933	1.98872	ppb		-0.05
Spiked Amount 2.000			Recovery =	99.450%			
Target Compounds							Qvalue
3) Naphthalene	6.11	128	3703 ✔	2.26986 ✔	ppb		100
4) 2-Methylnaphthalene	6.89	142	2376	2.24737	ppb		94
5) 1-Methylnaphthalene	7.00	142	2475	2.32693	ppb		97
8) 1,1'-Biphenyl	7.43	154	2717	2.22817	ppb		90
9) Acenaphthylene	7.92	152	3849	2.39854	ppb		97
10) Acenaphthene	8.12	154	2259	2.53779	ppb		93
11) Fluorene	8.72	166	2727	2.66367	ppb		98
13) Phenanthrene	9.85	178	4389	2.61039	ppb		99
14) Anthracene	9.91	178	4226	2.53948	ppb		97
15) Fluoranthene	11.22	202	6569	2.71619	ppb	#	82
17) Pyrene	11.49	202	6814	2.55669	ppb		93
19) Benz (a) anthracene	12.89	228	5411	2.31016	ppb		95
20) Chrysene	12.94	228	6005	2.65394	ppb	#	96
21) Indeno (1,2,3-cd) pyrene	16.03	276	5297	2.21778	ppb		70
23) Benzo (b) fluoranthene	14.08	252	5215	2.65443	ppb	#	88
24) Benzo (k) fluoranthene	14.12	252	5193	2.58913	ppb		95
25) Benzo (a) pyrene	14.47	252	4549	2.40937	ppb		99
26) Dibenz (a,h) anthracene	16.04	278	4140	2.41433	ppb		88
27) Benzo (g,h,i) perylene	16.46	276	4436	2.48004	ppb		90

$\frac{3703 \times 2.5}{2533 \times 1.610} = 2.27$ LF 8/10/12

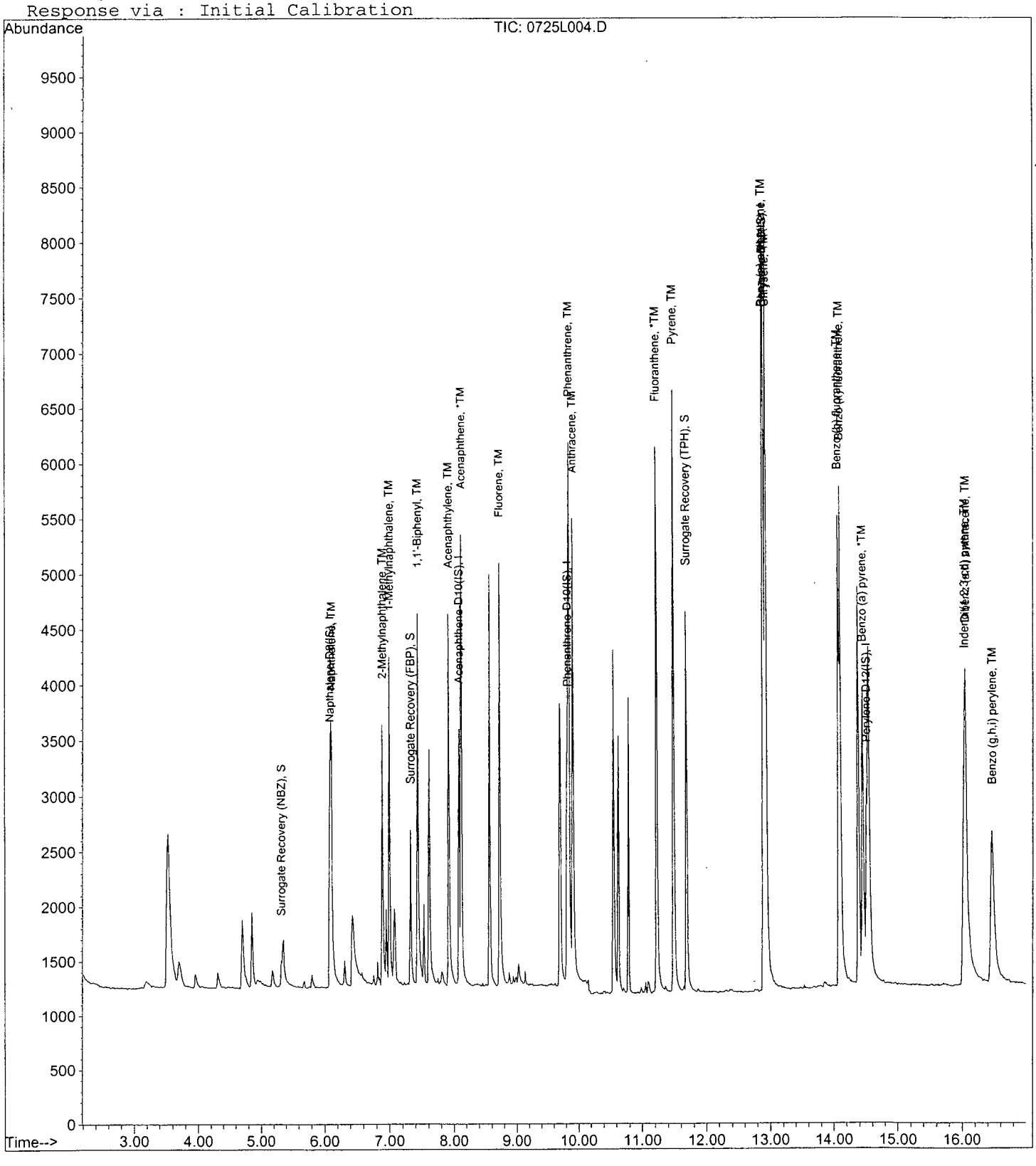
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0725L004.D Vial: 4
Acq On : 25 Jul 12 19:23 Operator: LF
Sample : 120725A LCS-1 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:24 2012 Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration



Matrix Spike Recoveries

EPA 8270D SIM

APPL ID: **120725W-65167 MS - 169430**
Batch ID: #SIMHC-120725A
Sample ID: AY65167
Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1-METHYLNAPHTHALENE	3.81	ND	2.52	2.58	66.1	67.7	45-105	2.4	25
2-METHYLNAPHTHALENE	3.81	ND	2.46	2.44	64.6	64.0	45-105	0.82	25
ACENAPHTHENE	3.81	ND	2.78	2.87	73.0	75.3	45-110	3.2	25
ACENAPHTHYLENE	3.81	ND	2.87	2.85	75.3	74.8	50-105	0.70	25
ANTHRACENE	3.81	ND	2.94	2.99	77.2	78.5	55-110	1.7	25
BENZO(A)ANTHRACENE	3.81	ND	2.41	2.39	63.3	62.7	55-110	0.83	25
BENZO(A)PYRENE	3.81	ND	2.46	2.37	64.6	62.2	55-110	3.7	25
BENZO(B)FLUORANTHENE	3.81	ND	2.41	2.32	63.3	60.9	45-120	3.8	25
BENZO(GHI)PERYLENE	3.81	ND	2.61	2.55	68.5	66.9	40-125	2.3	25
BENZO(K)FLUORANTHENE	3.81	ND	3.00	2.84	78.7	74.5	45-125	5.5	25
CHRYSENE	3.81	ND	2.90	2.87	76.1	75.3	55-110	1.0	25
DIBENZ(A,H)ANTHRACENE	3.81	ND	2.60	2.58	68.2	67.7	40-125	0.77	25
FLUORANTHENE	3.81	ND	2.98	3.06	78.2	80.3	55-115	2.6	25
FLUORENE	3.81	ND	3.09	3.11	81.1	81.6	50-110	0.65	25
INDENO(1,2,3-CD)PYRENE	3.81	ND	2.36	2.28	61.9	59.8	45-125	3.4	25
NAPHTHALENE	3.81	ND	2.59	2.58	68.0	67.7	40-100	0.39	25
PHENANTHRENE	3.81	ND	3.08	3.11	80.8	81.6	50-115	0.97	25
PYRENE	3.81	ND	2.89	2.87	75.9	75.3	50-130	0.69	25
SURROGATE: 2-FLUORBIPHENYL (S)	1.90	NA	1.23	1.22	64.7	64.2	50-110		
SURROGATE: NITROBENZENE-D5 (S)	1.90	NA	1.28	1.33	67.4	70.0	40-110		
SURROGATE: TERPHENYL-D14 (S)	1.90	NA	2.12	2.13	112	112	50-135		

Comments: _____

Primary	SPK	DUP
Quant Method :	SIMB.M	SIMB.M
Extraction Date :	07/25/12	07/25/12
Analysis Date :	07/25/12	07/25/12
Instrument :	Linus	Linus
Run :	0725L006	0725L007
Initials :	LF	

Printed: 07/27/12 12:15:03 PM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L006.D Vial: 6
Acq On : 25 Jul 12 20:15 Operator: LF
Sample : AY65167W10 MS-1 1/1050 Inst : Linus
Misc : Multiplr: 0.95

Quant Time: Jul 27 8:25 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2599	2.50000 ppb		-0.04
6) Acenaphthene-D10(IS)	8.08	164	1231	2.50000 ppb		-0.05
12) Phenanthrene-D10(IS)	9.81	188	2370	2.50000 ppb		-0.05
16) Chrysene-D12(IS)	12.90	240	2864	2.50000 ppb		0.00
22) Perylene-D12(IS)	14.52	264	2186	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	651	1.27568 ppb		-0.01
Spiked Amount 1.905			Recovery = 66.990%			
7) Surrogate Recovery (FBP)	7.32	172	1490	1.23136 ppb		-0.05
Spiked Amount 1.905			Recovery = 64.628%			
18) Surrogate Recovery (TPH)	11.69	244	3195	2.12372 ppb		-0.05
Spiked Amount 1.905			Recovery = 111.510%			
Target Compounds						Qvalue
3) Naphthalene	6.09	128	4552	2.58992 ppb		97
4) 2-Methylnaphthalene	6.89	142	2797	2.45561 ppb		91
5) 1-Methylnaphthalene	7.00	142	2884	2.51676 ppb		98
8) 1,1'-Biphenyl	7.43	154	3599	2.68077 ppb	#	87
9) Acenaphthylene	7.92	152	5064	2.86624 ppb		98
10) Acenaphthene	8.11	154	2729	2.78461 ppb		84
11) Fluorene	8.72	166	3484	3.09096 ppb		96
13) Phenanthrene	9.83	178	5493	3.07992 ppb		97
14) Anthracene	9.91	178	5191	2.94074 ppb		98
15) Fluoranthene	11.22	202	7638	2.97735 ppb		95
17) Pyrene	11.49	202	7852	2.88816 ppb	#	90
19) Benz (a) anthracene	12.89	228	5762	2.41159 ppb		98
20) Chrysene	12.94	228	6695	2.90064 ppb	#	99
21) Indeno (1,2,3-cd) pyrene	16.02	276	5751	2.36046 ppb		71
23) Benzo (b) fluoranthene	14.08	252	4858	2.40560 ppb	#	84
24) Benzo (k) fluoranthene	14.10	252	6186	3.00051 ppb		98
25) Benzo (a) pyrene	14.45	252	4765	2.45527 ppb		98
26) Dibenz (a,h) anthracene	16.04	278	4585	2.60126 ppb		93
27) Benzo (g,h,i) perylene	16.45	276	4791	2.60581 ppb		87

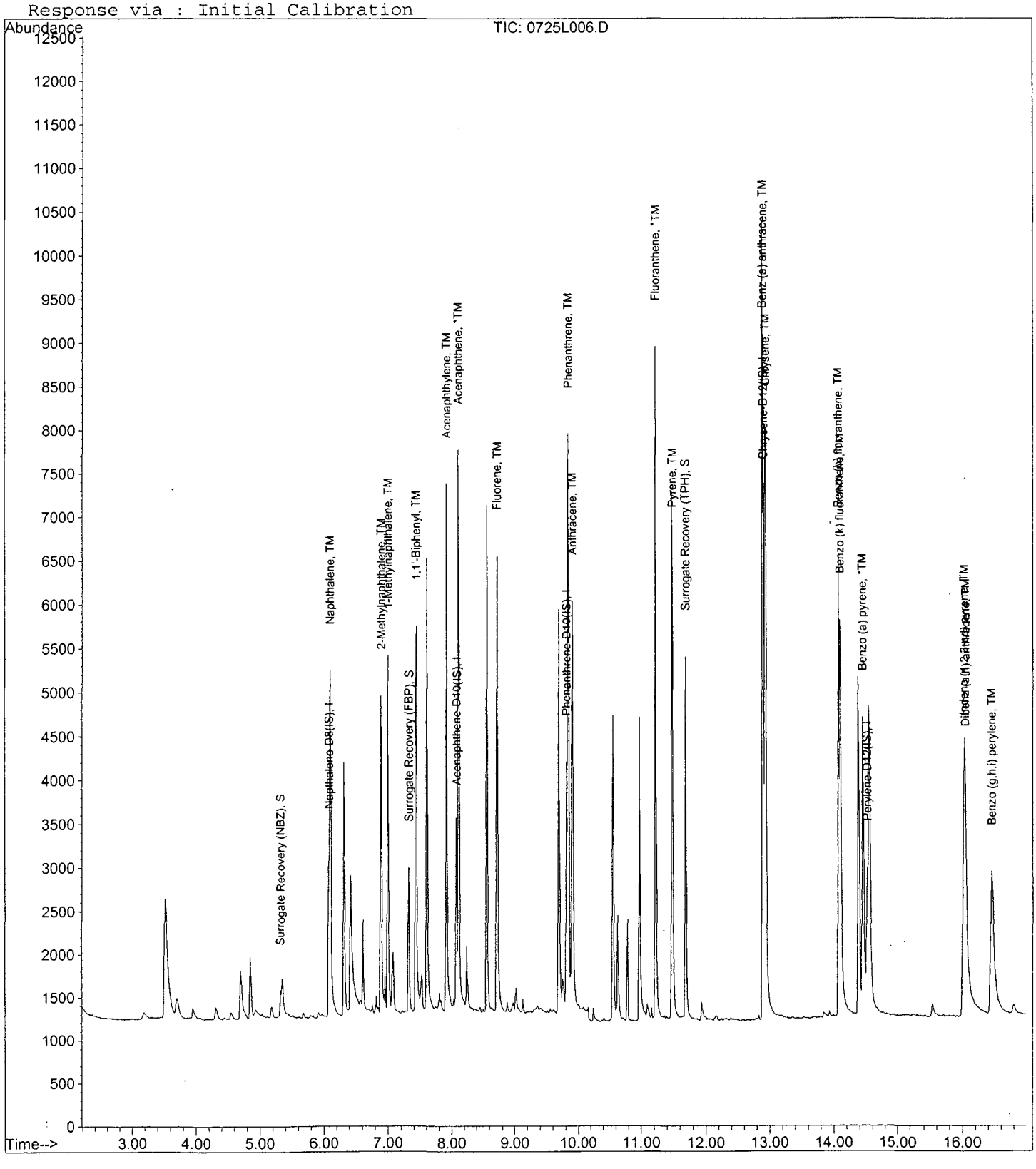
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0725L006.D Vial: 6
Acq On : 25 Jul 12 20:15 Operator: LF
Sample : AY65167W10 MS-1 1/1050 Inst : Linus
Misc : Multiplr: 0.95

Quant Time: Jul 27 8:25 2012 Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L007.D Vial: 7
Acq On : 25 Jul 12 20:41 Operator: LF
Sample : AY65167W13 MSD-1 1/1050 Inst : Linus
Misc : Multiplr: 0.95

Quant Time: Jul 27 8:25 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2688	2.50000 ppb		-0.04
6) Acenaphthene-D10(IS)	8.08	164	1301	2.50000 ppb		-0.05
12) Phenanthrene-D10(IS)	9.81	188	2439	2.50000 ppb		-0.05
16) Chrysene-D12(IS)	12.90	240	3020	2.50000 ppb		0.00
22) Perylene-D12(IS)	14.52	264	2405	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	700	1.32628 ppb		-0.01
Spiked Amount 1.905			Recovery = 69.615%			
7) Surrogate Recovery (FBP)	7.32	172	1558	1.21828 ppb		-0.05
Spiked Amount 1.905			Recovery = 63.945%			
18) Surrogate Recovery (TPH)	11.69	244	3379	2.13001 ppb		-0.05
Spiked Amount 1.905			Recovery = 111.825%			
Target Compounds						Qvalue
3) Naphthalene	6.09	128	4693	2.58174 ppb		99
4) 2-Methylnaphthalene	6.89	142	2872	2.43797 ppb		94
5) 1-Methylnaphthalene	7.00	142	3057	2.57941 ppb		97
8) 1,1'-Biphenyl	7.43	154	3710	2.61477 ppb	#	88
9) Acenaphthylene	7.92	152	5320	2.84913 ppb		98
10) Acenaphthene	8.11	154	2973	2.87036 ppb	#	82
11) Fluorene	8.72	166	3702	3.10765 ppb		97
13) Phenanthrene	9.83	178	5707	3.10939 ppb		96
14) Anthracene	9.91	178	5428	2.98801 ppb		98
15) Fluoranthene	11.22	202	8088	3.06358 ppb	#	92
17) Pyrene	11.49	202	8218	2.86664 ppb	#	88
19) Benz (a) anthracene	12.89	228	6010	2.38545 ppb		98
20) Chrysene	12.94	228	6978	2.86708 ppb		99
21) Indeno (1,2,3-cd) pyrene	16.02	276	5864	2.28251 ppb		73
23) Benzo (b) fluoranthene	14.08	252	5151	2.31842 ppb	#	84
24) Benzo (k) fluoranthene	14.10	252	6436	2.83750 ppb		100
25) Benzo (a) pyrene	14.45	252	5059	2.36938 ppb		98
26) Dibenz (a,h) anthracene	16.03	278	5002	2.57943 ppb		89
27) Benzo (g,h,i) perylene	16.45	276	5161	2.55144 ppb		91

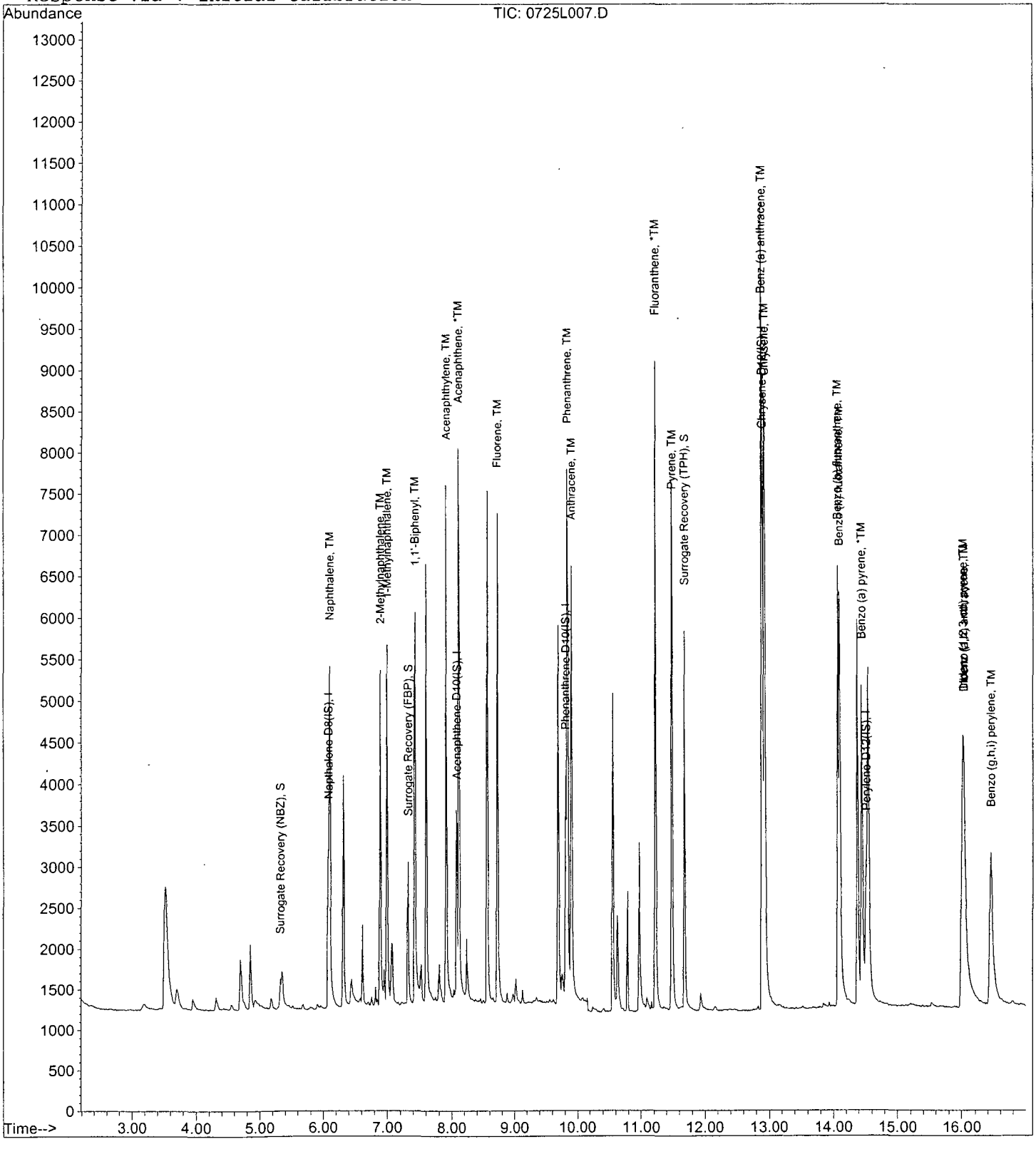
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0725L007.D Vial: 7
Acq On : 25 Jul 12 20:41 Operator: LF
Sample : AY65167W13 MSD-1 1/1050 Inst : Linus
Misc : Multiplr: 0.95

Quant Time: Jul 27 8:25 2012 Quant Results File: SIMB.RES

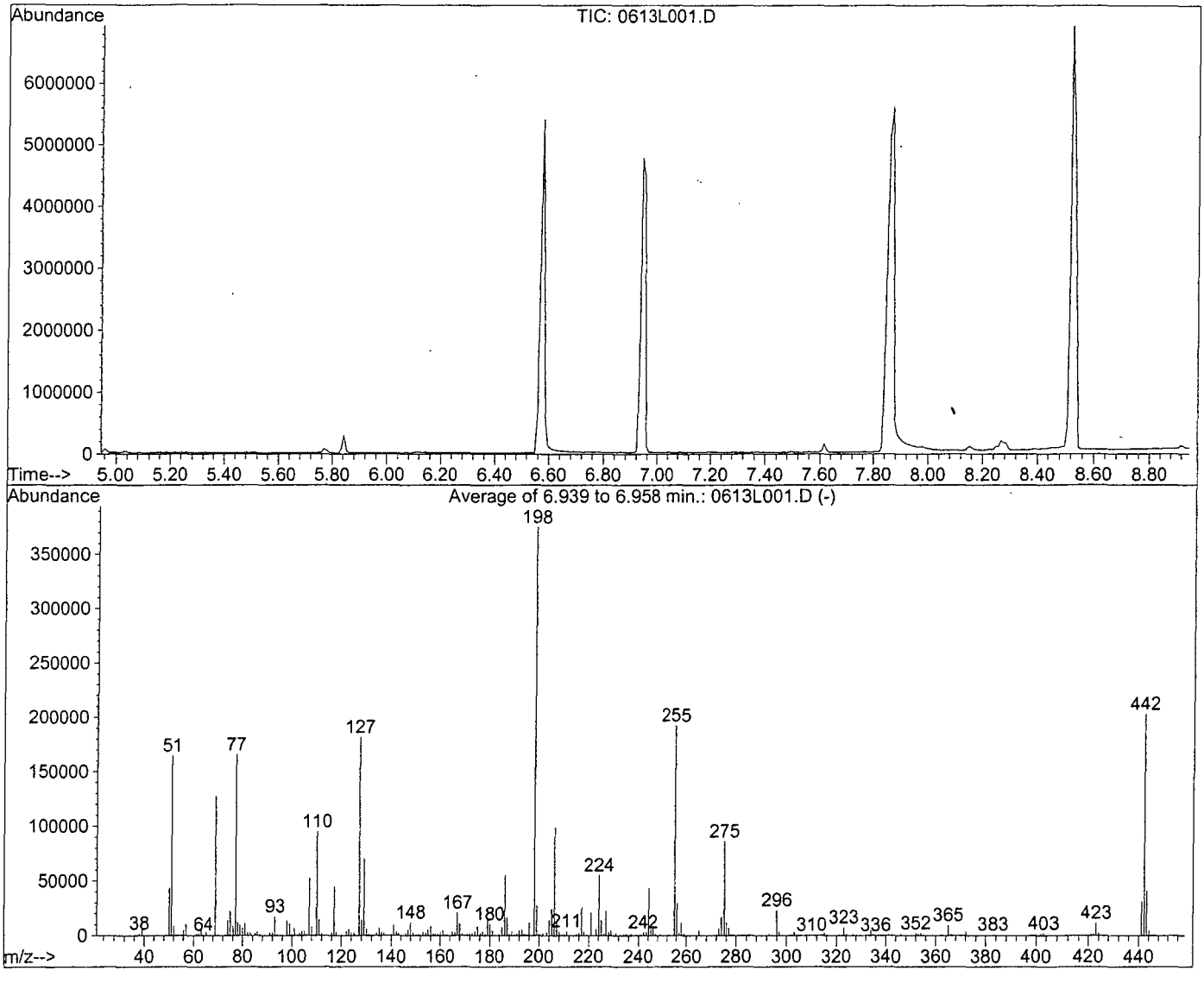
Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L120613\0613L001.D Vial: 1
Acq On : 13 Jun 12 13:07 Operator: LF
Sample : SVTUNE 2-28-12 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C



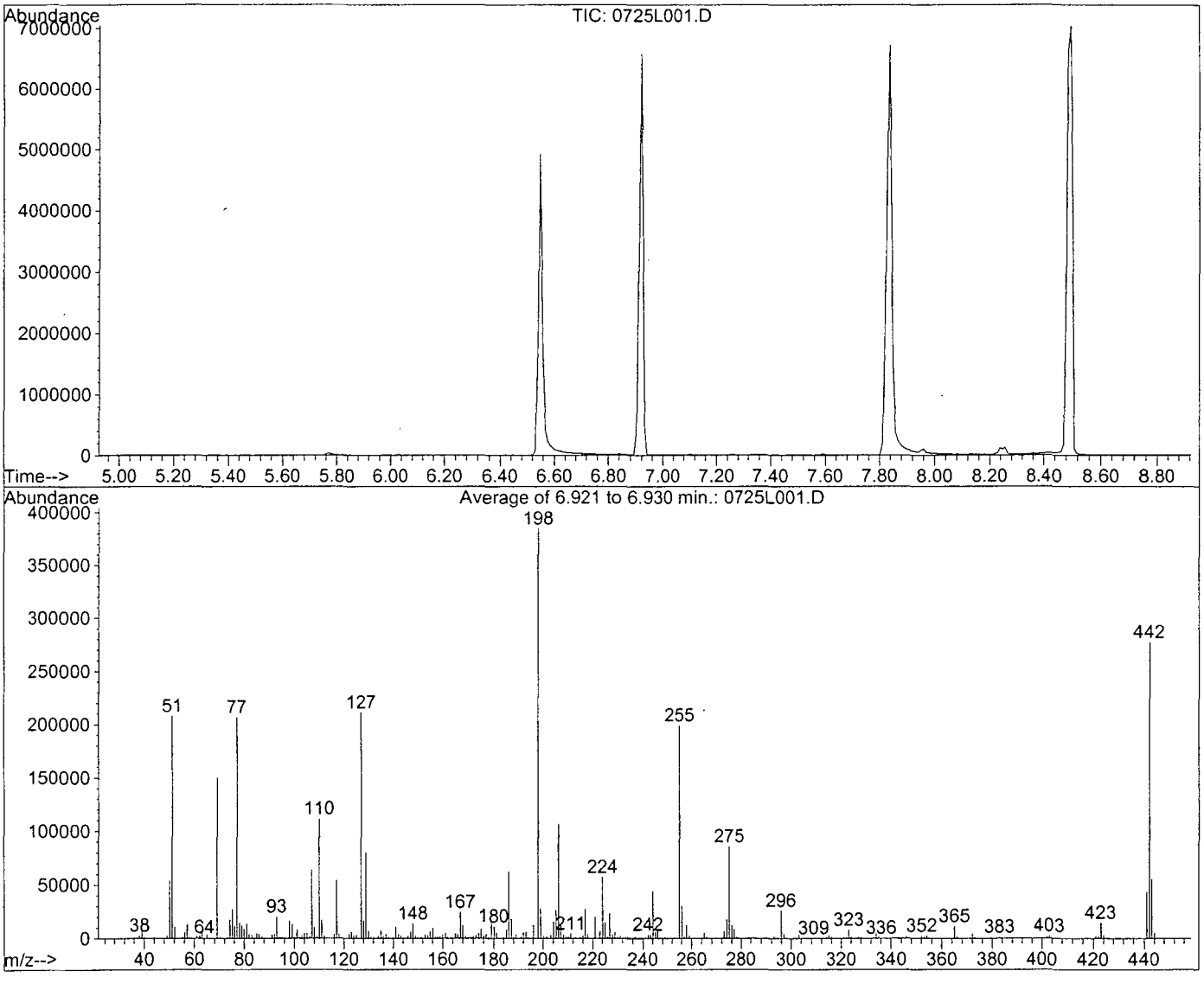
Spectrum Information: Average of 6.939 to 6.958 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.8	164628	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	681	PASS
127	198	40	60	48.3	181462	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	375479	PASS
199	198	5	9	7.2	27064	PASS
275	198	10	30	22.8	85713	PASS
365	198	1	100	2.5	9250	PASS
441	443	0.01	100	75.8	30917	PASS
442	198	40	150	53.9	202264	PASS
443	442	17	23	20.2	40782	PASS

DFTPP

Data File : M:\LINUS\DATA\L120613\0725L001.D Vial: 1
Acq On : 25 Jul 12 18:12 Operator: LF
Sample : SVTUNE 2-28-12 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 6.921 to 6.930 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	53.9	207646	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	928	PASS
127	198	40	60	54.8	210956	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	384992	PASS
199	198	5	9	7.3	27977	PASS
275	198	10	30	22.2	85462	PASS
365	198	1	100	2.9	11042	PASS
441	443	0.01	100	77.5	42884	PASS
442	198	40	150	72.0	277056	PASS
443	442	17	23	20.0	55324	PASS

10/18/12

Part #: 10001
Lot #: 042910
Laboratory Use Only - See MSDS
Exp: 042913 Storage 0 °C
CLP Semi-Volatiles Base/Neutrals Mix #1
14 components
2000 ug/mL in methy
ABSOLUTE STANDARD
CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 042910 - 28440
Rec: 3/8/11 MFR exp. 4/29/2013

exp 10/18/12

10/18/12

Part #: 10001
Lot #: 042910
Laboratory Use Only - See MSDS
Exp: 042913 Storage 0 °C
CLP Semi-Volatiles Base/Neutrals Mix #1
14 components
2000 ug/mL in m
ABSOLUTE STANDA
Lot #: 042910 - 29085
Rec: 8/4/11 MFR exp. 04/29/13

exp 10/18/12

10/18/12

Part #: 10002
Lot #: 073109
Laboratory Use Only - See MSDS
Exp: 073112 Storage 4 °C
CLP Semi-Volatiles Base/Neutrals Mix #2
14 components
2000 ug/mL in methyle
ABSOLUTE STANDARDS
CLP Semi-Volatiles Base/Neutrals Mix #2
Lot #: 073109 - 28446
Rec. 3/8/11 MFR exp. 7/31/2012

exp 7/31/12

10/18/12

Part #: 10002
Lot #: 073109
Laboratory Use Only - See MSDS
Exp: 073112 Storage 4 °C
CLP Semi-Volatiles Base/Neutrals Mix #2
14 components
2000 ug/mL in met
ABSOLUTE STANDAF
CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 073109 - 29090
Rec: 8/4/11 MFR exp 07/31/12

exp 7/31/12

10/18/12

Part #: 10004
Lot #: 101509
Laboratory Use Only - See MSDS
Exp: 101514 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #1
4 components
2000 ug/mL in methyl
ABSOLUTE STANDARDS
CLP Semi-Volatiles Toxic Substances #1
Lot #: 101509 - 28453
Rec: 3/8/11 MFR exp. 10/15/201

exp 10/18/12

10/18/12

Part #: 10004
Lot #: 101509
Laboratory Use Only - See MSDS
Exp: 101514 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #1
4 components
2000 ug/mL in metl
ABSOLUTE STANDAR
CLP Semi-Volatiles Toxic Substances #1
Lot #: 101509 - 29095
Rec: 8/4/11 MFR exp. 10/15/14

exp 10/18/12

10/18/12

Part #: 10005
Lot #: 061209
Laboratory Use Only - See MSDS
Exp: 061214 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #2
8 components
2000 ug/mL in methy
ABSOLUTE STANDARD
CLP Semi-Volatiles Toxic Substances #2
Lot #: 061209 - 28458
Rec: 3/8/11 MFR exp. 6/12/2014

exp 10/18/12

10/18/12

Part #: 10005
Lot #: 121208
Laboratory Use Only - See MSDS
Exp: 121213 Storage 4 °C
CLP Semi-Volatiles Toxic Substances #2
8 components
2000 ug/mL in met
ABSOLUTE STANDAR
CLP Semi-Volatiles Toxic Substances #2
Lot #: 121208 - 29100
Rec: 8/4/11 MFR exp. 12/12/13

exp 10/18/12

2/25/12

8270D PAH SIM Solution,
200 mg/L, 1 ml

110780-01

Lot #	Storage	Expiry
170253	≤-10 Degrees C	3/3/13

Solv: Methylene Chloride

Per R&D only, not human consump. Made in the USA

8270D PAH SIM
Lot #. 170253 - 28478
Rec. 3/10/11 MFR exp 3/3/2013

exp 4/25/13

2/25/12

8270D PAH SIM Solution,
Second Source, 200 mg/L, 1 ml

110780-01-SS

Lot #	Storage	Expiry
170256	≤-10 Degrees C	3/3/13

Solv: Methylene Chloride

Per R&D only, not human consump. Made in the USA

8270D PAH SIM (SS)
Lot # 170256 - 28490
Rec 3/10/11 MFR exp. 3/3/2013

exp 2/25/13

2/25/12

8270 BN:A (200:400)
Surrogate Solution, 1 ml

110004-17

Lot #	Storage	Expiry
167802	≤-10 Degrees C	1/9/13

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270 BN:A (200:400) Surrogate Solution
Lot # 167802 - 29314
Rec. 8/8/11 MFR exp. 01/09/13

exp 1/9/13

2/25/12

Method 8270 Internal
Standard Solution, 2,000 mg/L, 1 ml

110001-02

Lot #	Storage	Expiry
167766	≤-10 Degrees C	4/20/13

Solv: Methylene Chloride

R&D only, not human consump. Made in the USA

8270 Internal Standard
Lot #: 167766 - 28151
Rec 1/20/11 MFR exp 04/20/13

exp 2/25/13

2/25/12

PREP DATE:	02-25-12						
SIM Semivolitile Int. Std. Mix 125 ug/ml							
Exp:	08-25-12						
		Conc		Date	CODE:	B	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	
O2SI	Int. Std.	2000	167766-28151	02/25/12	02-25-13	100	
EM Science	MeCl2		47186			1500	
						1600	

2/25/12

PREP DATE:	02-25-12													
8270 SIM STANDARD CURVE														
						0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00	
		Conc		Date	CODE:	A	A	C	D	E	F	G	H	
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	

UF 2/27/12

PREP DATE:	02-25-12						
SIM 8270 Second Source (5µg/mL)							
Exp:	03-10-12						
				Conc.	Date	CODE:	
Supplier	ID #		Lot #	µg/mL	Code	Exp.Date	µL
	8270D PAH SIM (SS)		170256-28490	200	02/25/12	02-25-13	5
	MeCl2			Lot#47186			195
					Final Volume		200

UF 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
ULTRA 1 mL
For Lab Use

UF 2/28/13

UF 2/28/12

PREP DATE:	02-28-12					
SV Tune Mix 50ug/ml						
Exp:	02-28-13					
		Conc.		Date	CODE:	B
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
U Scientific	GCM-150	1000	CH-2137	02/28/12	07-31-13	1000
EM Science	MeCl2		47080			19000
					Final Vol	20000

UF 2/29/12

PREP DATE:	02-29-12												
8270 SIM STANDARD CURVE													
						0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
		Conc.		Date	CODE:	A	A	C	D	E	F	G	H
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		02/29/12		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

UF 2/29/12

PREP DATE:	02-29-12					
SIM 8270 Second Source (5µg/mL)						
Exp:	03-14-12					
			Conc.	Date	CODE:	
Supplier	ID #	Lot #	µg/mL	Code	Exp.Date	µL
	8270D PAH SIM (SS)	170256-28490	200	02/25/12	02-25-13	5
	MeCl2		Lot#47186			195
				Final Volume		200

UF 3/18/12

PREP DATE:	03-18-12												
8270 STANDARD CURVE													
						5	10	20	40	50	60	80	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
	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

UF 3/19/12

PREP DATE:	03-18-12					
8270 Second Source (SS) 50ug/mL						
						50
		Conc.		Date	CODE:	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	8270C SS	200		10/11/11	10-11-12	25
EM Science	Methylene Chloride		47186			75

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
2000 ug/mL in me
ABSOLUTE STANDA

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 042910 - 29081
Rec: 8/4/11 MFR exp. 04/29/13

VF

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
2000 ug/mL in meth
ABSOLUTE STANDAR

CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 073109 - 29086
Rec: 8/4/11 MFR exp. 07/31/12

VF

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
2000 ug/mL in meth
ABSOLUTE STANDARI

CLP Semi-Volatiles Toxic Substances #1
Lot #: 101509 - 29091
Rec: 8/4/11 MFR exp. 10/15/14

VF

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
2000 ug/mL in me
ABSOLUTE STANDA

CLP Semi-Volatiles Toxic Substances #2
Lot #: 121208 - 29097
Rec 8/4/11 MFR exp. 12/12/13

VF

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
2000 ug/mL in meth
ABSOLUTE STANDAR

CLP Semi-Volatiles - Benzidines
Lot #: 071211 - 29102
Rec. 8/4/11 MFR exp. 07/12/14

VF

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
2000 ug/mL in meth
ABSOLUTE STANDARI

CLP Semi-Volatiles - PAH Mix
Lot #: 100909 - 29107
Rec: 8/4/11 MFR exp. 10/09/14

VF

exp 10/9/14

VF 5/14/12

Part #: 10018 Laboratory Use Only - See MSDS
Lot #: 062111 Exp: 062116 Storage 4 °C



EPA Method 8270A - Analytes Mix #8
13 components - PI
2000 ug/mL in meth
ABSOLUTE STANDAR

EPA Method 8270A - Analytes Mix #8
Lot #: 062111 - 29112
Re 1 MFR exp. 06/21/16

VF

exp 6/21/16

VF 5/11/12

Part #: 70023 Laboratory Use Only - See MSDS
Lot #: 031611 Exp: 031616 Storage 4 °C



Atrazine
1000 ug/mL in ac
ABSOLUTE STANDA

Atrazine
Lot #: 031611 - 29117
Rec: 8/4/11 MFR exp. 03/16/16

VF

exp 3/16/16

VF 5/1/12

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 041911 Exp: 041914 Storage 4 °C



EPA Method 8270A
4 components
2000 ug/mL in acet

EPA Method 8270A - Mix #18
Lot #: 041911 - 29122
Rec: 8/4/11 MFR exp. 04/19/14

ABSOLUTE STANDAR

exp 4/19/14

VF 5/1/12

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 030411 Exp: 030414 Storage 4 °C



Semi-Volatile Standard
11 components
Varied ug/mL in m

Semi-Volatile Standard
Lot #: 030411 - 29127
Rec: 8/4/11 MFR exp. 03/04/14

ABSOLUTE STANDAR

exp 3/4/14

VF 5/1/12

PREP DATE.	05-01-12					
8270C Stock/Spike Standard						
Exp:	07-31-12					
		Conc.		Date	CODE:	P
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
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

PREP DATE.	05-04-12												
8270 STANDARD CURVE													
						5	10	20	40	50	60	80	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
	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 5/4/12

PREP DATE:	05-04-12					
8270 Second Source (SS) 50ug/mL						50
		Conc.		Date	CODE:	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	8270C SS	200		10/11/11	10-11-12	25
						75
EM Science	Methylene Chloride		47186			
					Final Vol.	100

5/22/12

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 mel

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 042910 - 29082
Rec: 8/4/11 MFR exp. 04/29/13

ABSOLUTE STANDAR

exp 4/29/13

VF 5/30/12

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 me

CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 073109 - 29087
Rec. 8/4/11 MFR exp. 07/31/12

ABSOLUTE STANDAI

exp 7/31/12

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	120725A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	SIM Spike 170745-30363		Surrogate ID 1	8270 SIM Surrogate 188684-30653	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	07/25/12 12:04	
Spiked ID 8			Ext. End Time:	16:29 7/25/12	
			GC Requires Extract By:	08/03/12 0:00	

pH1	2	07/25/12 12:04:00 PM	Water Bath Temp Criteria	76,80 °C
pH2	14	07/25/12 1:20:00 PM		
pH3				

Spiked By: GH **Date** 07/25/12 **Witnessed By:** DRA **Date** 07/25/12

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	120725A Blk				0.025	1	1000	1	2/1	07/25/12 12:04	
						equip	E-WB5,76				
2	120725A LCS-1		0.025	1	0.025	1	1000	1	2/1	07/25/12 12:04	
						equip	E-WB5,76				
3	AY65166	AY65166W07			0.025	1	1050	1	2/1	07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
4	AY65167 MS-1	AY65167W10	0.025	1	0.025	1	1050	1	2/1	07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
5	AY65167 MSD-1	AY65167W13	0.025	1	0.025	1	1050	1	2/1	07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
6	AY65167	AY65167W09			0.025	1	1000	1	2/1	07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter -- Amber Liter
						equip	E-WB6,80				
7	AY65220	AY65220W04			0.025	1	1000	1	2/1	07/25/12 12:04	68284-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				

DRA 7/25/12

Solvent and Lot#	
MC	EMD52104
Na2SO4	2351C512
10N NaOH	07/06/12
1+1 Acid	06/27/12
A. Na2SO4	06/28/12

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	
Date	7/25/12
Time	
Refrigerator	

	Technician's Initials
Scanned By	GH
Sample Preparation	GH
Extraction	JM
Concentration	IC

Modified	07/25/12 4:11:30 PM

Reviewed By: DRA **Date** 07/25/12

Injection Log

Directory: M:\LINUS\DATA\L120613\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0613L001.D	1	SVTUNE 2-28-12		13 Jun 12 13:07
2	3	0613L003.D	1	0.1ug/ml PAH 06-13-12		13 Jun 12 13:51
3	4	0613L004.D	1	0.2ug/ml PAH		13 Jun 12 14:16
4	5	0613L005.D	1	0.5ug/ml PAH		13 Jun 12 14:41
5	6	0613L006.D	1	1.0ug/ml PAH		13 Jun 12 15:07
6	7	0613L007.D	1	5.0ug/ml PAH		13 Jun 12 15:33
7	8	0613L008.D	1	10ug/ml PAH		13 Jun 12 15:59
8	9	0613L009.D	1	50ug/ml PAH		13 Jun 12 16:25
9	10	0613L010.D	1	100ug/ml PAH		13 Jun 12 16:51
10	11	0613L011.D	1	5.0ug/ml SS PAH 06-13-12		13 Jun 12 17:17
11	1	0725L001.D	1	SVTUNE 2-28-12		25 Jul 12 18:12
12	2	0725L002.D	1	5.0ug/ml PAH 06-13-12		25 Jul 12 18:31
13	3	0725L003.D	1	120725A BLK 1/1000		25 Jul 12 18:57
14	4	0725L004.D	1	120725A LCS-1 1/1000		25 Jul 12 19:23
15	5	0725L005.D	0.95238	AY65166W07 1/1050		25 Jul 12 19:49
16	6	0725L006.D	0.95238	AY65167W10 MS-1 1/1050		25 Jul 12 20:15
17	7	0725L007.D	0.95238	AY65167W13 MSD-1 1/1050		25 Jul 12 20:41
18	8	0725L008.D	1	AY65167W09 1/1000		25 Jul 12 21:07

EPA 8015B
Total Petroleum Hydrocarbons

EPA 8015B
Total Petroleum Hydrocarbons -

QC Summary

Method Blank
TPH Diesel Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169638**
Batch ID: #TPETD-120726A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL FUEL	80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
BLANK	SURROGATE: OCTACOSANE (S)	64.4	28-142			%	07/26/12	08/01/12
BLANK	SURROGATE: ORTHO-TERPHEN	78.3	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731039
Instrument: Apollo
Sequence: 120731
Initials: SD

Printed: 08/02/12 5:56:43 PM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 08/01/12

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120726A-BLK	Blank	28-142	64.4		57-132	78.3	
120726A-LCS	Lab Control Spike	28-142	59.4		57-132	89.3	
AY65166	ES083	28-142	63.7		57-132	77.6	
AY65167-MS	Matrix Spike	28-142	46.3		57-132	70.0	
AY65167-MSD	Matrix SpikeD	28-142	64.0		57-132	89.3	
AY65167	ES084	28-142	70.2		57-132	81.9	

Comments: Batch: #TPETD-120726A

Laboratory Control Spike Recovery
TPH Diesel Water

APPL ID: **120726W-65167 LCS - 169638**
Batch ID: #TPETD-120726A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL FUEL	2000	1370	68.5	61-143
SURROGATE: OCTACOSANE (S)	150	89.1	59.4	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	134	89.3	57-132

Comments: _____

Primary	SPK
Quant Method :	TPH0719.M
Extraction Date :	07/26/12
Analysis Date :	08/01/12
Instrument :	Apollo
Run :	731040
Initials :	SD

Printed: 08/02/12 5:56:33 PM
APPL Standard LCS

Matrix Spike Recoveries

TPH Diesel Water

APPL ID: **120726W-65167 MS - 169638**
Batch ID: #TPETD-120726A
Sample ID: AY65167
Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL FUEL	2000	ND	1250	1570	62.5	78.5	61-143	22.7	30
SURROGATE: OCTACOSANE (S)	150	NA	69.4	96.0	46.3	64.0	28-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	NA	105	134	70.0	89.3	57-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	TPH0719.M	TPH0719.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	08/01/12	08/01/12
Instrument :	Apollo	Apollo
Run :	731043	731044
Initials :	SD	

Printed: 08/02/12 5:56:30 PM
APPL MSD SCII

EPA 8015B-e

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 08/01/12

Matrix: WATER Instrument: Apollo

Blank ID: 120726A-BLK Time Analyzed: 0111

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120726A-BLK	Blank	731039	08/01/12 0111
120726A-LCS	Lab Control Spike	731040	08/01/12 0135
AY65166	ES083	731042	08/01/12 0224
120726A-MS	Matrix Spike	731043	08/01/12 0248
120726A-MSD	Matrix SpikeD	731044	08/01/12 0312
AY65167	ES084	731045	08/01/12 0336

Comments: Batch: #TPETD-120726A

EPA 8015B
Total Petroleum Hydrocarbons -

Sample Data

TPH Diesel Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68268

Sample ID: ES083

APPL ID: AY65166

Sample Collection Date: 07/19/12

QCG: #TPETD-120726A-169638

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	63.7	28-142			%	07/26/12	08/01/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (S	77.6	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731042
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 5:56:36 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731042.D Vial: 42
Acq On : 8-1-12 2:24:08 Operator: LAC
Sample : AY65166W04 5/1040 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

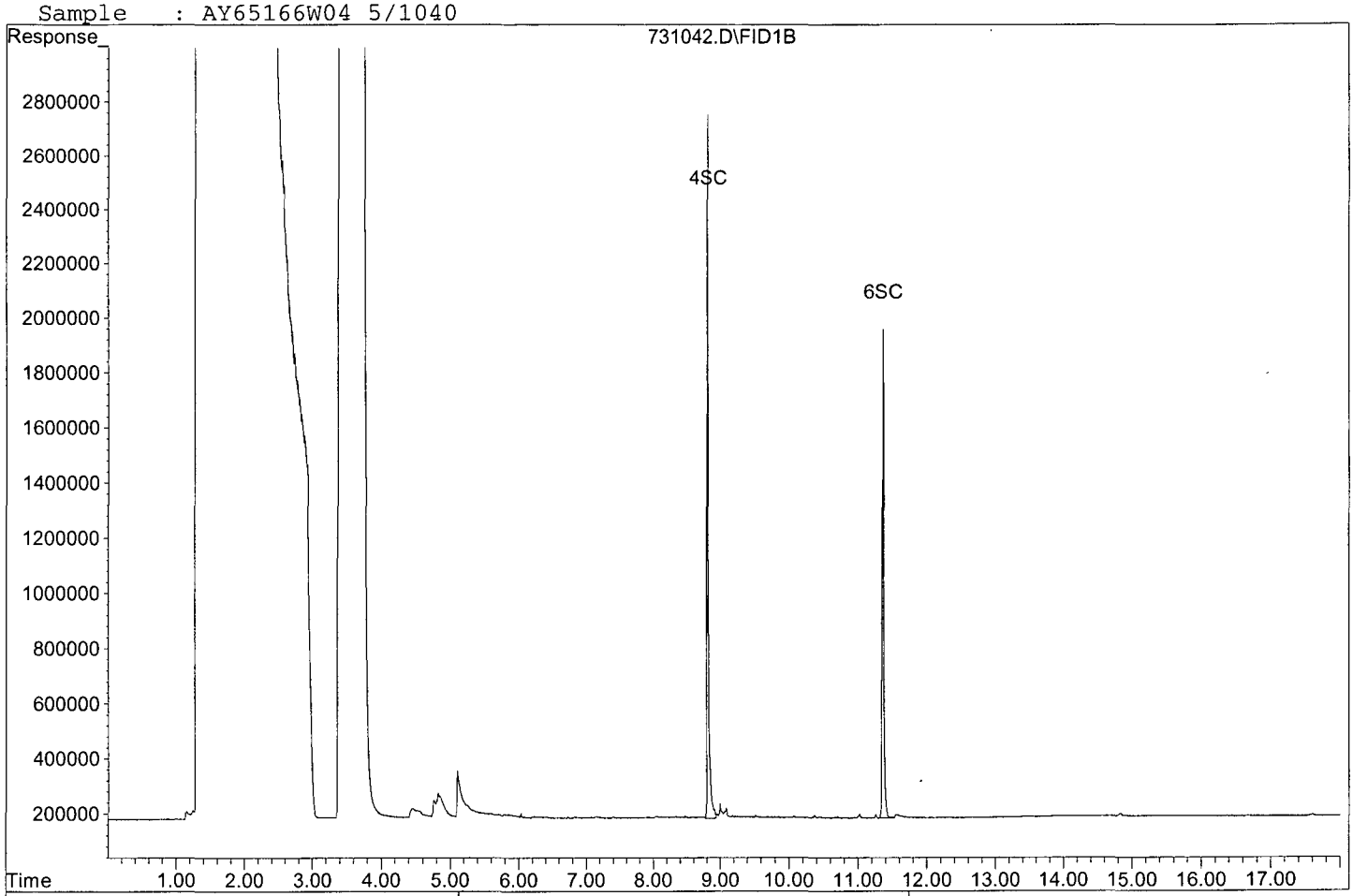
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

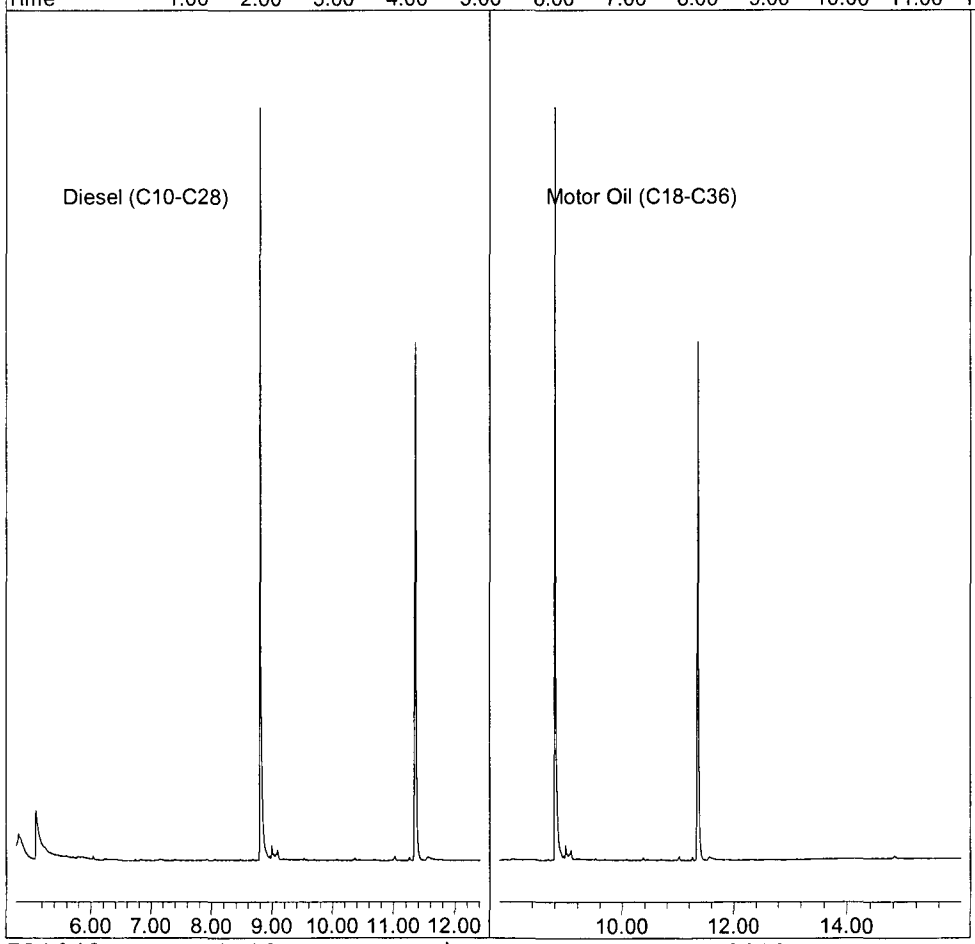
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	32820007	110.896 ppb
Surrogate Spike 142.857		Recovery =	77.63%
6) SC Octacosane(S)	11.36	28778928	90.928 ppb
Surrogate Spike 142.857		Recovery =	63.65%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120731\731042.D
Sample : AY65166W04 5/1040





TPH Diesel Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68268

Sample ID: ES084

APPL ID: AY65167

Sample Collection Date: 07/19/12

QCG: #TPETD-120726A-169638

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	70.2	28-142			%	07/26/12	08/01/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (S	81.9	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731045
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 5:56:36 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731045.D Vial: 45
Acq On : 8-1-12 3:36:31 Operator: LAC
Sample : AY65167W11 5/1050 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:46 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

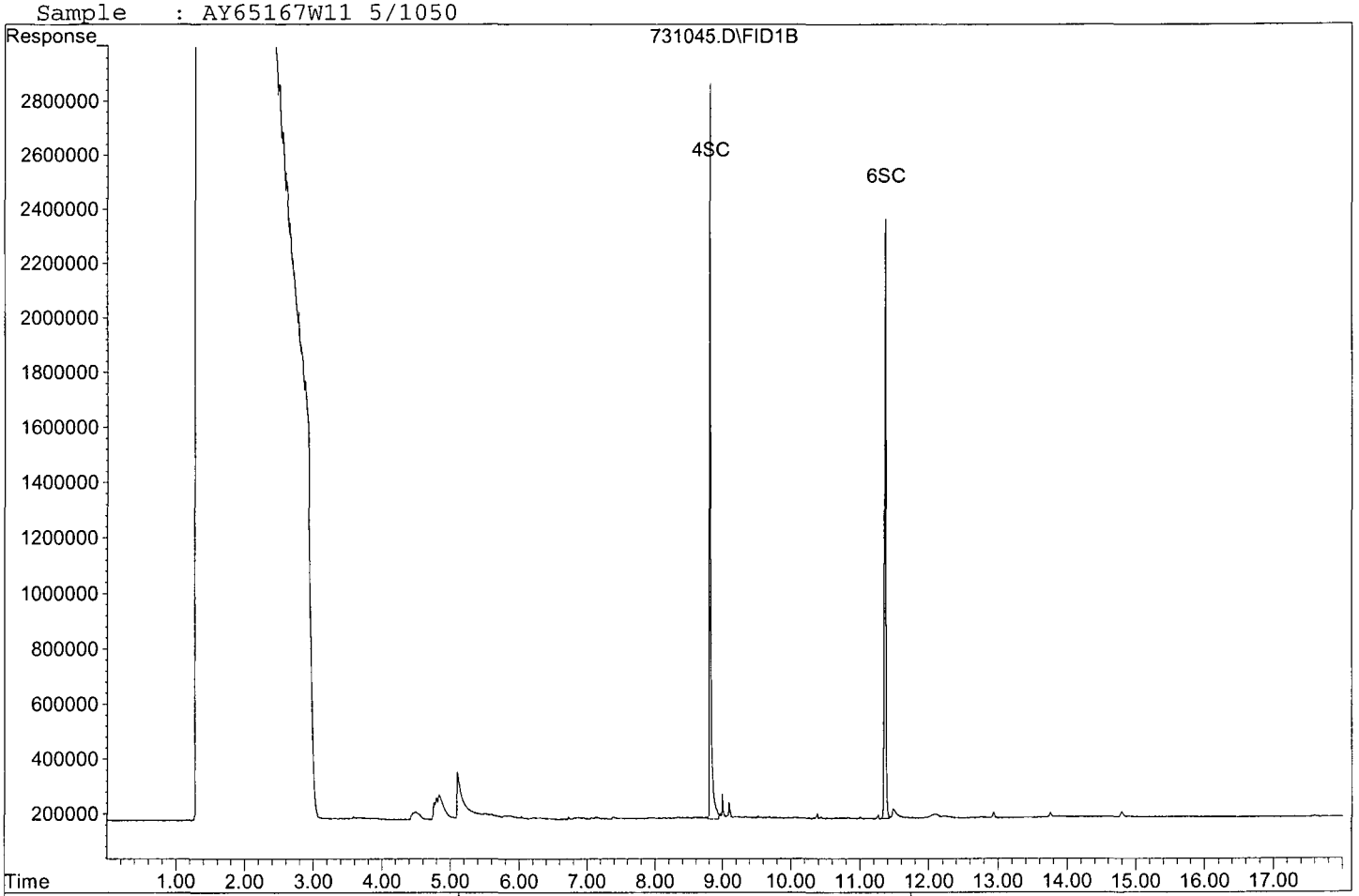
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

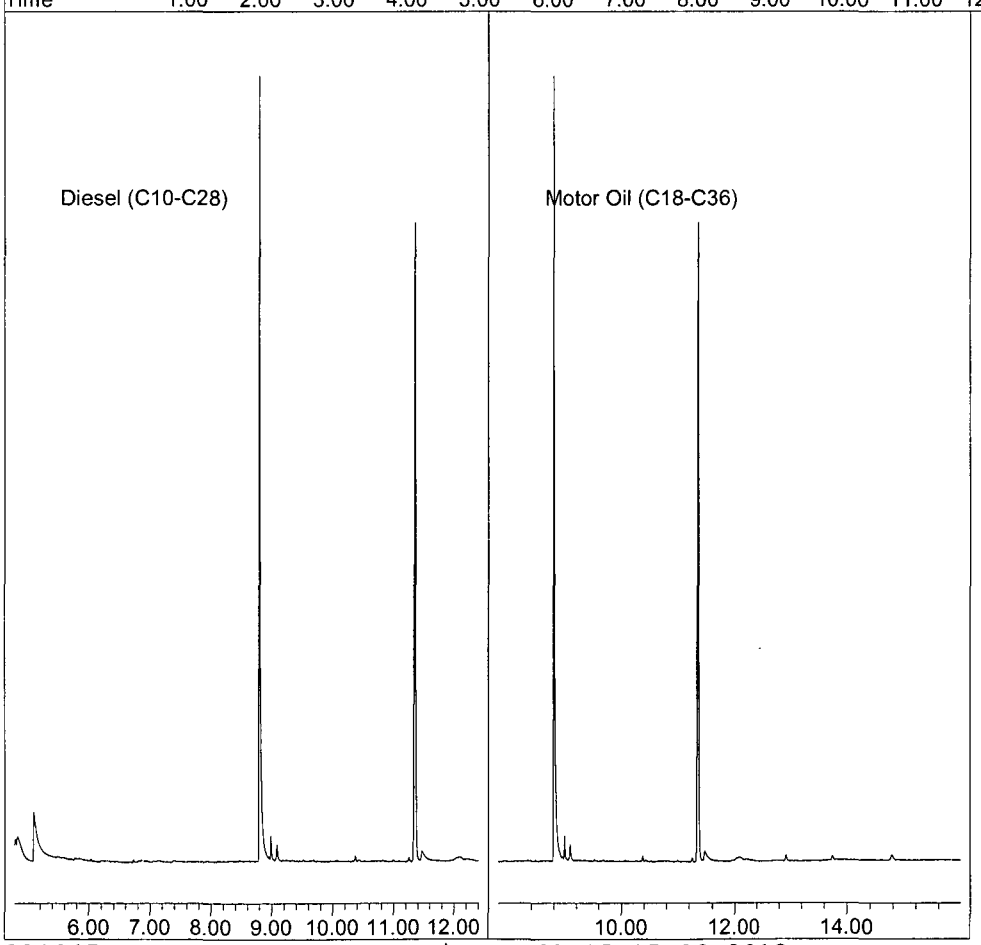
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	34609999	116.945 ppb
Surrogate Spike 142.857		Recovery =	81.86%
6) SC Octacosane(S)	11.36	31728129	100.246 ppb
Surrogate Spike 142.857		Recovery =	70.17%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731045.D
Sample : AY65167W11 5/1050





EPA 8015B
Total Petroleum Hydrocarbons -

Calibration Data

TPH Extractables
TPH0719

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68268
Case No: Initial Cal. Date: 06/22/2012 and 7/19/12
Matrix: 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

Quantitation Report (QT Reviewed)

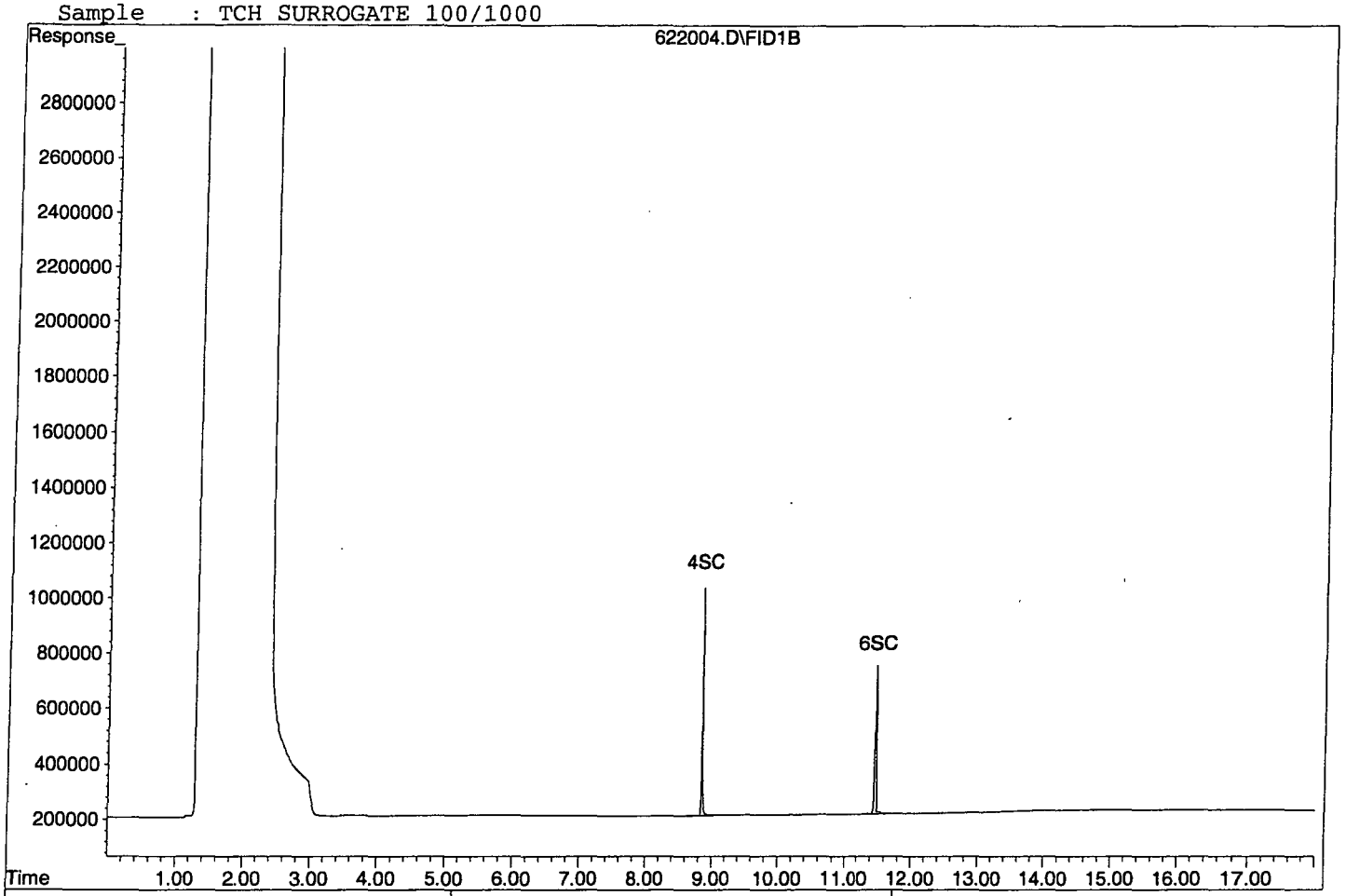
Data File : G:\APOLLO\DATA\120622\622004.D Vial: 4
Acq On : 6-22-12 18:22:29 Operator: LAC
Sample : TCH SURROGATE 100/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

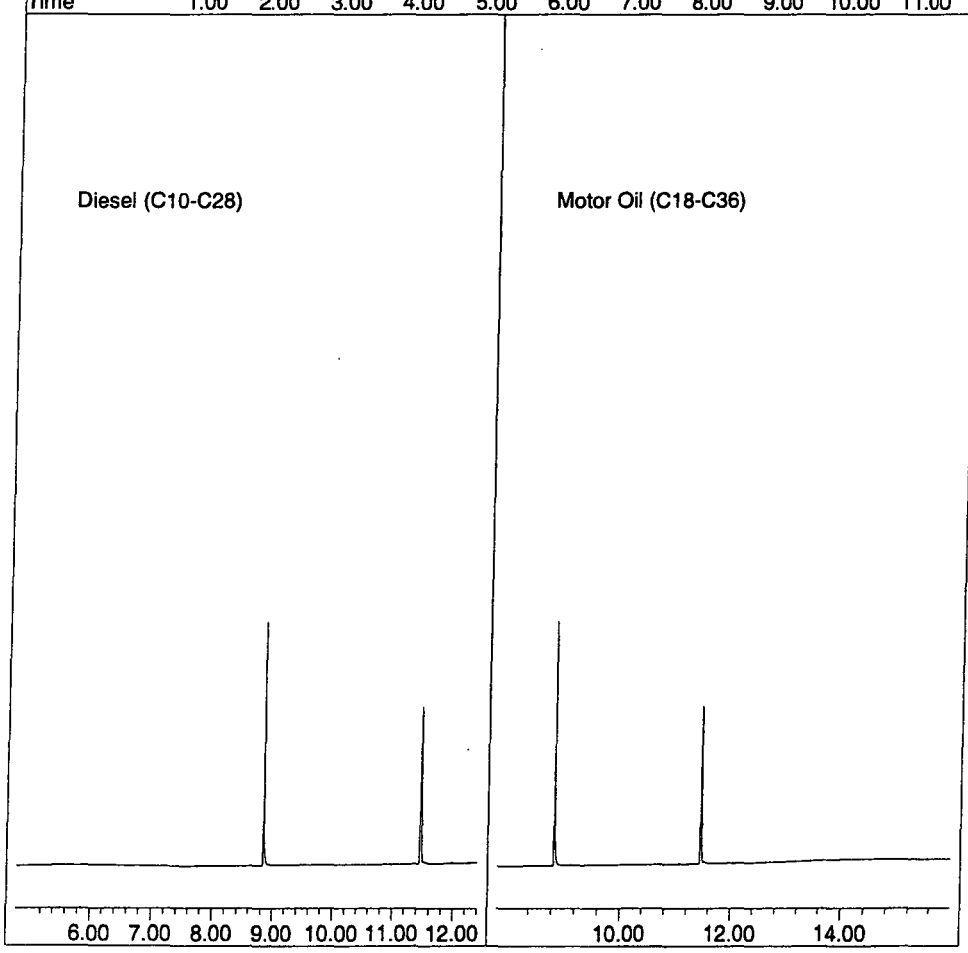
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
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				

Data File: G:\APOLLO\DATA\120622\622004.D
Sample : TCH SURROGATE 100/1000





Quantitation Report (QT Reviewed)

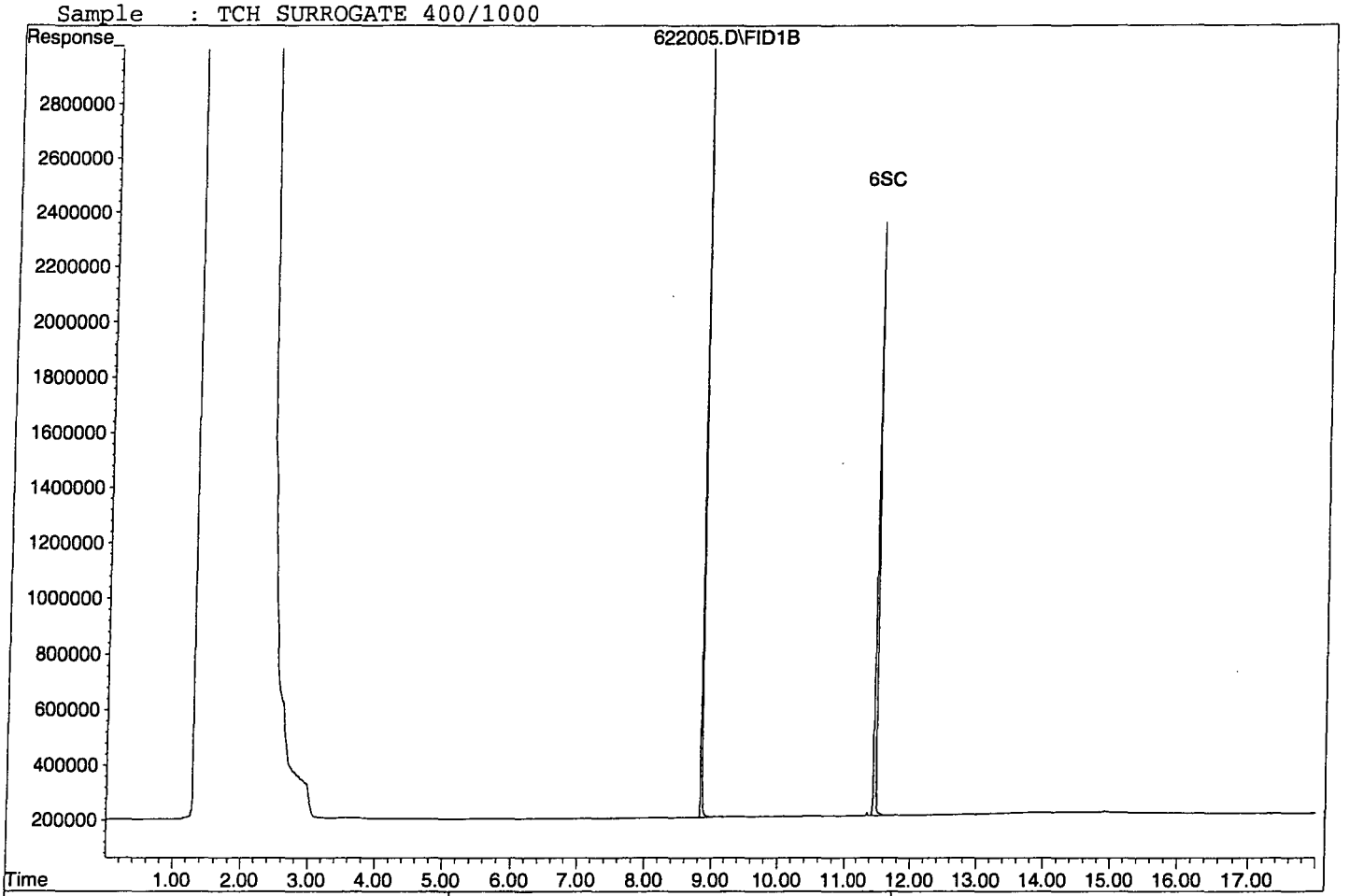
Data File : G:\APOLLO\DATA\120622\622005.D Vial: 5
Acq On : 6-22-12 18:46:55 Operator: LAC
Sample : TCH SURROGATE 400/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

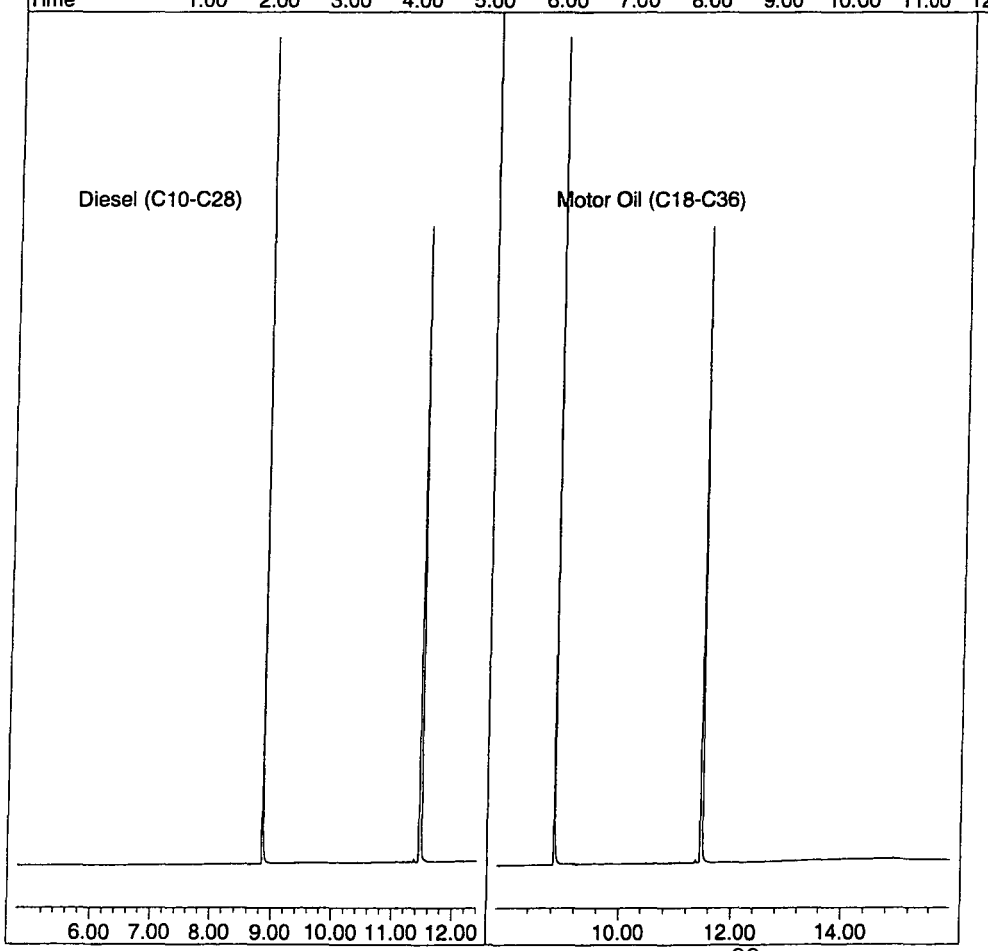
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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			

Data File: G:\APOLLO\DATA\120622\622005.D
Sample : TCH SURROGATE 400/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622006.D Vial: 6
Acq On : 6-22-12 19:10:46 Operator: LAC
Sample : TCH SURROGATE 600/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

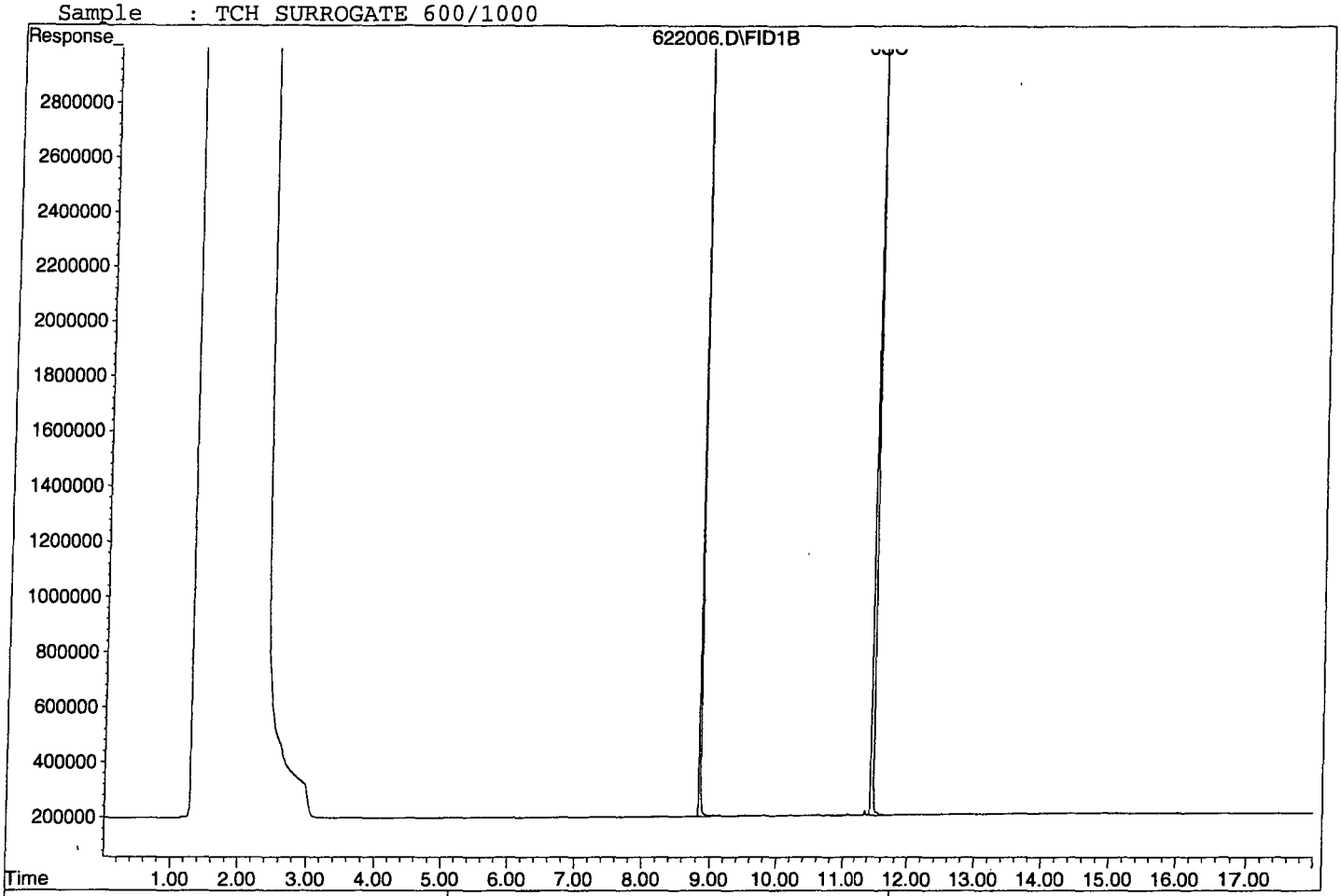
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

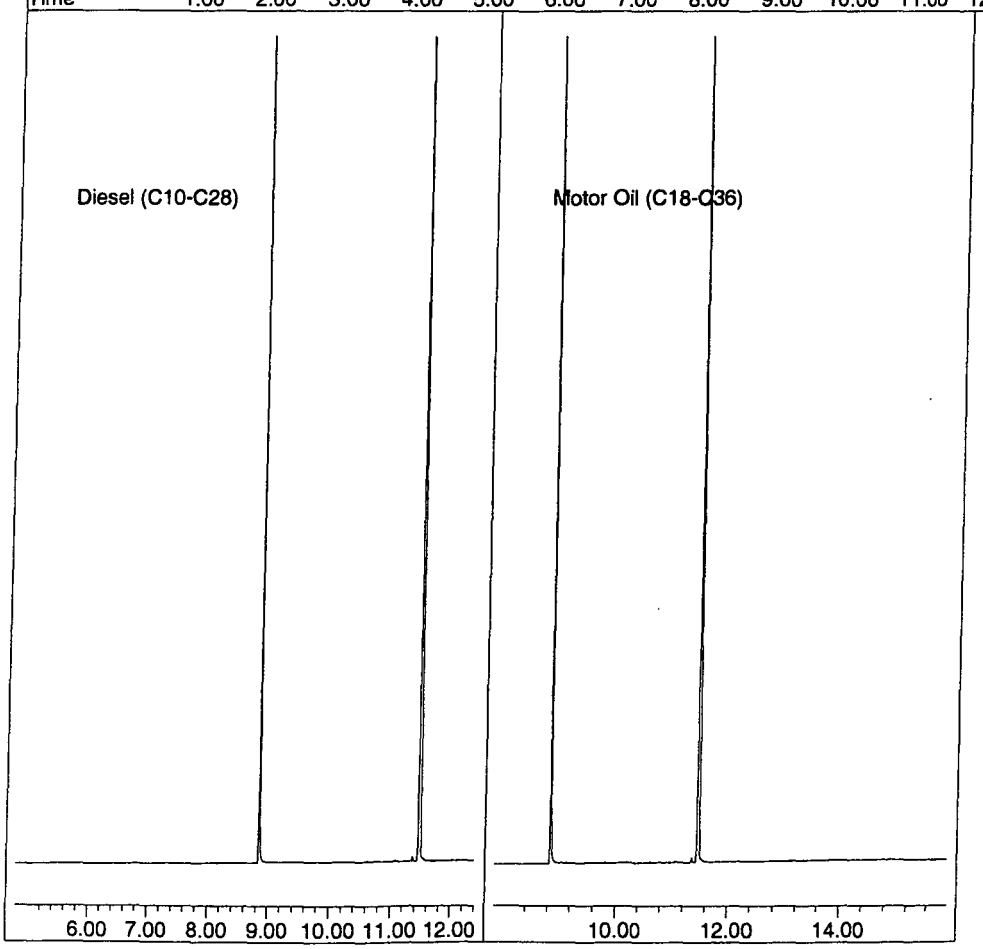
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.84	43049549	15.420 ppb
Surrogate Spike 30.000	Recovery	=	51.40%
6) SC Octacosane(S)	11.48	45975259	18.583 ppb
Surrogate Spike 30.000	Recovery	=	61.94%
Target Compounds			

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622006.D
Sample : TCH SURROGATE 600/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622007.D Vial: 7
Acq On : 6-22-12 19:34:47 Operator: LAC
Sample : TCH SURROGATE 800/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

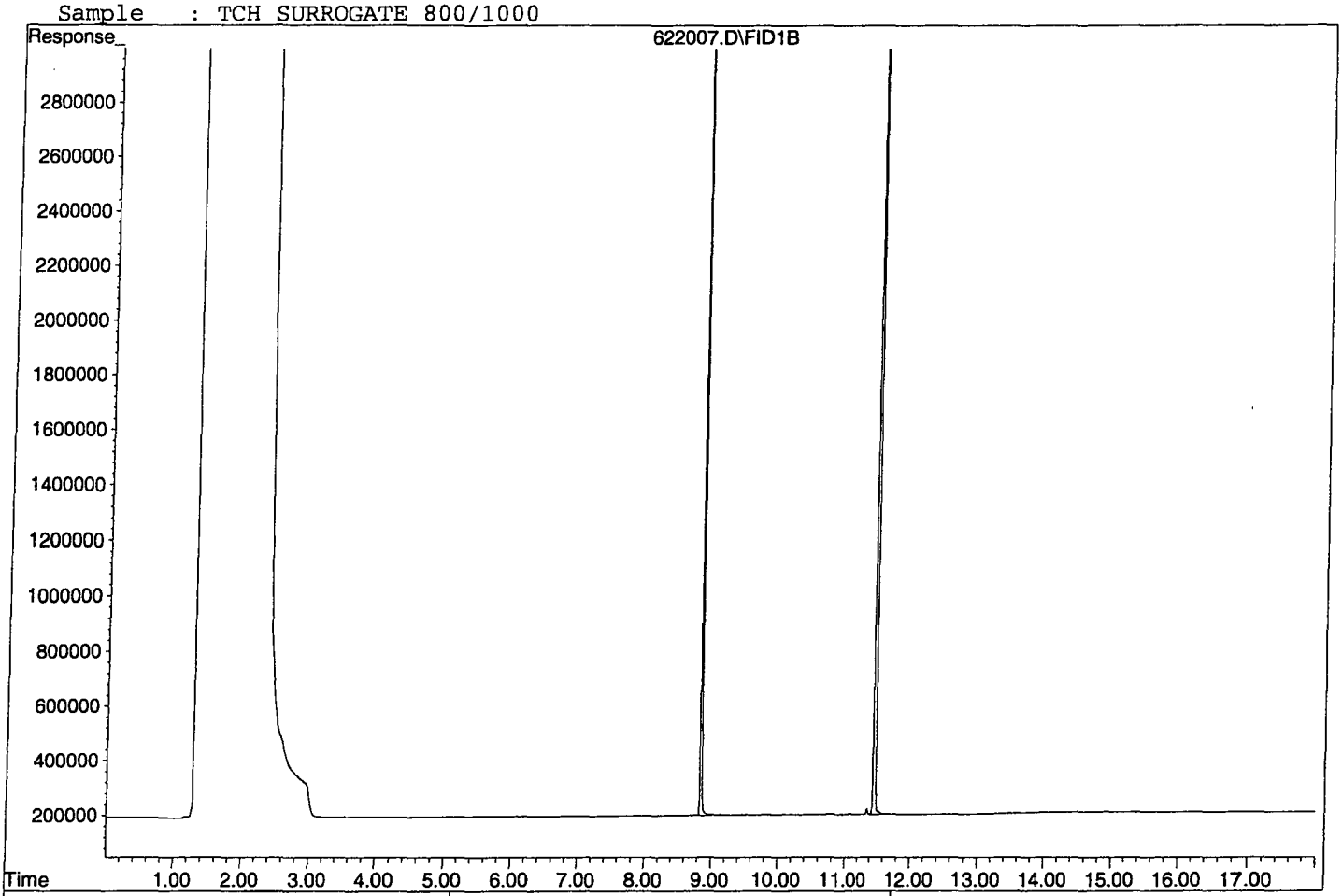
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

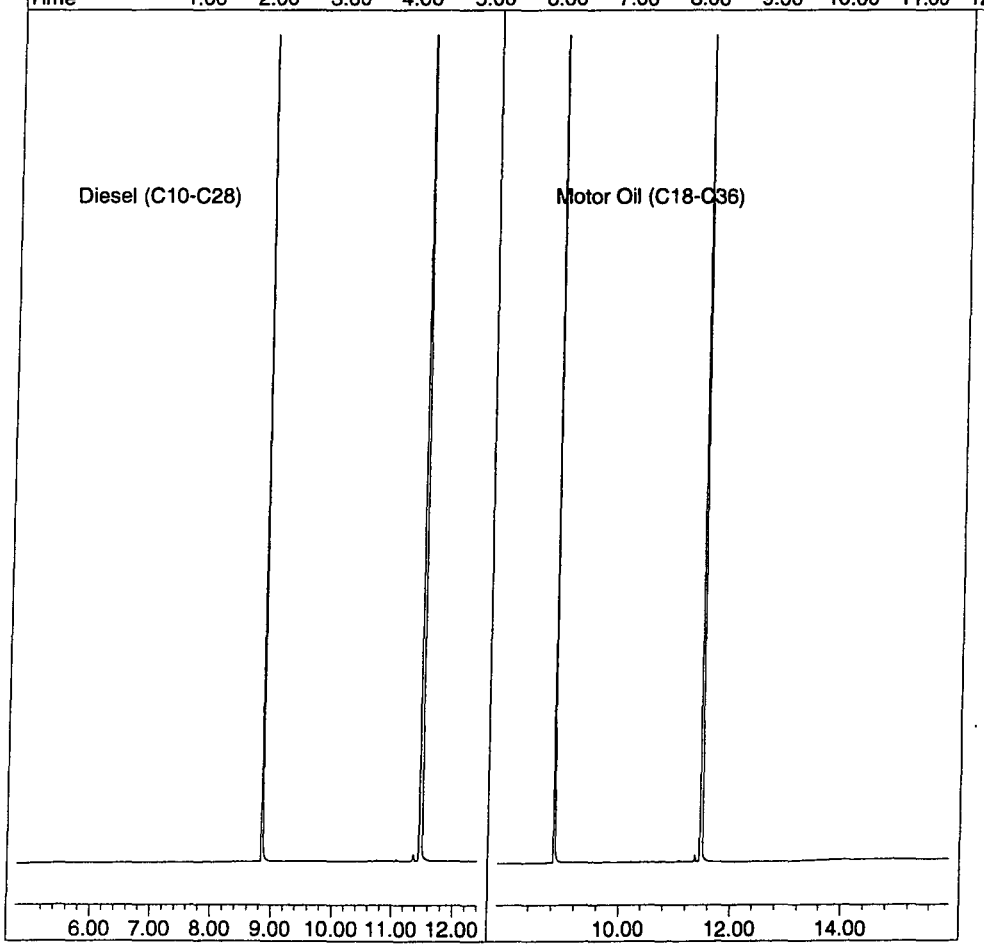
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.85	55952695	19.926 ppb
Surrogate Spike 30.000		Recovery =	66.42%
6) SC Octacosane(S)	11.48	59762243	23.528 ppb
Surrogate Spike 30.000		Recovery =	78.43%
Target Compounds			

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622007.D
Sample : TCH SURROGATE 800/1000





Quantitation Report (QT Reviewed)

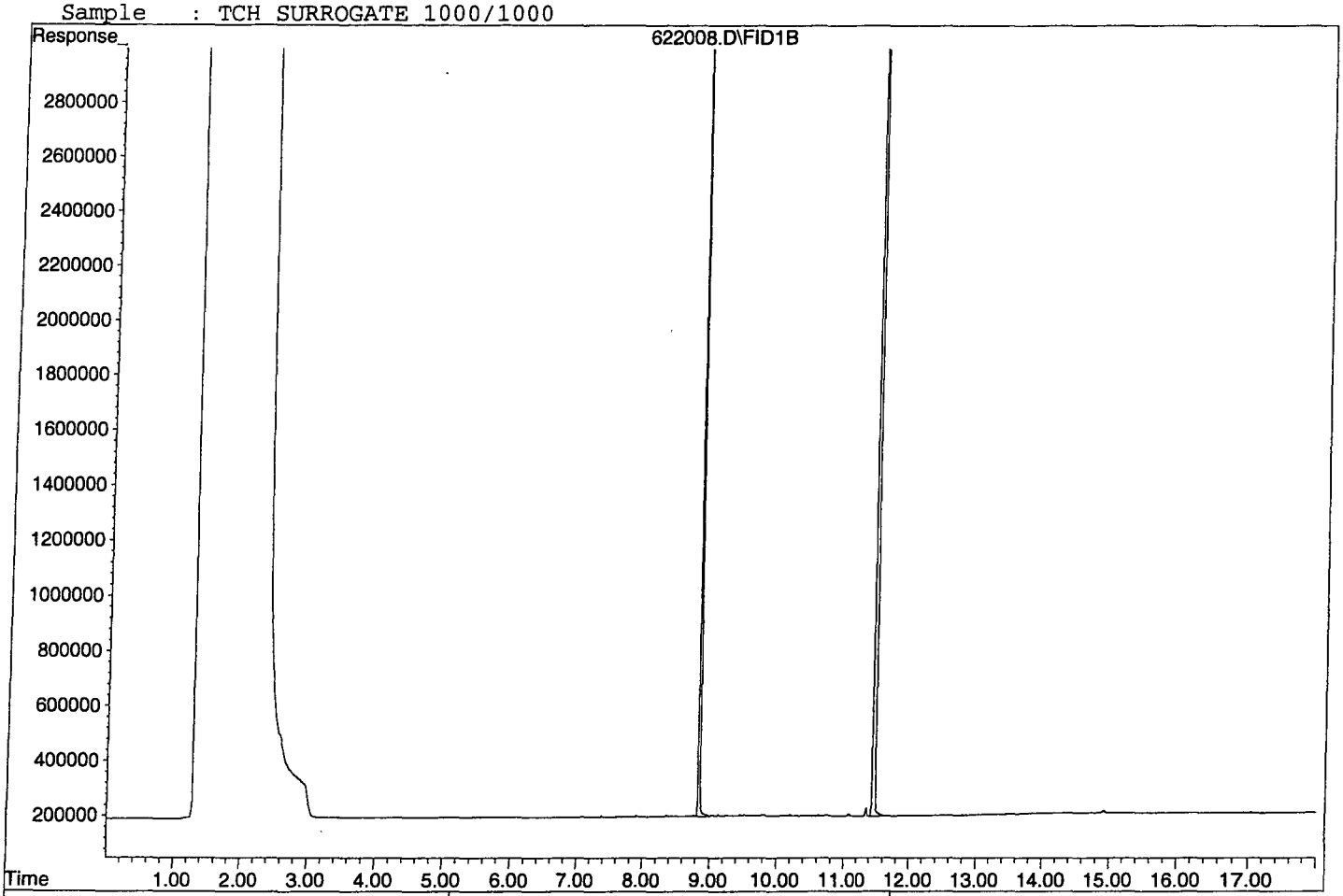
Data File : G:\APOLLO\DATA\120622\622008.D Vial: 8
Acq On : 6-22-12 19:58:49 Operator: LAC
Sample : TCH SURROGATE 1000/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:39 2012 Quant Results File: TPH0622.RES

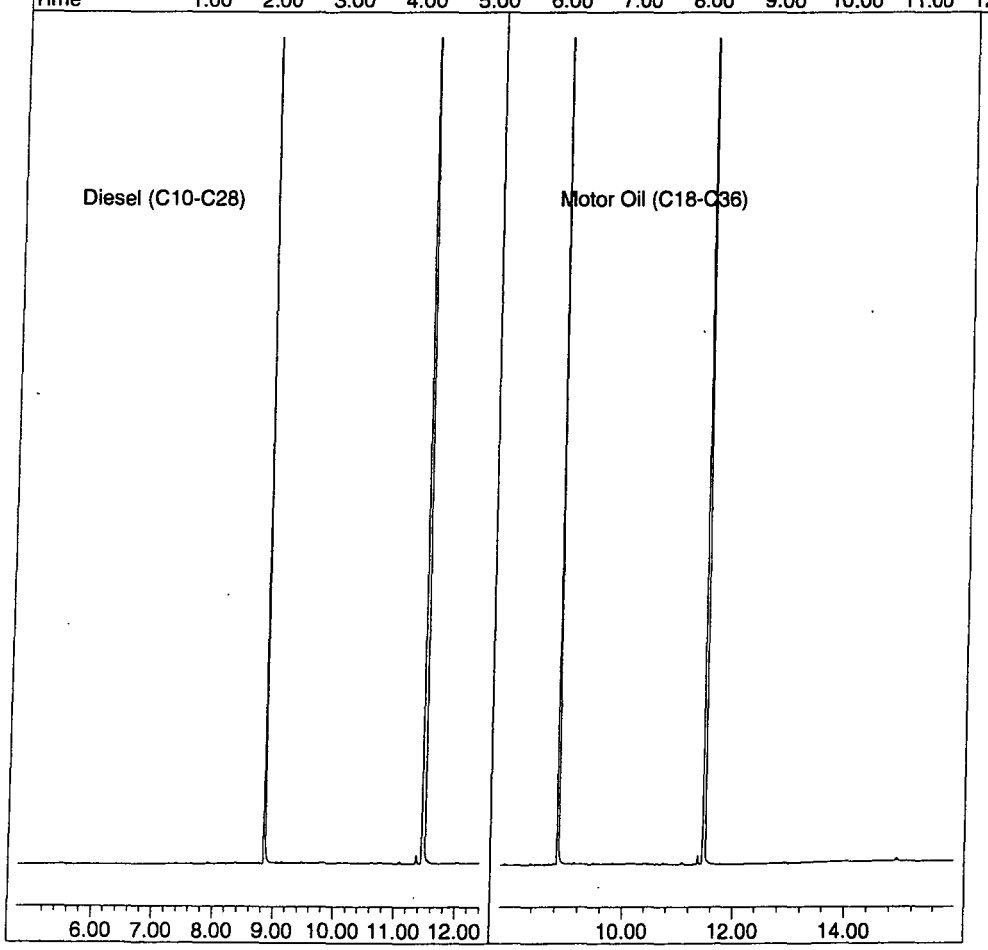
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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			

Data File: G:\APOLLO\DATA\120622\622008.D
Sample : TCH SURROGATE 1000/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622009.D Vial: 9
Acq On : 6-22-12 20:22:56 Operator: LAC
Sample : DIESEL 10/1000 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:08 2012 Quant Results File: TPH0622.RES

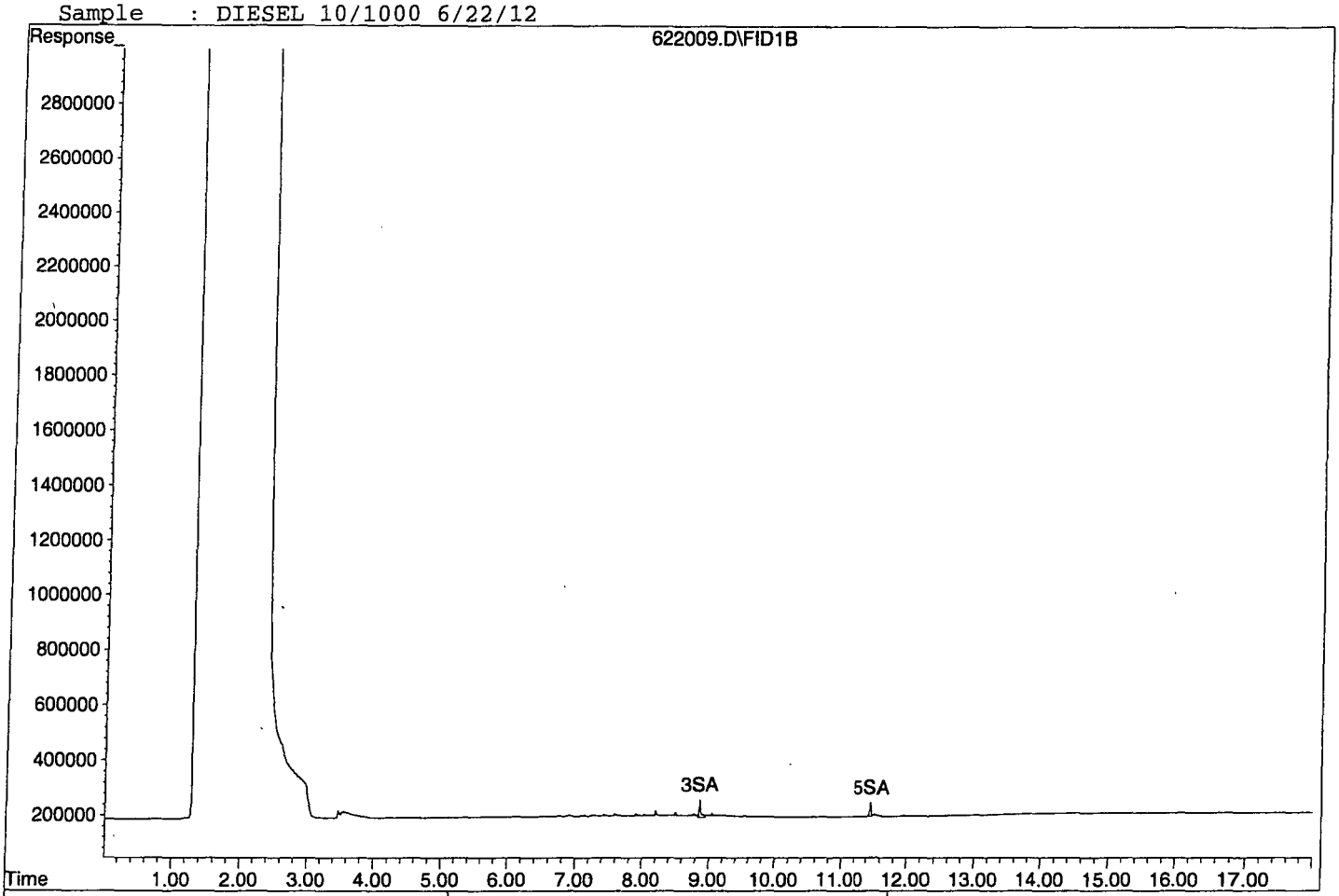
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

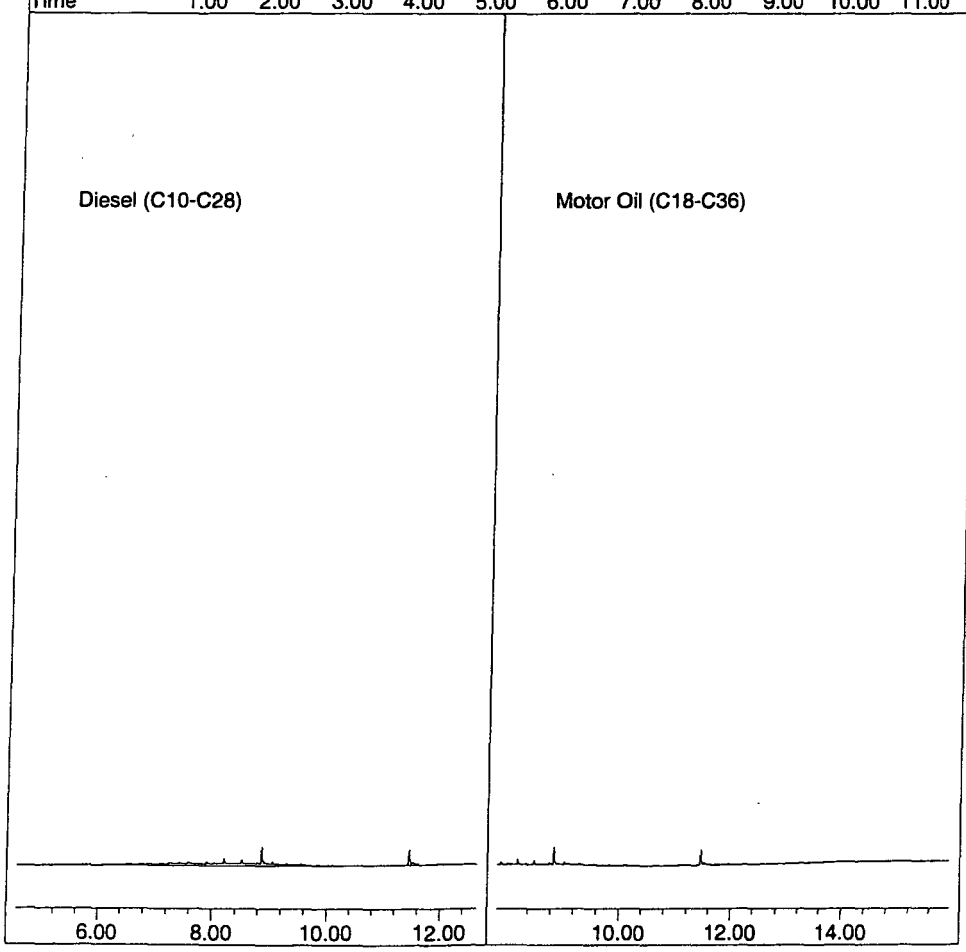
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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





Quantitation Report (Not Reviewed)

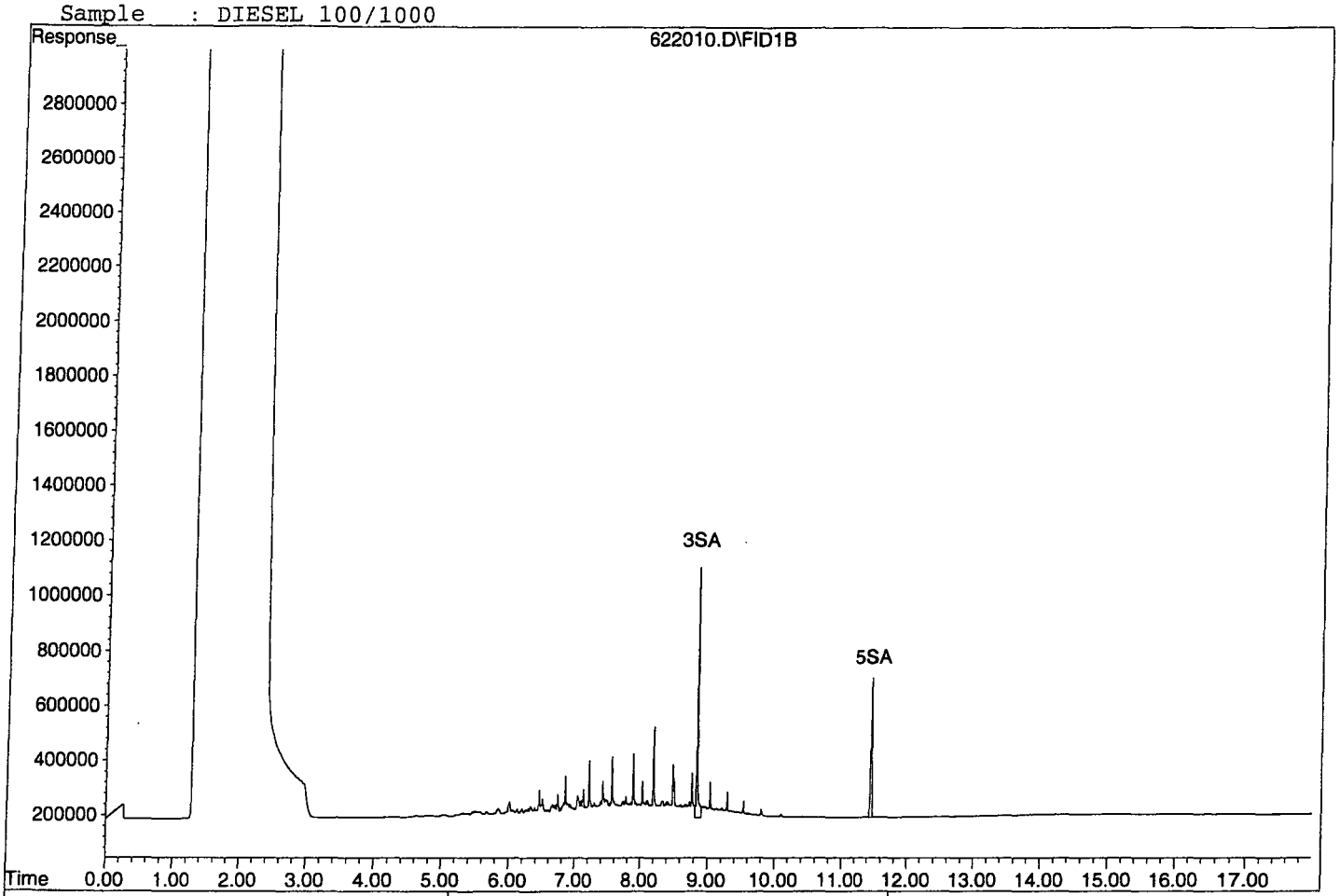
Data File : G:\APOLLO\DATA\120622\622010.D Vial: 10
Acq On : 6-22-12 20:47:06 Operator: LAC
Sample : DIESEL 100/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

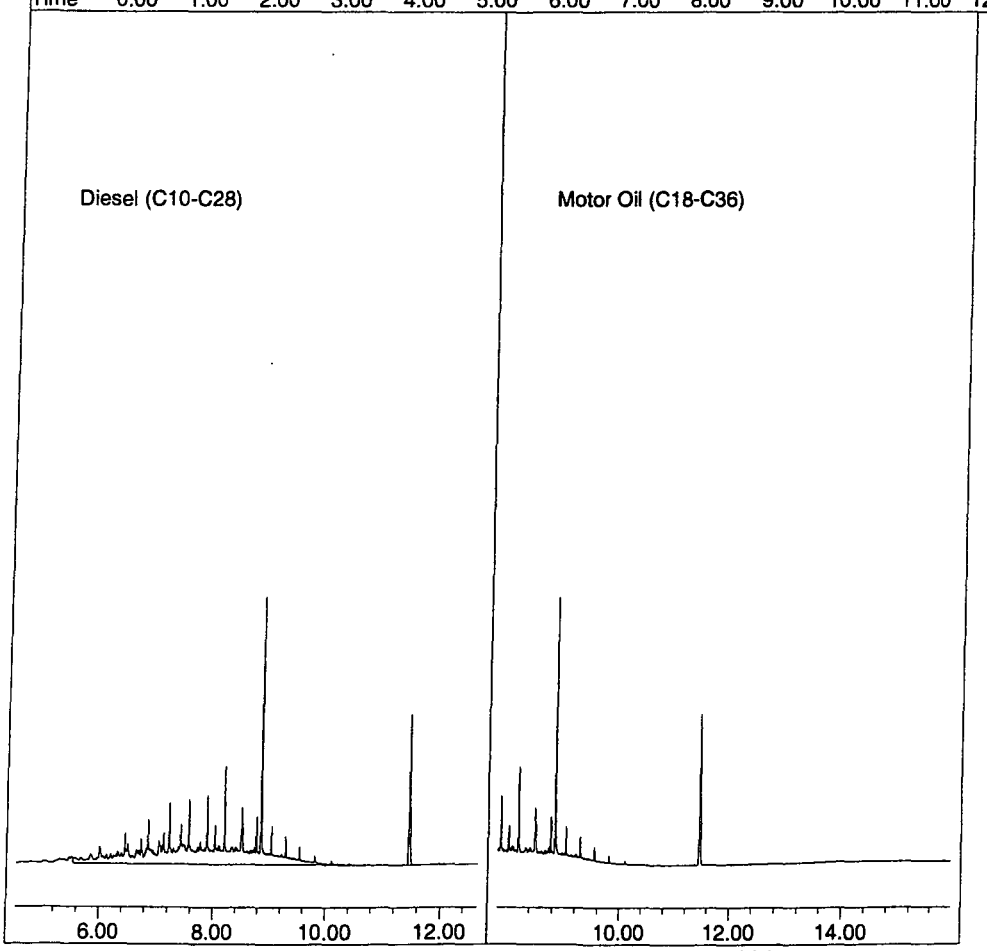
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

Data File: G:\APOLLO\DATA\120622\622010.D
Sample : DIESEL 100/1000





Quantitation Report (Not Reviewed)

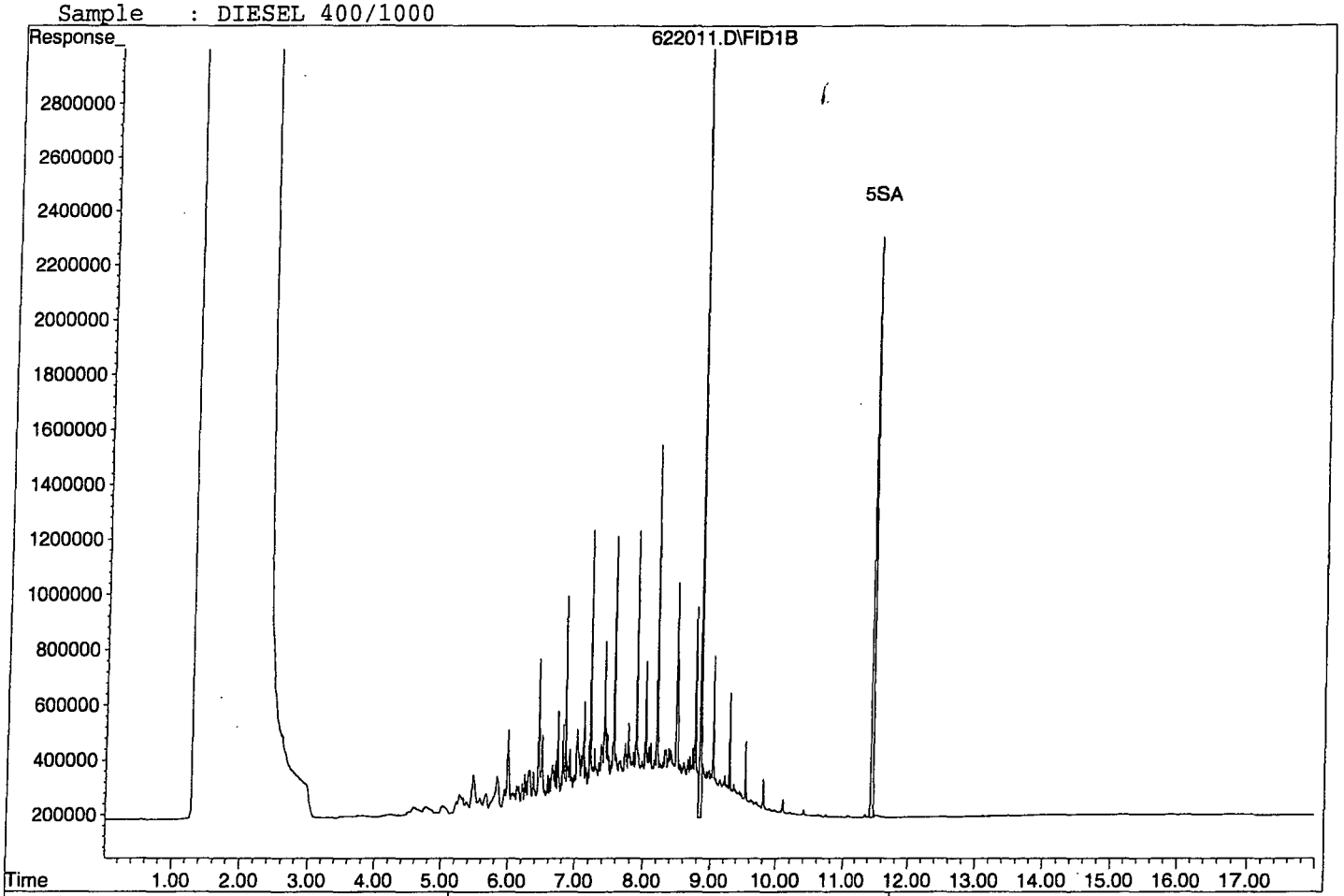
Data File : G:\APOLLO\DATA\120622\622011.D Vial: 11
Acq On : 6-22-12 21:11:13 Operator: LAC
Sample : DIESEL 400/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

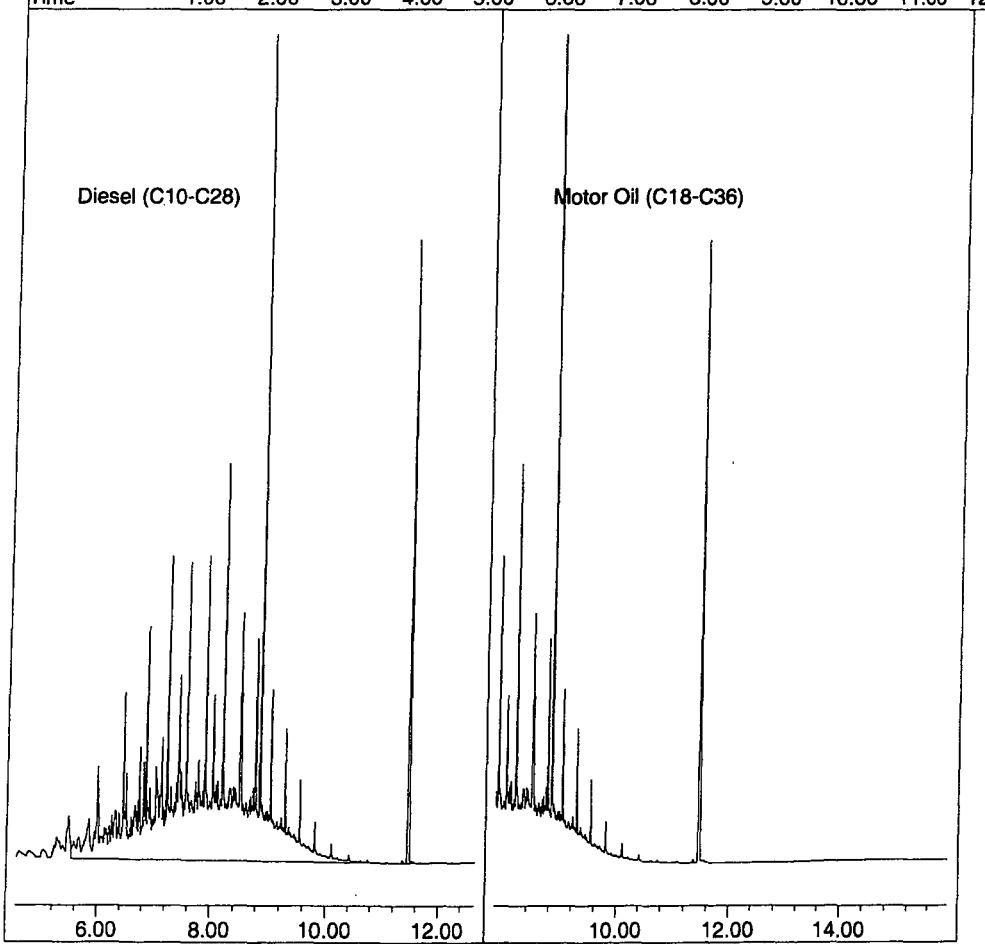
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

Data File: G:\APOLLO\DATA\120622\622011.D
Sample : DIESEL 400/1000





Quantitation Report (Not Reviewed)

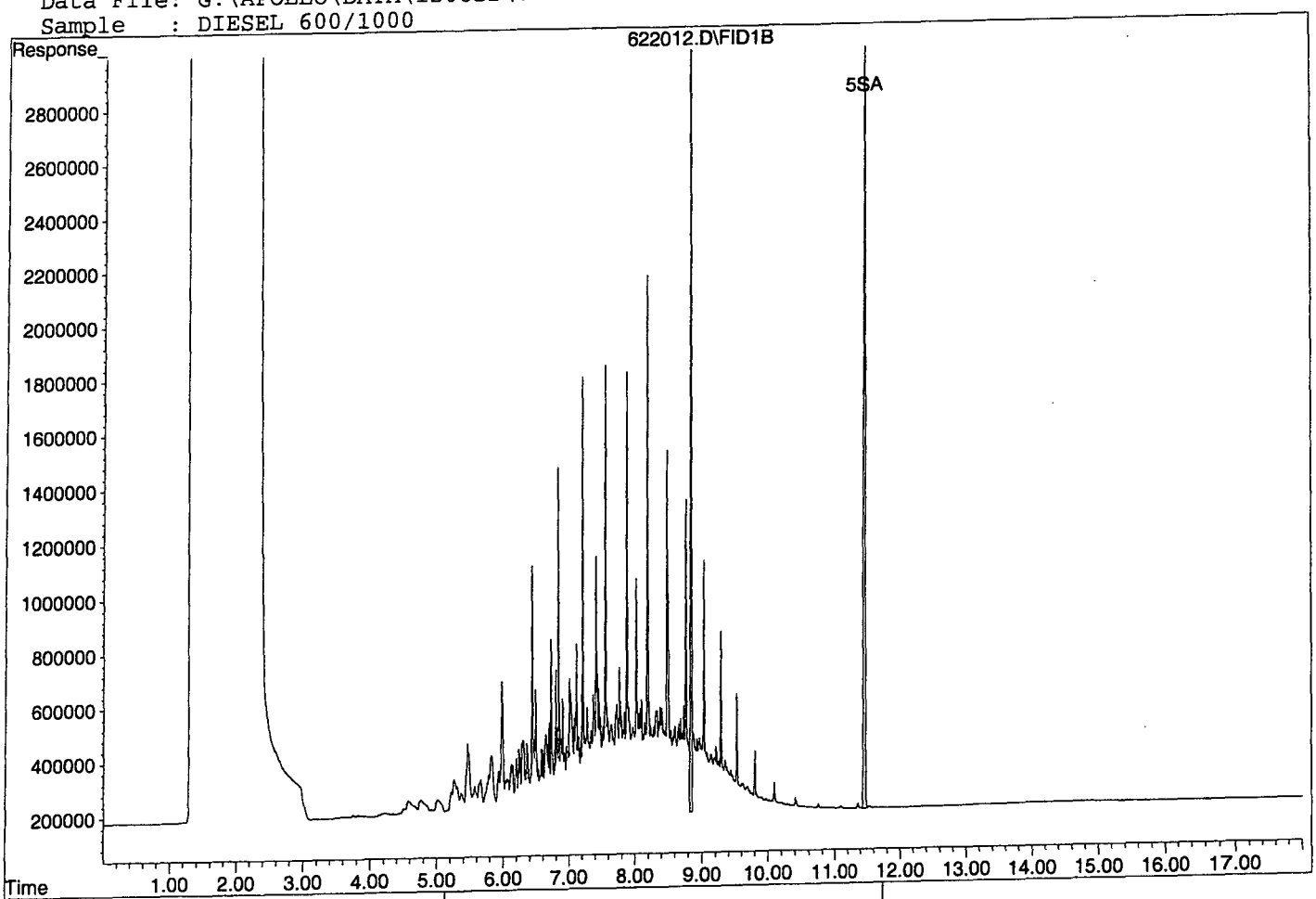
Data File : G:\APOLLO\DATA\120622\622012.D Vial: 12
Acq On : 6-22-12 21:35:18 Operator: LAC
Sample : DIESEL 600/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

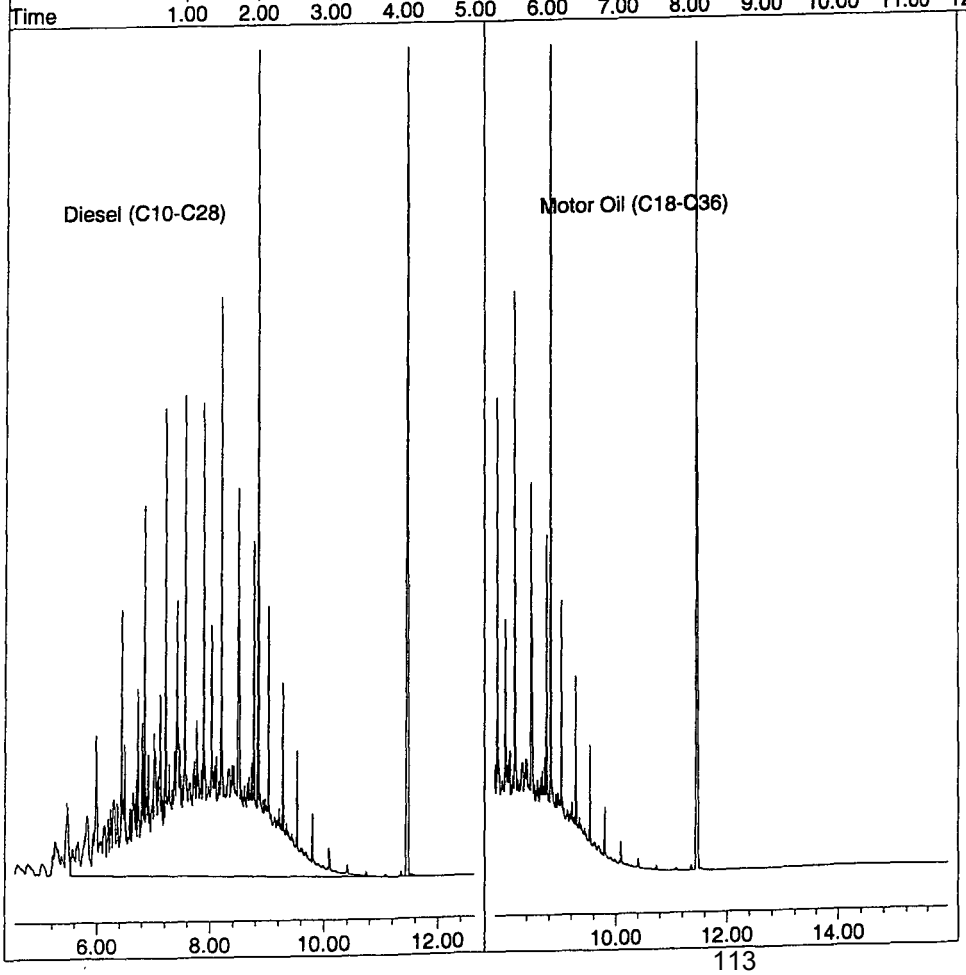
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

Data File: G:\APOLLO\DATA\120622\622012.D
Sample : DIESEL 600/1000





Quantitation Report (Not Reviewed)

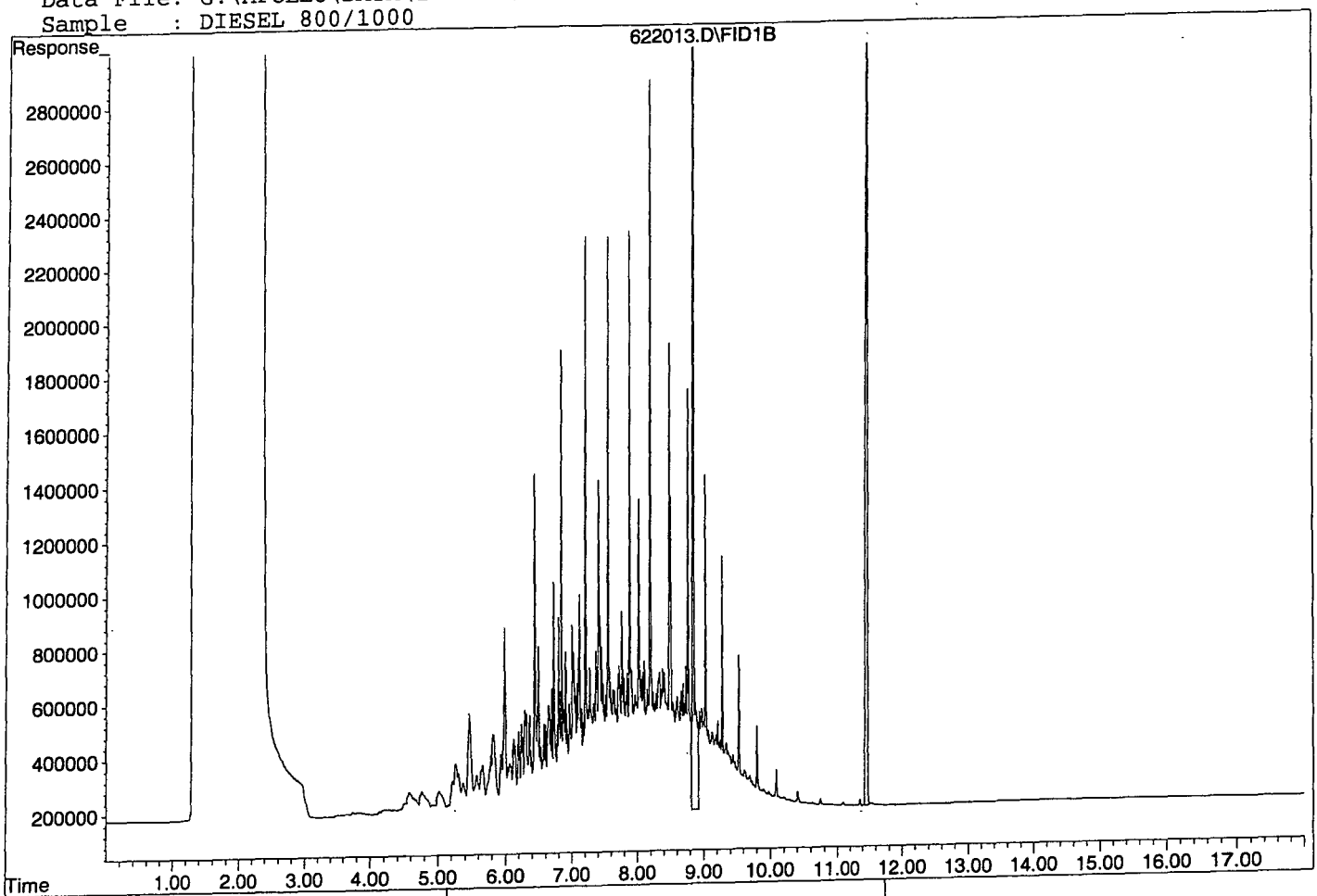
Data File : G:\APOLLO\DATA\120622\622013.D Vial: 13
Acq On : 6-22-12 21:59:20 Operator: LAC
Sample : DIESEL 800/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

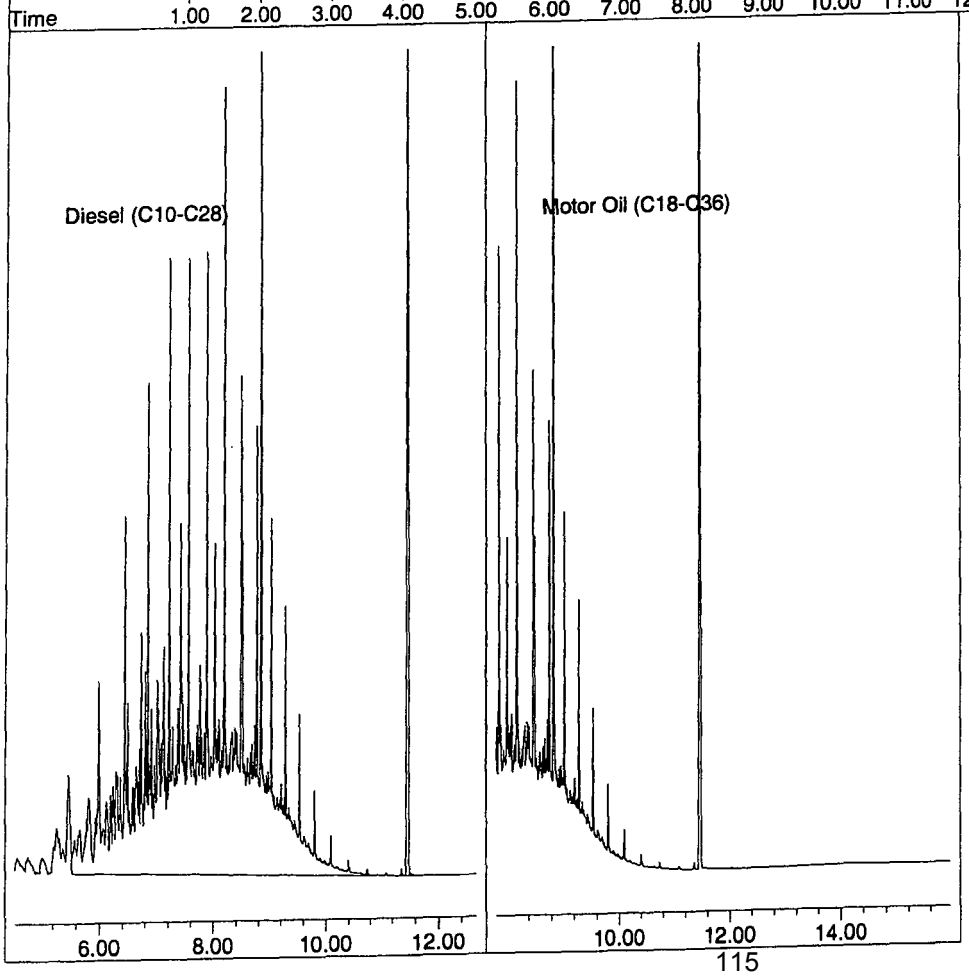
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

Data File: G:\APOLLO\DATA\120622\622013.D
Sample : DIESEL 800/1000





Quantitation Report (Not Reviewed)

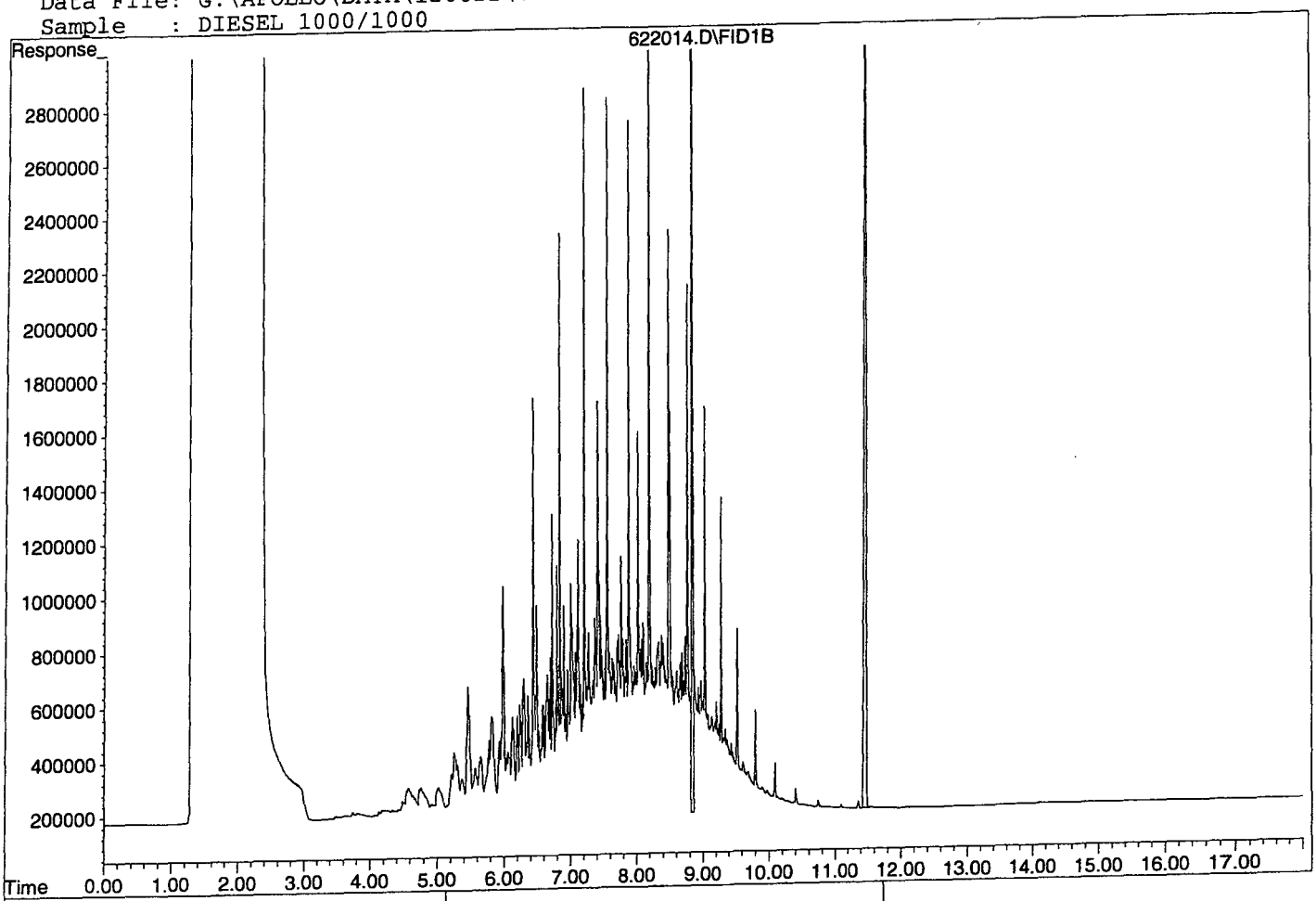
Data File : G:\APOLLO\DATA\120622\622014.D Vial: 14
Acq On : 6-22-12 22:23:21 Operator: LAC
Sample : DIESEL 1000/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

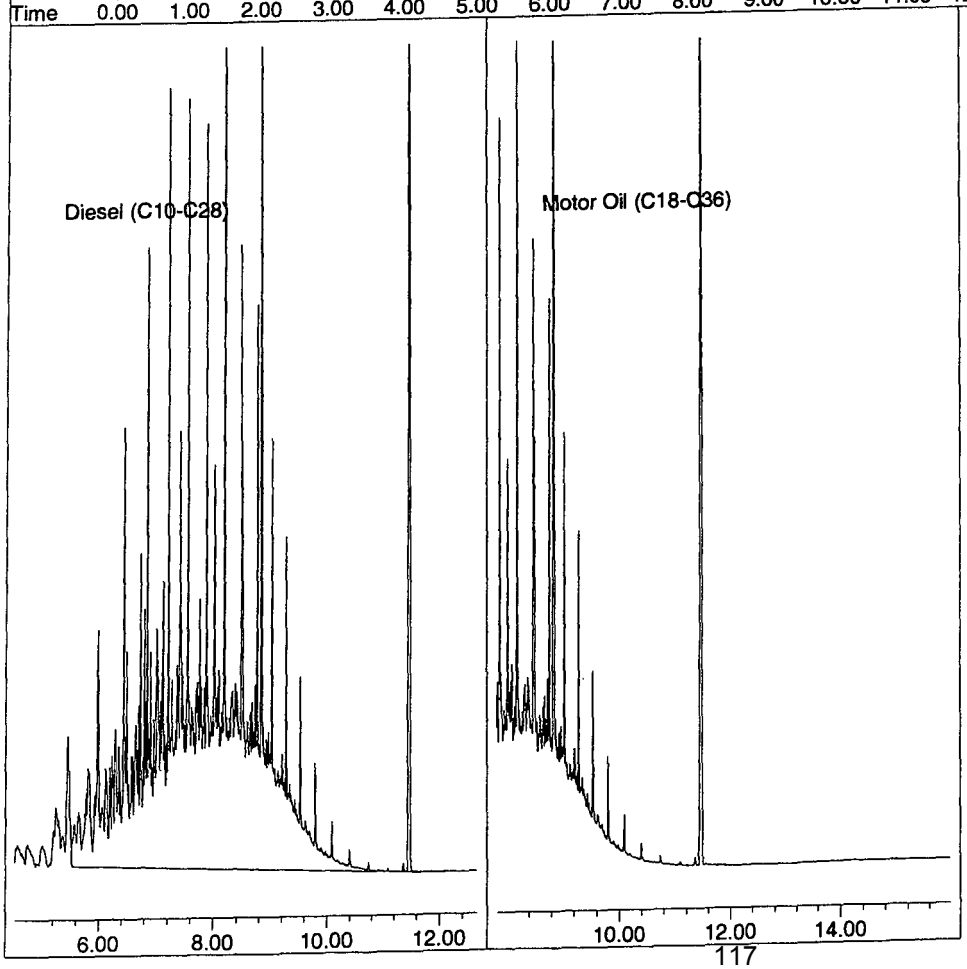
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

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: 68268
Date Analyzed: 06/22/12
Instrument: Apollo
Initial Cal. Date: 06/22/12
Data File: 622015.D

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C28)	549491	516614	6.0	HATM	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.0		

Quantitation Report (QT Reviewed)

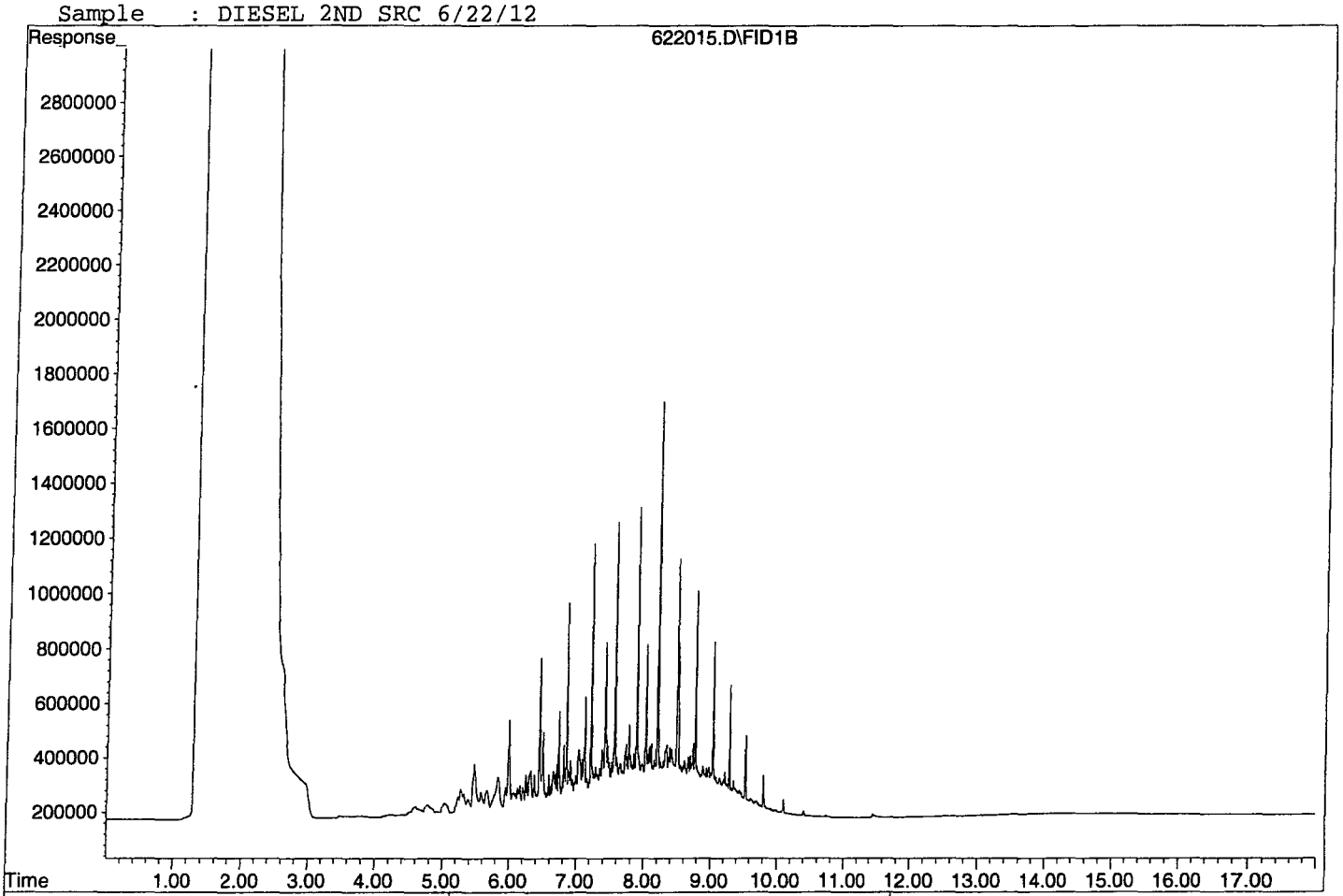
Data File : G:\APOLLO\DATA\120622\622015.D Vial: 15
Acq On : 6-22-12 22:47:20 Operator: LAC
Sample : DIESEL 2ND SRC 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:28 2012 Quant Results File: TPH0622.RES

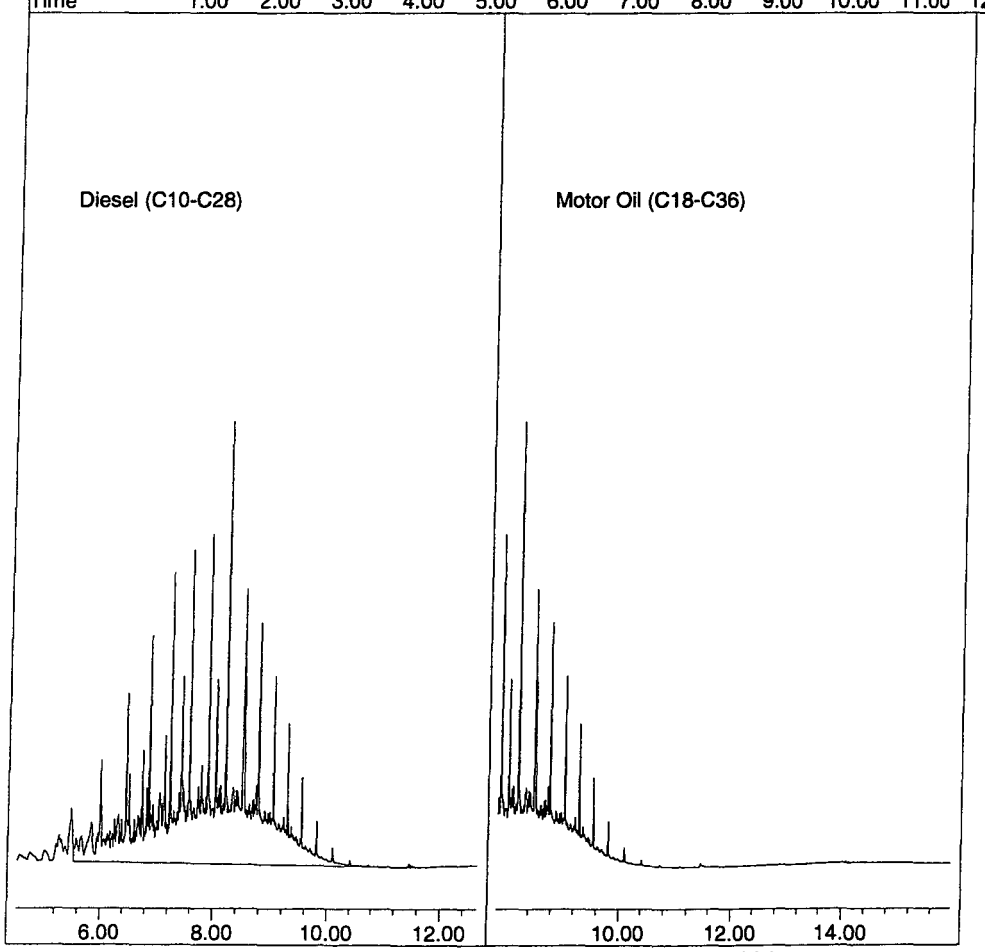
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	413291584	376.067 ppb

Data File: G:\APOLLO\DATA\120622\622015.D
Sample : DIESEL 2ND SRC 6/22/12





TPH Extractables
TPH0719

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 68268
Date Analyzed: 07/31/12
Instrument: Apollo
Initial Cal. Date: 07/31/12
Data File: 731032.D, 033.d

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C28)	549491	522051	5.0	HATM	
2	HBTM	Motor Oil (C18-C36)	432503	356513	18	HBTM	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			11.5		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731032.D Vial: 32
Acq On : 7-31-12 22:20:07 Operator: LAC
Sample : DIESEL 400ppm 7/30/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 2 17:35 2012 Quant Results File: TPH0719.RES

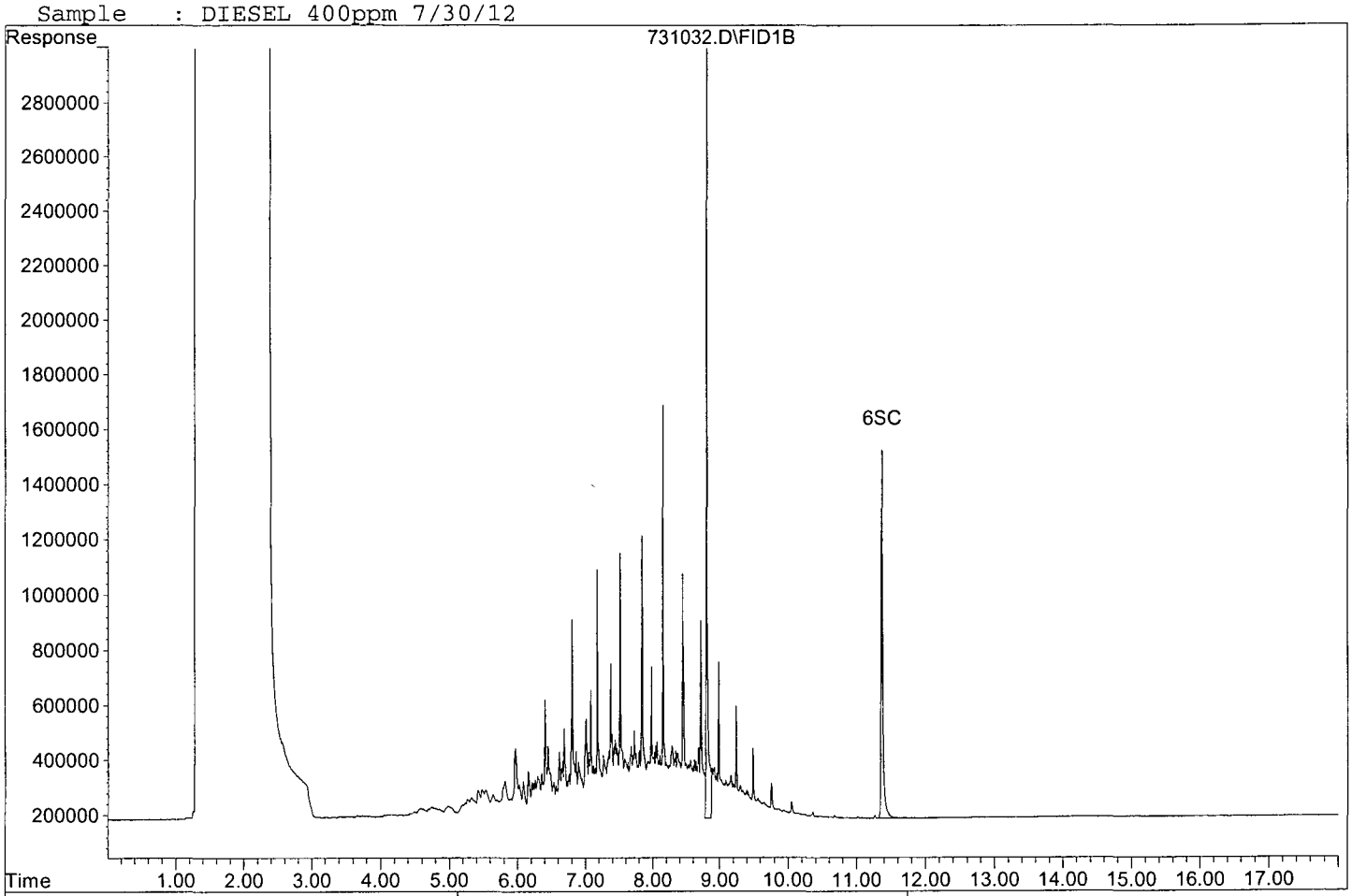
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

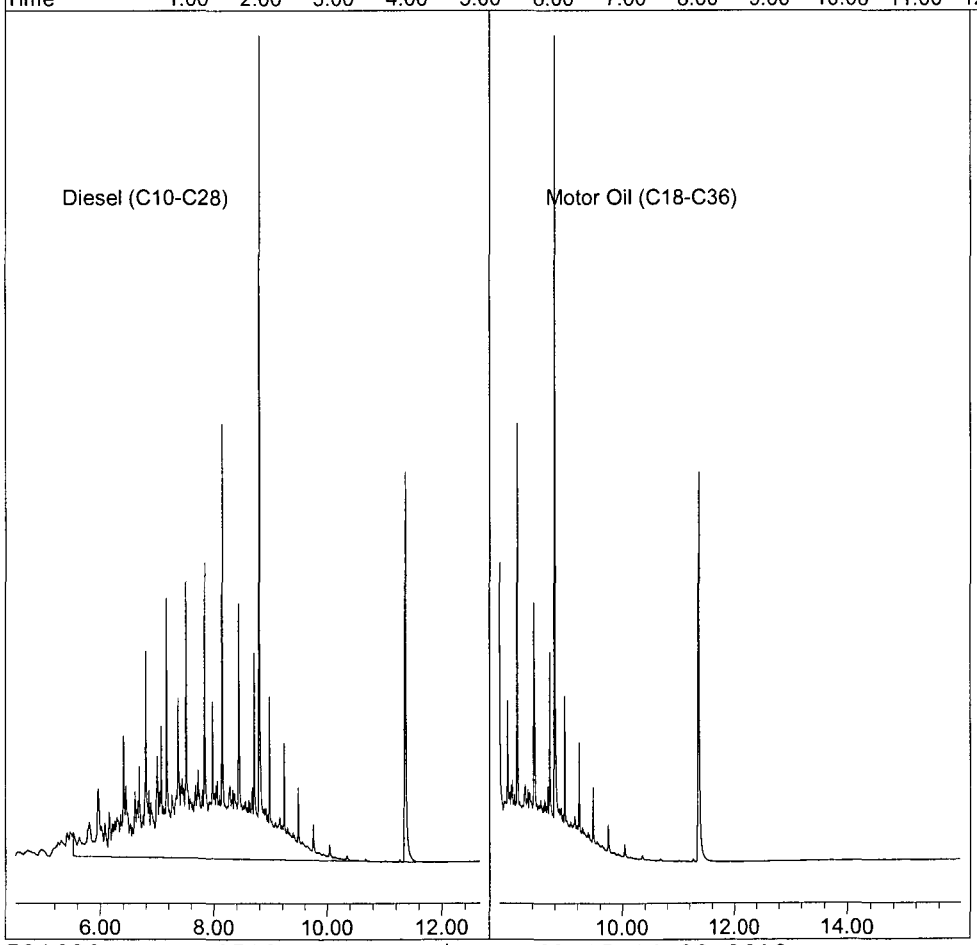
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	36556809	25.940 ppb
Surrogate Spike 30.000	Recovery =		86.47%
6) SC Octacosane(S)	11.36	23773019	15.773 ppb
Surrogate Spike 30.000	Recovery =		52.58%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	417641191	380.025 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120731\731032.D
Sample : DIESEL 400ppm 7/30/12





TPH Extractables
TPH0719

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68268
Date Analyzed: 08/01/12
Instrument: Apollo
Initial Cal. Date: 07/31/12
Data File: 731047.D, 048.d

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C28)	549491	522769	4.9	HATM	
2	HBTM	Motor Oil (C18-C36)	432503	396846	8.2	HBTM	
3							
4							
5							
6							
7							
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32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			6.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731047.D Vial: 47
Acq On : 8-1-12 4:24:28 Operator: LAC
Sample : DIESEL 400ppm 7/31/12 Inst : Apollo
Misc : Water Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 2 17:36 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

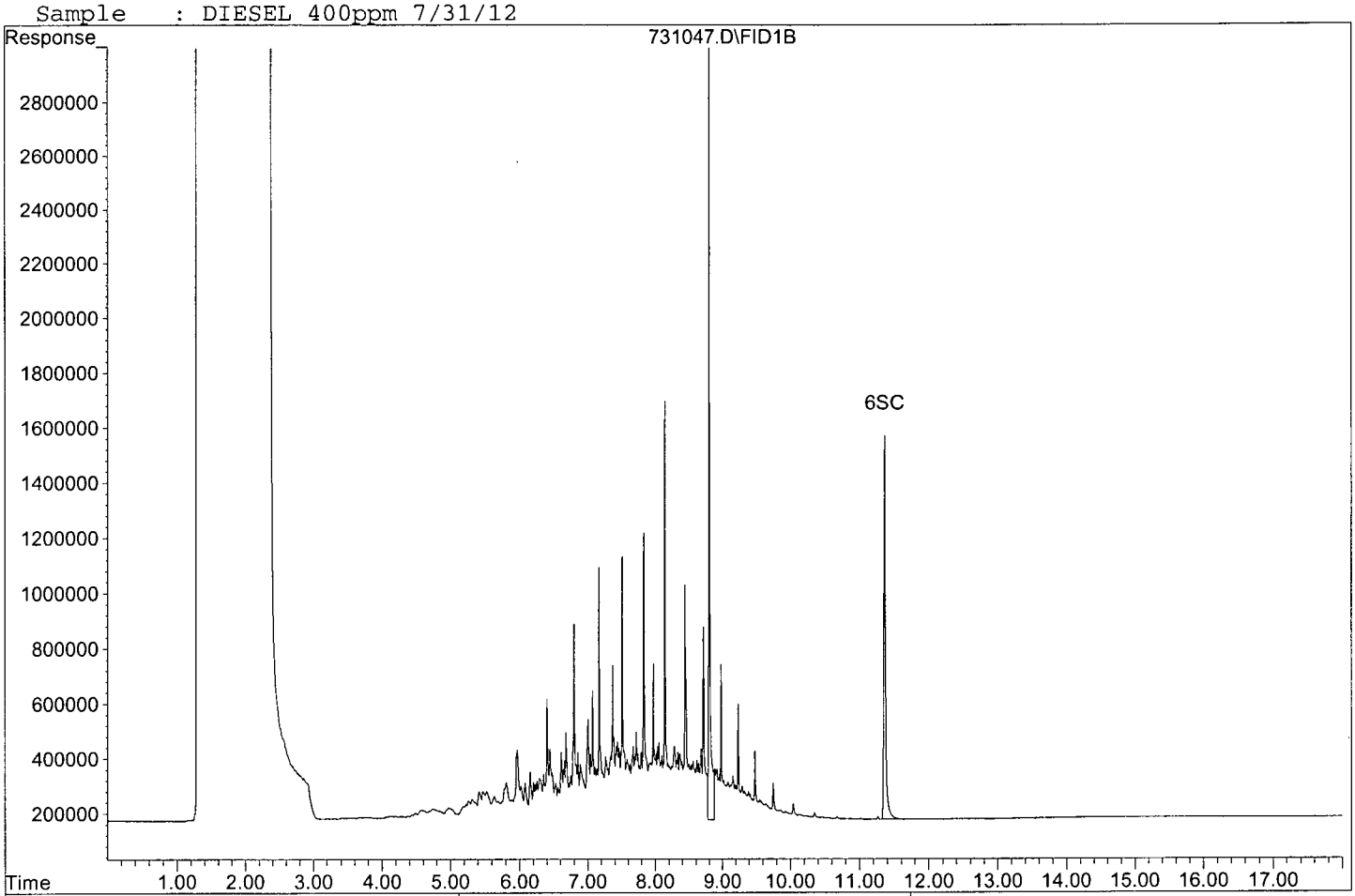
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

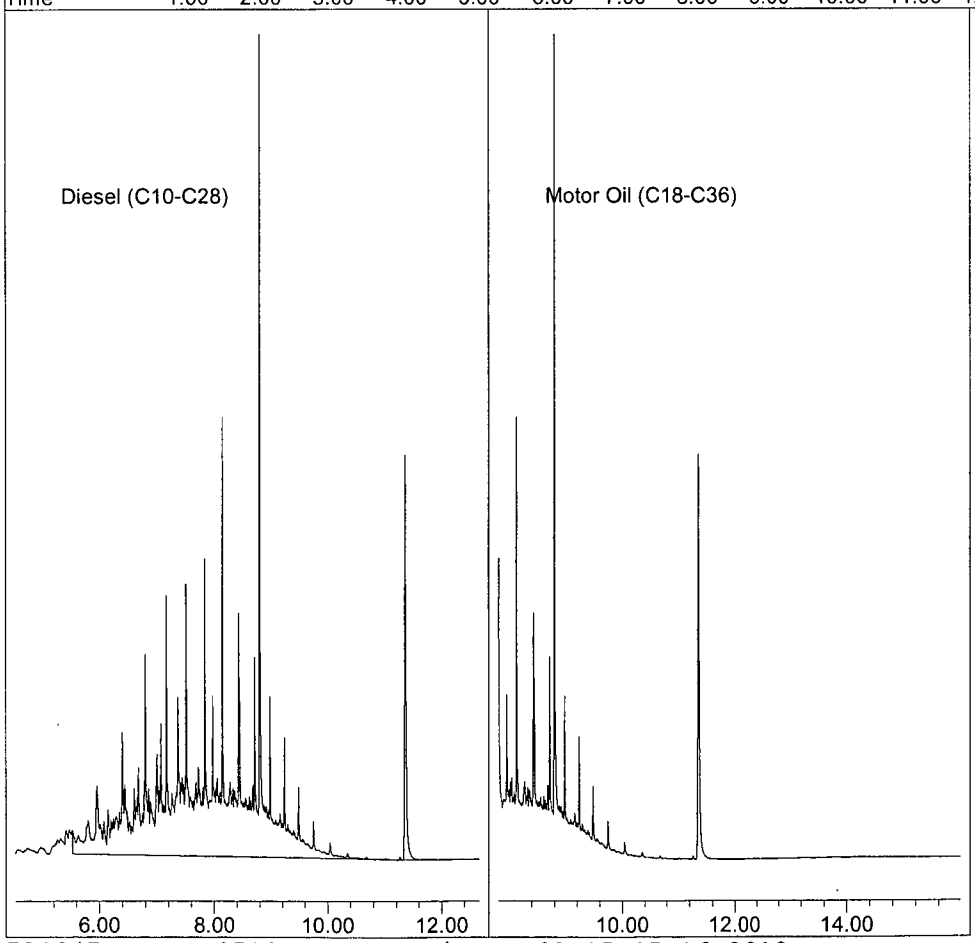
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	36659238	26.013 ppb
Surrogate Spike 30.000	Recovery =		86.71%
6) SC Octacosane(S)	11.36	24520491	16.269 ppb
Surrogate Spike 30.000	Recovery =		54.23%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	418214967	380.547 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731047.D
Sample : DIESEL 400ppm 7/31/12





EPA 8015B
Total Petroleum Hydrocarbons -

Raw Data

Method Blank
TPH Diesel Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169638**
Batch ID: #TPETD-120726A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL FUEL	80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
BLANK	SURROGATE: OCTACOSANE (S)	64.4	28-142			%	07/26/12	08/01/12
BLANK	SURROGATE: ORTHO-TERPHEN	78.3	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731039
Instrument: Apollo
Sequence: 120731
Initials: SD

Printed: 08/02/12 5:56:43 PM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731039.D Vial: 39
Acq On : 8-1-12 1:11:25 Operator: LAC
Sample : 120726A BLK 5/1000 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

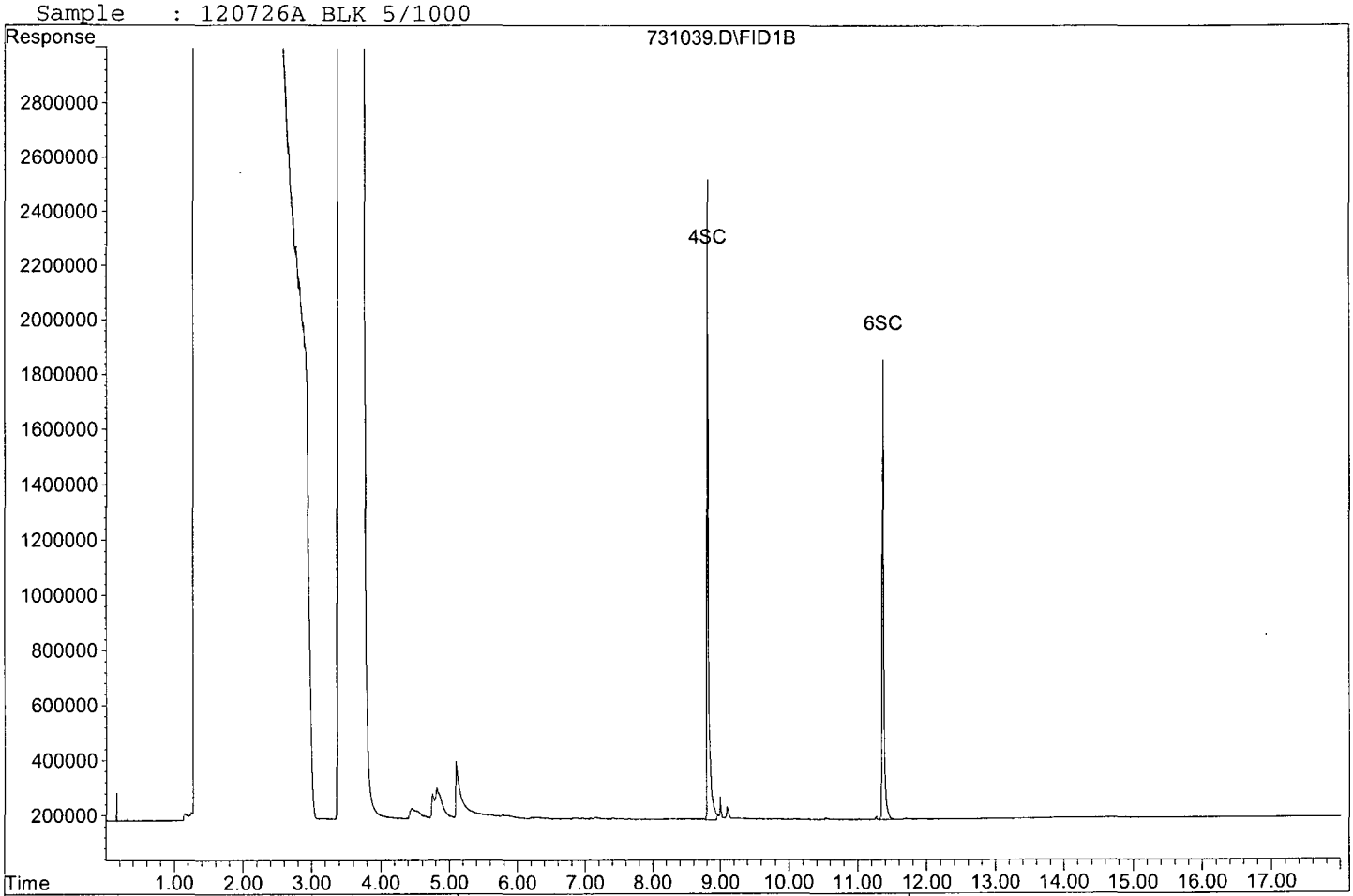
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

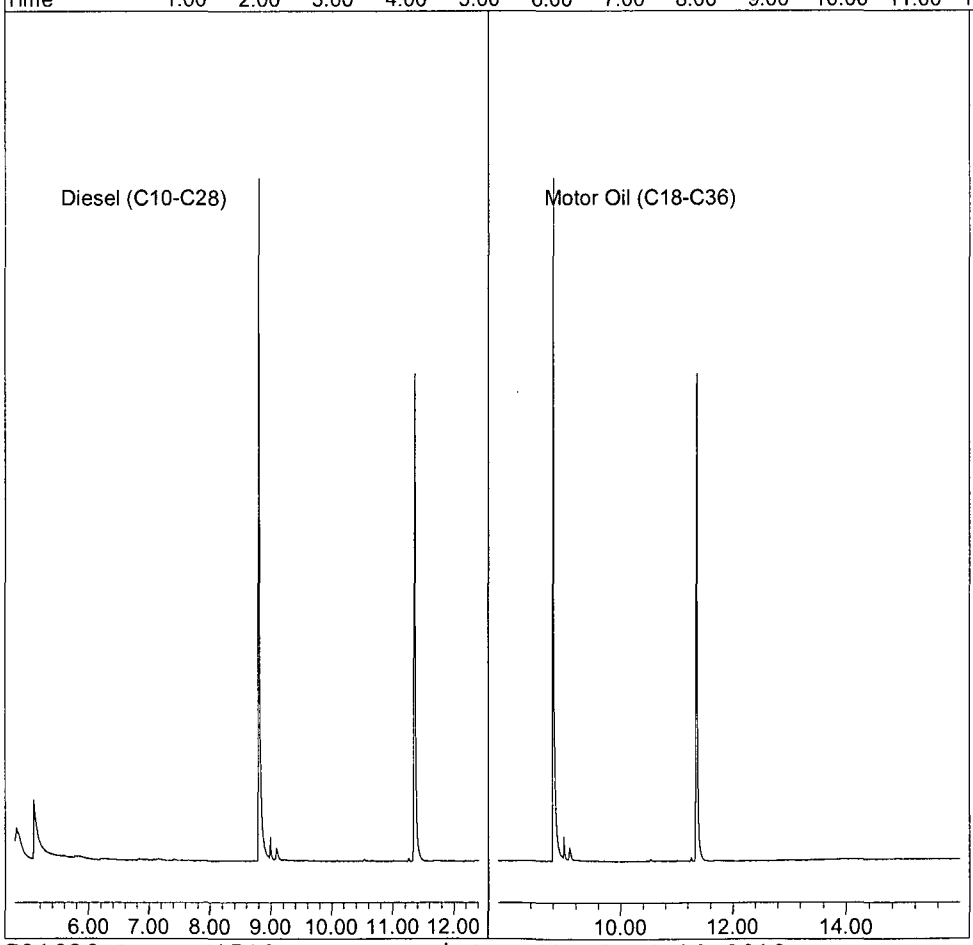
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	33091847	111.815 ppb
Surrogate Spike 142.857		Recovery =	78.27%
6) SC Octacosane(S)	11.36	29130667	92.039 ppb
Surrogate Spike 142.857		Recovery =	64.43%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731039.D
Sample : 120726A BLK 5/1000





Laboratory Control Spike Recovery
TPH Diesel Water

APPL ID: **120726W-65167 LCS - 169638**
Batch ID: #TPETD-120726A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL FUEL	2000	1370	68.5	61-143
SURROGATE: OCTACOSANE (S)	150	89.1	59.4	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	134	89.3	57-132

Comments: _____

Primary	SPK
Quant Method :	TPH0719.M
Extraction Date :	07/26/12
Analysis Date :	08/01/12
Instrument :	Apollo
Run :	731040
Initials :	SD

Printed: 08/02/12 5:56:33 PM

APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731040.D Vial: 40
Acq On : 8-1-12 1:35:46 Operator: LAC
Sample : 120726A LCS-1 5/1000 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

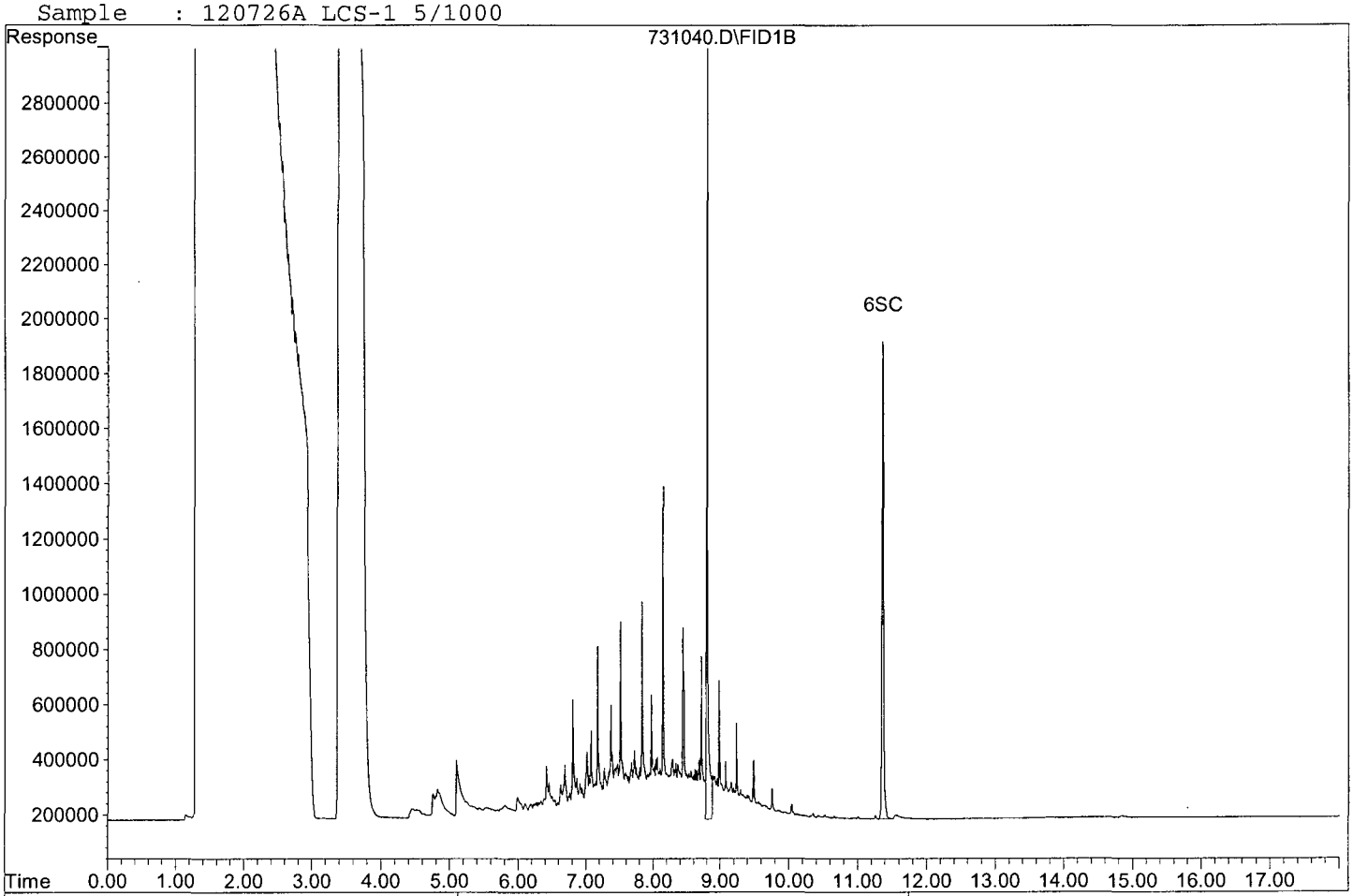
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

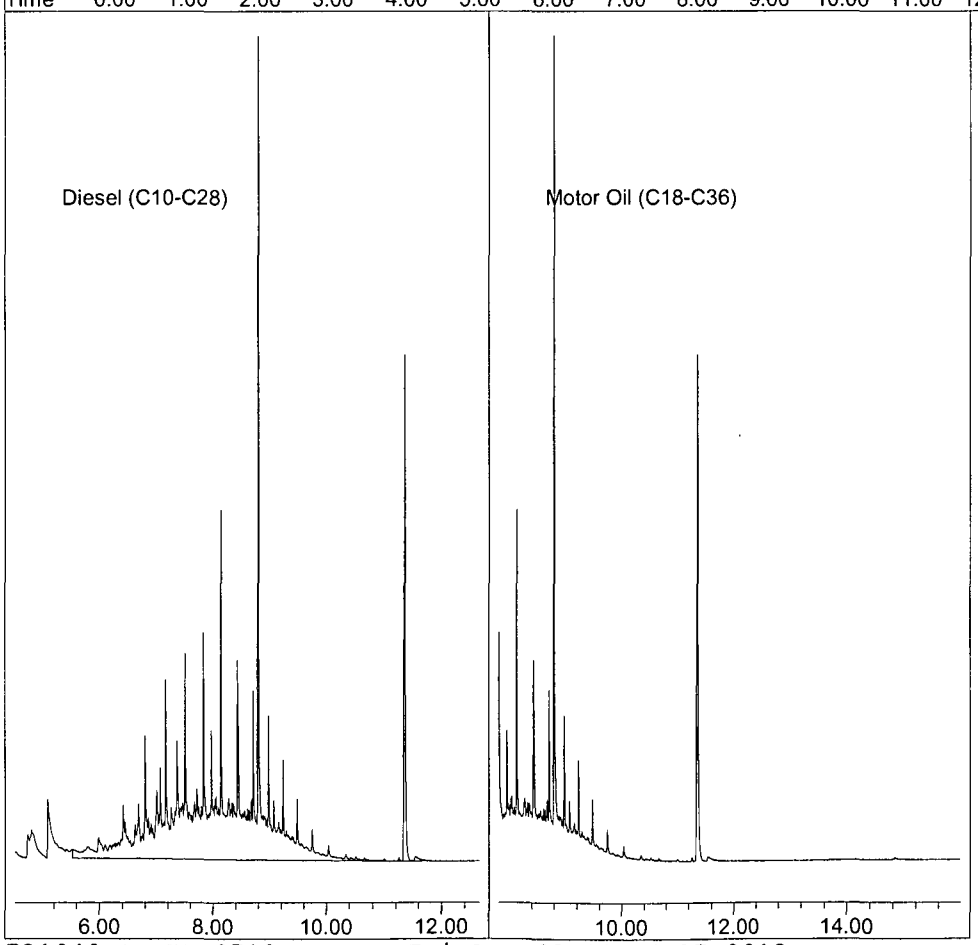
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	39608240	133.833 ppb
Surrogate Spike 142.857		Recovery =	93.68%
6) SC Octacosane(S)	11.36	28208107	89.124 ppb
Surrogate Spike 142.857		Recovery =	62.39%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	315722567	1368.028 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120731\731040.D
Sample : 120726A LCS-1 5/1000





Matrix Spike Recoveries

TPH Diesel Water

APPL ID: **120726W-65167 MS - 169638**
Batch ID: #TPETD-120726A
Sample ID: AY65167
Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
DIESEL FUEL	2000	ND	1250	1570	62.5	78.5	61-143	22.7	30
SURROGATE: OCTACOSANE (S)	150	NA	69.4	96.0	46.3	64.0	28-142		
SURROGATE: ORTHO-TERPHENYL (S)	150	NA	105	134	70.0	89.3	57-132		

Comments: _____

Primary	SPK	DUP
Quant Method :	TPH0719.M	TPH0719.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	08/01/12	08/01/12
Instrument :	Apollo	Apollo
Run :	731043	731044
Initials :	SD	

Printed: 08/02/12 5:56:31 PM
APPL MSD SCII

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731043.D Vial: 43
Acq On : 8-1-12 2:48:20 Operator: LAC
Sample : AY65167W14 MS-1 5/1070 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

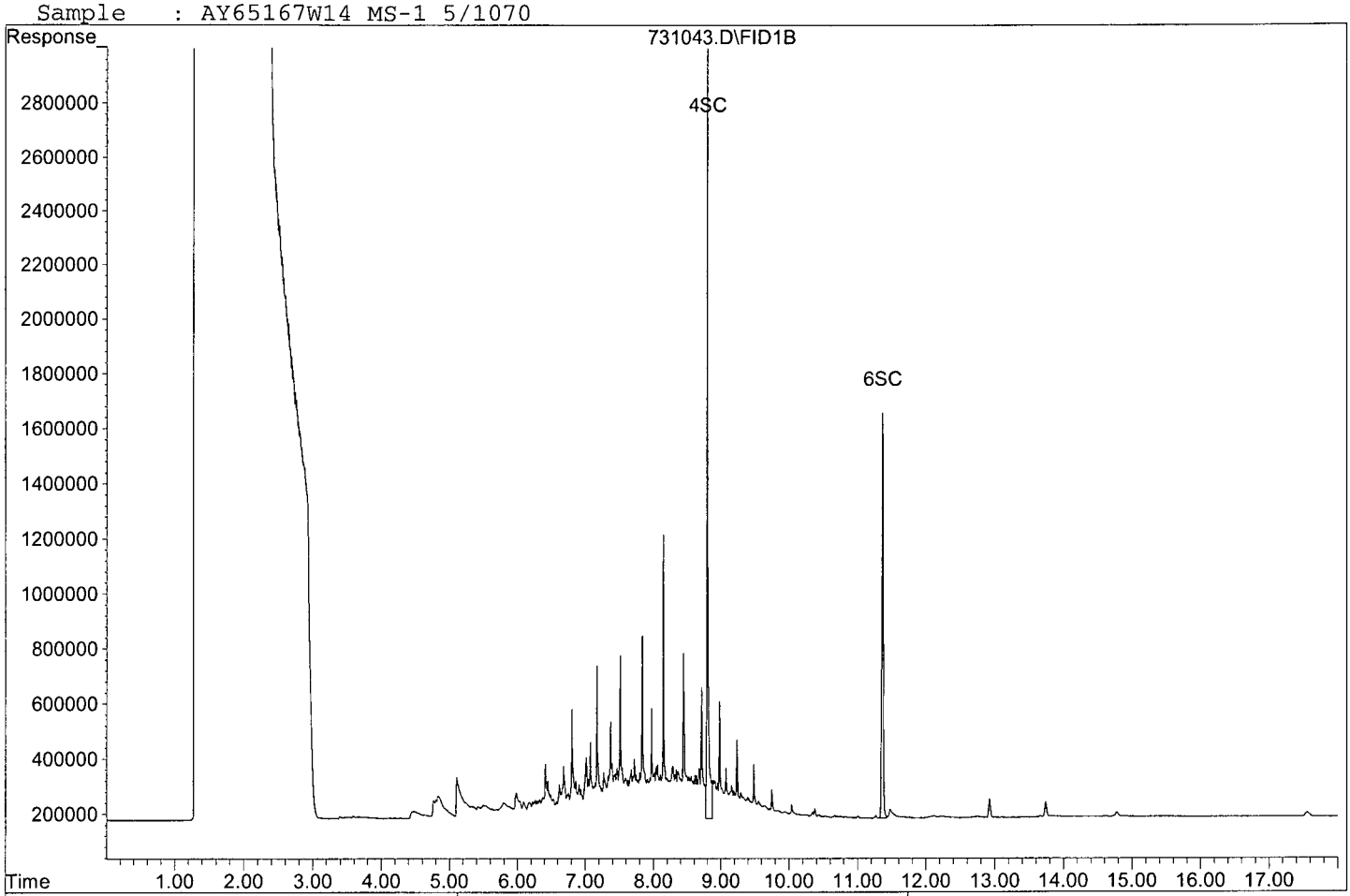
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

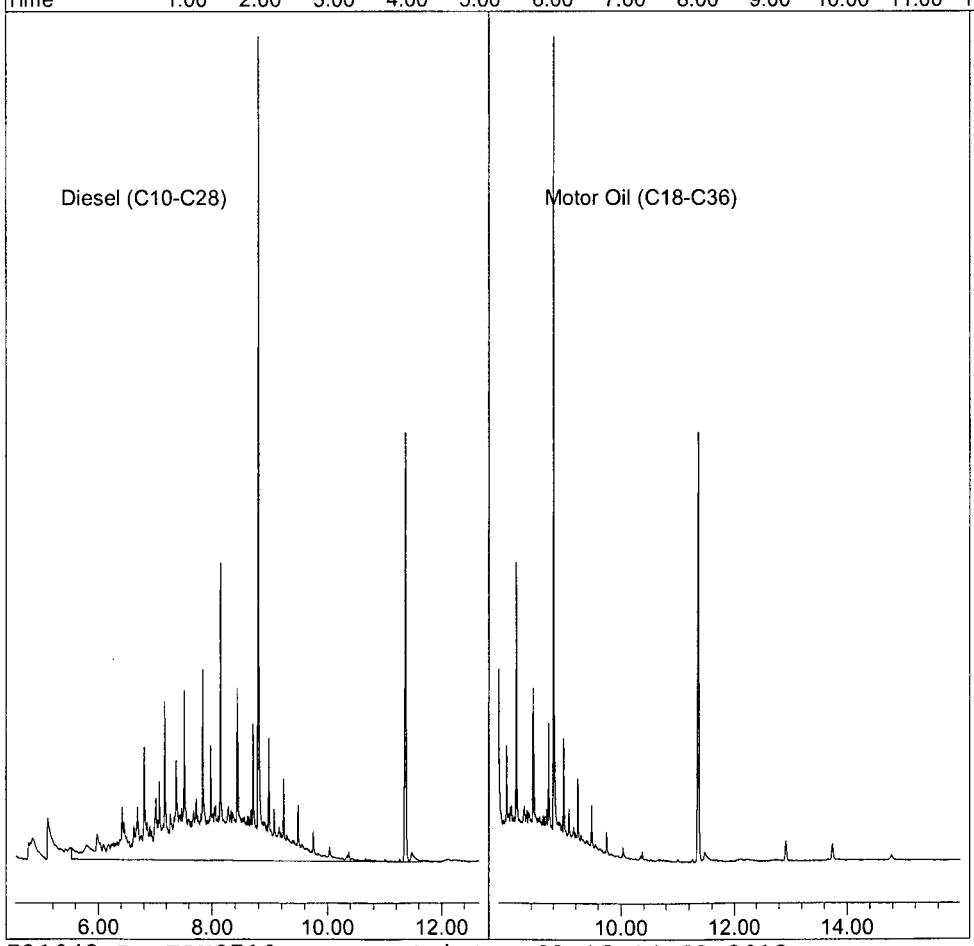
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	31129928	105.186 ppb
Surrogate Spike 142.857		Recovery =	73.63%
6) SC Octacosane(S)	11.36	21975645	69.432 ppb
Surrogate Spike 142.857		Recovery =	48.60%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	289124170	1252.777 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120731\731043.D
Sample : AY65167W14 MS-1 5/1070





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731044.D Vial: 44
Acq On : 8-1-12 3:12:24 Operator: LAC
Sample : AY65167W12 MSD-1 5/1070 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

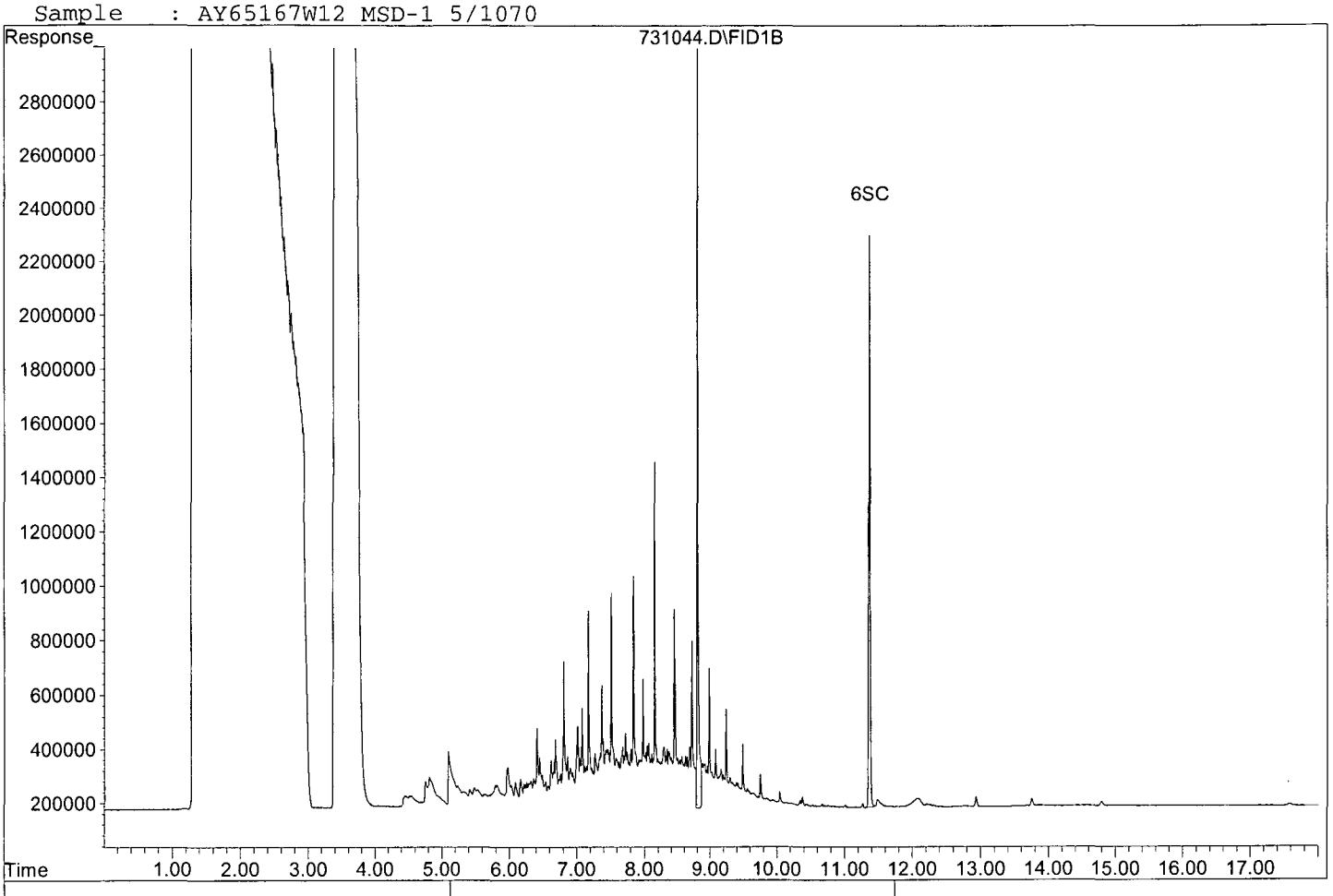
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

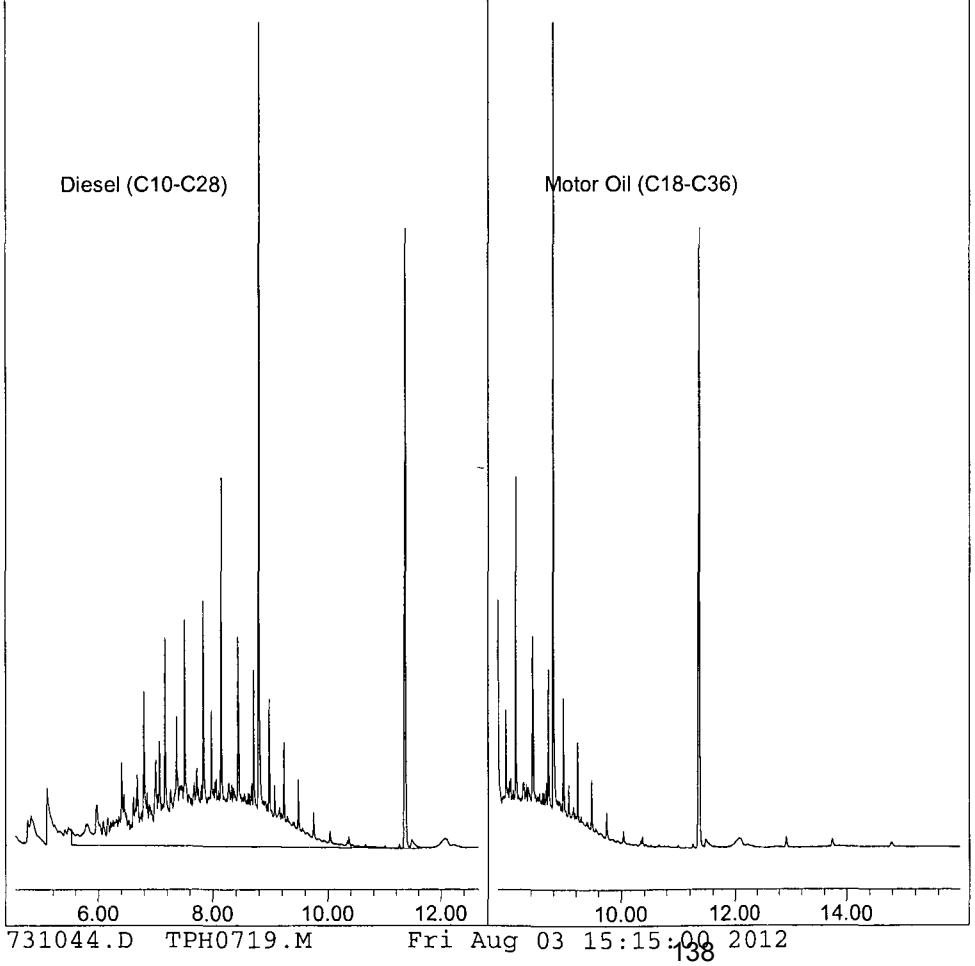
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	39607763	133.832 ppb
Surrogate Spike 142.857		Recovery =	93.68%
6) SC Octacosane(S)	11.36	30390406	96.019 ppb
Surrogate Spike 142.857		Recovery =	67.21%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	361491853	1566.347 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120731\731044.D
Sample : AY65167W12 MSD-1 5/1070





STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	INITIALS
		PCB Soil Spike					
AR1016	1,000 mg/L	O2SI	1250 mL	25mL	50 ug/mL	Acetone	CM
AR1260			1			#022912B	6-21-12
			AND LOT: 163759-29971				ex. 9-21-12
			163759 op. 2-14-12 CM 6-21-12 ex. 2-14-13				

Aroclor 1016 + 1260 Solution, 1,000 mg/L, 1 ml
130011-03
Lot # 163759 Storage ≤ Ambient Expiry 9/14/13
Solv: Hexane
R&D only, not human consump. Made in the USA

Aroclor 1016 + 1260 op. 6-21-12
Lot #: 163759 - 29969 ex. 6-21-13
Rec: 11/10/11 MFR exp. 09/14/13 CM
CM 6-21-12

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	INITIALS
		OCL Soil Surrogate					
DECA	5,000 mg/mL	O2SI	1mL	250mL	20 mg/mL	Acetone	CM
DBC						#022912B	6-21-12
TCMX							ex. 9-21-12

Pesticide Surrogate Solution, 5,000 mg/L, 1 ml
O2SI
Cat. No: 130070-02
Lot No: 154164
Pesticide Surr. Soln, 5000mg/L
Lot #: 154164 - 29418
Rec: 8/26/11 MFR exp. 12/19/12
Exp: 12/19/2012
Storage: </= Ambient
Solvent: Tol.:Hex. 1:1
ption For Research Use Only
Opened: 6-21-12 ex. 6-21-13
CM 6-21-12

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
011598-03
Lot # 183767 Storage ≤ -10 Degrees C Expiry 2/11/16
Solv: Methylene Chloride
R&D only, not human consump. Made in the USA

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
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	200uL	10mL	1000ug/mL	MC #51306

CM 6-22-12
ex. 12-22-12

CM 6-22-12

GC/MS STANDARD PREP LOG# _____ PAGE _____

006

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE / INITIALS

MOTOR OIL CAL STD

STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	Motor Oil Composite, 50,000 mg/L, 1 ml, 116390-02, Lot# 183768, Storage ≤ -10 Degrees C, Expiry 1/8/15, Solv.: Methylene Chloride, R&D only, not for human consump., Made in the USA	1mL	50mL	1000ug/mL	MC LOT# 51306

Motor oil composite op. 6-22-12
Lot #: 183768 - 30232 ex. 6-22-13
Rec: 1/10/12 MFR exp. 01/08/15

CM 6-22-12

CM 6-22-12 ex. 12-22-12

CM 6-22-12

THC SURR CAL STD

STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT LOT#
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#183766-30661 OP:6/12/12 EXP:6/12/13	834 µL	10mL	50ug/mL	MC LOT# 51306

CM 6-22-12

CM 6-22-12 ex. 12-22-12

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	1000

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	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	1000

DIESEL 2ND SOURCE

STD	Init. Conc	Source	Aliquot	Final Vol.	Final Conc.	Solvent
DIESEL 2ND SRC	1000µg/ml	O2SI	400µL	1 mL	400 µg/mL	MC
	Prep:	06/22/12				51306
	Exp:	12/22/12				

CM 6-22-12

LCMS STANDARD PREP LOG# _____ PAGE# 039

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	LOT #	DATE / INITIALS
			MOTOR OIL CCV 500ppm				
MOTOR OIL STD	2000 ug/mL	025E M.O. STD prep. 7-19-12	250uL	1mL	500 ug/mL	MC # 51306	CM 7-31-12 ex. 1-19-13
			DIESEL CCV 400ppm				
DIESEL STD	1000 ug/mL	Diesel STD prep. 6-22-12	400uL	1mL	400 ug/mL	MC #51306	CM 7-31-12 ex. 1-19-13

OCL Second Source

LH 8/1/12 exp: 12/12/12

Compounds	OCL Second Source Conc in mix	Conc in stock	Aliquot	Source stock	Final Vol
a-BHC	.10 ug/mL	100 ~~10~~ 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~~	~~# 001909D~~
g-BHC			Prep:	~~5R~~ 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

LH 8/1/12

OCL CALIBRATION CURVE

LH 8/1/12 exp 2/1/13

Compound	Conc. In Mix	Conc. Of Stock	Aliquot	stock source	Final Vol.
Various Analytes	1A: 0.0025 ug/ml	10 ug/ml	2.5 ul	OCL Stock	10 mL
	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	7/30/13	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: ~~2/13/12~~	8/1/12
		082610B		exp: ~~8/13/12~~	2/1/13
Solvent:	Hexane	Lot: ~~040711A~~	LH 8/3/12		LH 8/3/12

LC/MS STANDARD PREP LOG# _____ PAGE# _____

020 STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE/ INITIALS

AR 1248 CALIBRATION CURVE

AR1248 Prep:3/26/12
Exp: 9/26/12

7/18/12 DRA

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

DRA
OP: 7/18/12
EK: 7/18/13

Diesel Fuel #2 Composite,
50,000 mg/L, 1 ml
011598-03
Lot# 183767 Storage ≤ -10 Degrees C Expiry 2/11/16
Solv: Methylene Chloride
R&D only, not human consump.
Made in the USA

Diesel Fuel #2 Composite
Lot #: 183767 - 30901
Rec: 5/30/12 MFR exp. 02/11/16

7/18/12 DRA

DATE / INITIALS	STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	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 7-9-12
7-12-12	Octacosane		CAT: 11036-05					ex. 7-9-13
			LOT: 188683-30664 thru 668					
			Op. 7-9-12					
			ex. 7-9-13					
			MSE002 Surrogate					
CM 7-6-12	1,3-DBP	100 mg/mL	1,3 DBP STK	35 mL	10mL	Methanol		CM 7-9-12
ex. 7-28-12			prep. 5-14-12			0.35 mg/mL		ex. 10-9-12
			ex. 5-14-13					

OP FAMPHUR CURVE												
PREP:	07/09/12	EXP:	07/28/12			IA	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL
	OP/FAMPHUR ST	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

CM 7-6-12 ex. 7-20-12

CM 7-9-12 ex. 7-28-(illegible)

PREP DATE:	07/09/12										
OPC CURVE											
EXP:	10/06/12										
						1	2	3	4	5	6
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	500	700	1000
	Hexane		082610B			990	950	800	500	300	NA
					Final VOL.	1000	1000	1000	1000	1000	1000

CM 7-9-12

CM 7-9-12 ex. 10-6-12

[redacted]

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	120726A	Extraction Method	SEP011	Units	mL

Spiked ID 1	Diesel Ampule 183767-30901		Surrogate ID 1	THC Surrogate 183766-30665	
Spiked ID 2	Motor Oil Ampule 183768-30234		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	07/26/12 15:45	
Spiked ID 8			Ext. End Time:	07/27/12 10:36	
			GC Requires Extract By:	**08/03/12 0:00**	

pH1			Water Bath Temp Criteria	78,76,80 °
pH2				
pH3				

Spiked By: DL **Date** 07/26/12 **Witnessed By:** JM **Date** 07/26/12

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	120726A Blk				0.250	1	1000	5	7	07/26/12 15:45	
						equip	E-WB7,78				
2	120726A LCS-1		0.040	1	0.250	1	1000	5	7	07/26/12 15:45	
						equip	E-WB7,78				
3	120726A LCS-2		0.040	2	0.250	1	1000	5	7	07/26/12 15:45	
						equip	E-WB7,78				
4	AY65166	AY65166W04			0.250	1	1040	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB7,78				
5	AY65167 MS-1	AY65167W14	0.040	1	0.250	1	1070	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB7,78				
6	AY65167 MSD-1	AY65167W12	0.040	1	0.250	1	1070	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB7,78				
7	AY65167	AY65167W11			0.250	1	1050	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB7,78				
8	AY65211	AY65211W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
						equip	E-WB7,78				
9	AY65212	AY65212W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
						equip	E-WB7,78				
10	AY65213	AY65213W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
						equip	E-WB7,78				
11	AY65214	AY65214W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
12	AY65215	AY65215W02			0.250	1	1070	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
13	AY65216	AY65216W05			0.250	1	1070	5	7	07/26/12 15:45	68283-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				

vent and Lot#	
:	EMD52104
2SO4	2351C512

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/GH
Concentration	IC

Modified	07/27/12 10:47:48 AM

Reviewed By: DRA **Date** 07/27/12

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	120726A	Extraction Method	SEP011	Units	mL

Spiked ID 1	Diesel Ampule 183767-30901		Surrogate ID 1	THC Surrogate 183766-30665	
Spiked ID 2	Motor Oil Ampule 183768-30234		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	07/26/12 15:45	
Spiked ID 8			Ext. End Time:	07/27/12 10:36	
			GC Requires Extract By:	**08/03/12 0:00**	

pH1			Water Bath Temp Criteria	78,76,80 °
pH2				
pH3				

Spiked By: DL **Date** 07/26/12 **Witnessed By:** JM **Date** 07/26/12

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
14	AY65217	AY65217W04			0.250	1	1050	5	7	07/26/12 15:45	68283-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
15	AY65218	AY65218W04			0.250	1	1070	5	7	07/26/12 15:45	68283-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				
16	AY65220	AY65220W07			0.250	1	1040	5	7	07/26/12 15:45	68284-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				
17	AY65277	AY65277W03			0.250	1	1070	5	7	07/26/12 15:45	68296-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				
18	AY65278	AY65278W03			0.250	1	1070	5	7	07/26/12 15:45	68296-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				
19	AY65395	AY65395W01			0.250	1	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
						equip	E-WB5,76				
20	AY65399	AY65399W01			0.250	1	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
						equip	E-WB5,76				
21	AY65402	AY65402W01			0.250	1	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
						equip	E-WB5,76				
22	AY65416	AY65416W01			0.250	1	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
						equip	E-WB5,76				

DRA 7/27/12

olvent and Lot#	
IC	EMD52104
a2SO4	2351C512

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	JM
Sample Preparation	JM
Extraction	JM/GH
Concentration	IC

Modified	07/27/12 10:47:48 AM

Reviewed By: DRA **Date** 07/27/12

Injection Log

Directory: G:\APOLLO\DATA\120622\

Line	Vial	FileName	Multiplier	SampleName,	Misc Info	Injected
1	4	622004.D	1	TCH SURROGATE 100/1000	Mix(c)	6-22-12 18:22:29
2	5	622005.D	1	TCH SURROGATE 400/1000	Mix(c)	6-22-12 18:46:55
3	6	622006.D	1	TCH SURROGATE 600/1000	Mix(c)	6-22-12 19:10:46
4	7	622007.D	1	TCH SURROGATE 800/1000	Mix(c)	6-22-12 19:34:47
5	8	622008.D	1	TCH SURROGATE 1000/1000	Mix(c)	6-22-12 19:58:49
6	9	622009.D	1	DIESEL 10/1000 6/22/12	Mix(A)	6-22-12 20:22:56
7	10	622010.D	1	DIESEL 100/1000	Mix(A)	6-22-12 20:47:06
8	11	622011.D	1	DIESEL 400/1000	Mix(A)	6-22-12 21:11:13
9	12	622012.D	1	DIESEL 600/1000	Mix(A)	6-22-12 21:35:18
10	13	622013.D	1	DIESEL 800/1000	Mix(A)	6-22-12 21:59:20
11	14	622014.D	1	DIESEL 1000/1000	Mix(A)	6-22-12 22:23:21
12	15	622015.D	1	DIESEL 2ND SRC 6/22/12	Mix(A)	6-22-12 22:47:20
13	32	731032.D	1	DIESEL 400ppm 7/30/12	Mix(A)	7-31-12 22:20:07
14	39	731039.D	4.7619	120726A BLK 5/1000	Water	8-1-12 1:11:25
15	40	731040.D	4.7619	120726A LCS-1 5/1000	Water	8-1-12 1:35:46
16	42	731042.D	4.7619	AY65166W04 5/1040	Water	8-1-12 2:24:08
17	43	731043.D	4.7619	AY65167W14 MS-1 5/1070	Water	8-1-12 2:48:20
18	44	731044.D	4.7619	AY65167W12 MSD-1 5/1070	Water	8-1-12 3:12:24
19	45	731045.D	4.7619	AY65167W11 5/1050	Water	8-1-12 3:36:31
20	47	731047.D	1	DIESEL 400ppm 7/31/12	Water	8-1-12 4:24:28

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank

EPA 8260B VOCs + Gas Water

Blank Name/QCG: **120726W-65167 - 169444**

Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenu
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	07/26/12	07/26/12
BLANK	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
BLANK	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
BLANK	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMO-3-CHLOROPROPA	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
BLANK	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
BLANK	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
BLANK	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
BLANK	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
BLANK	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
BLANK	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
BLANK	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 9:57:45 AM
GC SC-Blank-REG MDLs

Method Blank

EPA 8260B VOCs + Gas Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
BLANK	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	SURROGATE: 1,2-DICHLOROET	102	70-120			%	07/26/12	07/26/12
BLANK	SURROGATE: 4-BROMOFLUORO	101	75-120			%	07/26/12	07/26/12
BLANK	SURROGATE: DIBROMOFLUOR	102	85-115			%	07/26/12	07/26/12
BLANK	SURROGATE: TOLUENE-D8 (S)	101	85-120			%	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 9:57:45 AM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 07/26/12

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120726AT-LCS	Lab Control Spike	70-120	102		75-120	104	
120726AT-BLK	Blank	70-120	102		75-120	101	
AY65168	ES086 TRIP BLANK	70-120	101		75-120	98.6	
AY65166	ES083	70-120	104		75-120	102	
AY65167	ES084	70-120	101		75-120	98.9	
AY65167-MS	Matrix Spike	70-120	99.0		75-120	102	
AY65167-MSD	Matrix SpikeD	70-120	102		75-120	106	

Comments: Batch: #86RHB-120726AT

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 07/26/12

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120726AT-LCS	Lab Control Spike	85-115	102		85-120	99.6	
120726AT-BLK	Blank	85-115	102		85-120	101	
AY65168	ES086 TRIP BLANK	85-115	101		85-120	99.7	
AY65166	ES083	85-115	103		85-120	102	
AY65167	ES084	85-115	90.9		85-120	99.6	
AY65167-MS	Matrix Spike	85-115	91.9		85-120	98.0	
AY65167-MSD	Matrix SpikeD	85-115	94.7		85-120	102	

Comments: Batch: #86RHB-120726AT

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 LCS - 169444**
Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,1,1,2-TETRACHLOROETHANE	10.00	10.3	103	80-130
1,1,1-TRICHLOROETHANE	10.00	9.87	98.7	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.84	98.4	65-130
1,1,2-TRICHLOROETHANE	10.00	9.86	98.6	75-125
1,1-DICHLOROETHANE	10.00	10.4	104	70-135
1,1-DICHLOROETHENE	10.00	9.96	99.6	70-130
1,2,3-TRICHLOROPROPANE	10.00	10.3	103	75-125
1,2,4-TRICHLOROBENZENE	10.00	10.4	104	65-135
1,2-DIBROMO-3-CHLOROPROPANE	10.00	10.8	108	50-130
1,2-DIBROMOETHANE	10.00	9.82	98.2	70-130
1,2-DICHLOROBENZENE	10.00	9.95	99.5	70-120
1,2-DICHLOROETHANE	10.00	9.83	98.3	70-130
1,2-DICHLOROPROPANE	10.00	10.0	100	75-125
1,3-DICHLOROBENZENE	10.00	10.2	102	75-125
1,3-DICHLOROPROPENE, TOTAL	20.0	20.3	102	70-130
1,4-DICHLOROBENZENE	10.00	9.71	97.1	75-125
2-BUTANONE	10.00	9.66	96.6	30-150
4-METHYL-2-PENTANONE	10.00	9.27	92.7	60-135
ACETONE	10.00	10.9	109	40-140
BENZENE	10.00	9.55	95.5	80-120
BROMODICHLOROMETHANE	10.00	10.1	101	75-120
BROMOFORM	10.00	10.2	102	70-130
BROMOMETHANE	10.00	9.13	91.3	30-145
CARBON TETRACHLORIDE	10.00	10.3	103	65-140
CHLOROBENZENE	10.00	10.1	101	80-120
CHLORODIBROMOMETHANE	10.00	10.2	102	60-135
CHLOROETHANE	10.00	9.65	96.5	60-135
CHLOROFORM	10.00	9.96	99.6	65-135
CHLOROMETHANE	10.00	8.45	84.5	40-125
CIS-1,2-DICHLOROETHENE	10.00	10.3	103	70-125
ETHYLBENZENE	10.00	10.3	103	75-125

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Comments: _____

Printed: 07/31/12 9:57:35 AM
APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 LCS - 169444**
Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE	300	285	95.0	75-125
HEXACHLOROBUTADIENE	10.00	10.4	104	50-140
METHYL TERT-BUTYL ETHER	10.00	9.83	98.3	65-125
METHYLENE CHLORIDE	10.00	9.48	94.8	55-140
STYRENE	10.00	10.6	106	65-135
TETRACHLOROETHENE	10.00	10.3	103	45-150
TOLUENE	10.00	10.2	102	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.17	91.7	60-140
TRICHLOROETHENE	10.00	9.73	97.3	70-125
VINYL CHLORIDE	10.00	9.58	95.8	50-145
XYLENES (TOTAL)	30.0	31.5	105	80-120
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	34.2	102	70-120
SURROGATE: 4-BROMOFLUOROBENZE	29.5	30.7	104	75-120
SURROGATE: DIBROMOFLUOROMETH	31.9	32.5	102	85-115
SURROGATE: TOLUENE-D8 (S)	37.3	37.2	99.6	85-120

Comments: _____

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Printed: 07/31/12 9:57:35 AM
APPL Standard LCS

Matrix Spike Recoveries

EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 MS - 169444**
Batch ID: #86RHB-120726AT
Sample ID: AY65167
Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,1,1,2-TETRACHLOROETHANE	10.00	ND	8.86	8.94	88.6	89.4	80-130	0.90	30
1,1,1-TRICHLOROETHANE	10.00	ND	9.23	9.27	92.3	92.7	65-130	0.43	30
1,1,2,2-TETRACHLOROETHANE	10.00	ND	0.166	0.187	1.7 #	1.9 #	65-130	11.9	30
1,1,2-TRICHLOROETHANE	10.00	ND	8.01	7.73	80.1	77.3	75-125	3.6	30
1,1-DICHLOROETHANE	10.00	ND	9.08	9.10	90.8	91.0	70-135	0.22	30
1,1-DICHLOROETHENE	10.00	ND	10.2	10.9	102	109	70-130	6.6	30
1,2,3-TRICHLOROPROPANE	10.00	ND	9.19	9.10	91.9	91.0	75-125	0.98	30
1,2,4-TRICHLOROBENZENE	10.00	ND	8.39	8.99	83.9	89.9	65-135	6.9	30
1,2-DIBROMO-3-CHLOROPROPANE	10.00	ND	8.85	8.68	88.5	86.8	50-130	1.9	30
1,2-DIBROMOETHANE	10.00	ND	8.76	8.86	87.6	88.6	70-130	1.1	30
1,2-DICHLOROBENZENE	10.00	ND	8.93	8.73	89.3	87.3	70-120	2.3	30
1,2-DICHLOROETHANE	10.00	ND	9.08	8.87	90.8	88.7	70-130	2.3	30
1,2-DICHLOROPROPANE	10.00	ND	8.93	8.87	89.3	88.7	75-125	0.67	30
1,3-DICHLOROBENZENE	10.00	ND	9.16	9.08	91.6	90.8	75-125	0.88	30
1,3-DICHLOROPROPENE, TOTAL	20.0	ND	17.0	17.5	85.0	87.5	70-130	2.9	30
1,4-DICHLOROBENZENE	10.00	ND	8.83	8.79	88.3	87.9	75-125	0.45	30
2-BUTANONE	10.00	1.0	10.4	9.60	94.0	86.0	30-150	8.0	30
4-METHYL-2-PENTANONE	10.00	ND	9.17	8.73	91.7	87.3	60-135	4.9	30
ACETONE	10.00	2.3	13.0	12.4	107	101	40-140	4.7	30
BENZENE	10.00	1.3	9.60	9.78	83.0	84.8	80-120	1.9	30
BROMODICHLOROMETHANE	10.00	ND	8.67	8.77	86.7	87.7	75-120	1.1	30
BROMOFORM	10.00	ND	8.94	9.04	89.4	90.4	70-130	1.1	30
BROMOMETHANE	10.00	ND	7.72	7.73	77.2	77.3	30-145	0.13	30
CARBON TETRACHLORIDE	10.00	ND	9.21	9.49	92.1	94.9	65-140	3.0	30
CHLOROBENZENE	10.00	ND	8.74	9.06	87.4	90.6	80-120	3.6	30
CHLORODIBROMOMETHANE	10.00	ND	8.76	8.74	87.6	87.4	60-135	0.23	30
CHLOROETHANE	10.00	ND	7.80	7.99	78.0	79.9	60-135	2.4	30
CHLOROFORM	10.00	ND	9.01	8.83	90.1	88.3	65-135	2.0	30
CHLOROMETHANE	10.00	ND	6.87	7.14	68.7	71.4	40-125	3.9	30
CIS-1,2-DICHLOROETHENE	10.00	ND	9.00	8.94	90.0	89.4	70-125	0.67	30

= Recovery is outside QC limits.

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	07/26/12	07/26/12
Instrument :	Thor	Thor
Run :	0726T21	0726T22
Initials :	ARS	

Comments: _____

Printed: 07/31/12 9:57:19 AM
APPL MSD SCII

Matrix Spike Recoveries

EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 MS - 169444**
Batch ID: #86RHB-120726AT
Sample ID: AY65167
Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
ETHYLBENZENE	10.00	ND	8.96	8.99	89.6	89.9	75-125	0.33	30
GASOLINE	300	ND	218	232	72.7 #	77.3	75-125	6.2	30
HEXACHLOROBUTADIENE	10.00	ND	8.83	8.95	88.3	89.5	50-140	1.3	30
METHYL TERT-BUTYL ETHER	10.00	ND	8.73	8.72	87.3	87.2	65-125	0.11	30
METHYLENE CHLORIDE	10.00	ND	16.9	16.6	169 #	166 #	55-140	1.8	30
STYRENE	10.00	ND	9.10	9.30	91.0	93.0	65-135	2.2	30
TETRACHLOROETHENE	10.00	ND	8.89	9.25	88.9	92.5	45-150	4.0	30
TOLUENE	10.00	ND	9.09	9.15	90.9	91.5	75-120	0.66	30
TRANS-1,2-DICHLOROETHENE	10.00	ND	8.18	8.46	81.8	84.6	60-140	3.4	30
TRICHLOROETHENE	10.00	ND	19.9	20.4	199 #	204 #	70-125	2.5	30
VINYL CHLORIDE	10.00	ND	8.27	8.25	82.7	82.5	50-145	0.24	30
XYLENES (TOTAL)	30.0	ND	27.1	28.0	90.3	93.3	80-120	3.3	30
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	NA	33.3	34.2	99.0	102	70-120		
SURROGATE: 4-BROMOFLUOROBENZE	29.5	NA	30.0	31.2	102	106	75-120		
SURROGATE: DIBROMOFLUOROMETH	31.9	NA	29.3	30.2	91.9	94.7	85-115		
SURROGATE: TOLUENE-D8 (S)	37.3	NA	36.6	38.0	98.0	102	85-120		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	07/26/12	07/26/12
Instrument :	Thor	Thor
Run :	0726T21	0726T22
Initials :	ARS	

Printed: 07/31/12 9:57:19 AM
APPL MSD SCII

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 07/26/12

Matrix: WATER Instrument: Thor

Blank ID: 120726AT-BLK Time Analyzed: 1400

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120726AT-LCS	Lab Control Spike	0726T05	07/26/12 1113
120726AT-BLK	Blank	0726T11	07/26/12 1400
AY65168	ES086 TRIP BLANK	0726T12	07/26/12 1427
AY65166	ES083	0726T18	07/26/12 1714
AY65167	ES084	0726T20	07/26/12 1809
120726AT-MS	Matrix Spike	0726T21	07/26/12 1837
120726AT-MSD	Matrix SpikeD	0726T22	07/26/12 1904

Comments: Batch: #86RHB-120726AT

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 0726T01.D
Matrix: Water
ID: 5-ng BFB Std 07-16-12B

SDG No: 68268
Date Analyzed: 07/26/12
Instrument: Thor
Time Analyzed: 9:22

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		10ug/L Vol Std 07-26	0726T04.D	07/26/12 10:46
2	Lab Control Spike	120726A LCS-1WT	0726T05.D	07/26/12 11:13
3	Blank	120726A BLK-1WT	0726T11.D	07/26/12 14:00
4	ES086 TRIP BLANK	AY65168W01	0726T12.D	07/26/12 14:27
5	ES083	AY65166W01	0726T18.D	07/26/12 17:14
6	ES084	AY65167W01	0726T20.D	07/26/12 18:09
7		AY65167W234 MS-1WT	0726T21.D	07/26/12 18:37
8		AY65167W234 MSD-1WT	0726T22.D	07/26/12 19:04
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	14.9 - 40% of mass 95	17.9
75	30 - 60% of mass 95	47.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.2
173	0 - 2% of mass 174	0.4
174	50 - 100.49% of mass 95	97.3
175	5 - 9% of mass 174	7.9
176	95 - 101.49% of mass 174	97.8
177	5 - 9% of mass 176	6.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 0726T01.D
Matrix: Water
ID: 5-ng BFB Std 07-16-12B

SDG No: 68268
Date Analyzed: 07/26/12
Instrument: Thor
Time Analyzed: 9:22

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		CCV gas 300ug/L	0726T06.D	07/26/12 11:41
2	Lab Control Spike	LCS gas 300ug/L	0726T07.D	07/26/12 12:09
3	Blank	120726A BLK-1WT	0726T11.D	07/26/12 14:00
4	ES086 TRIP BLANK	AY65168W01	0726T12.D	07/26/12 14:27
5	ES083	AY65166W01	0726T18.D	07/26/12 17:14
6	ES084	AY65167W01	0726T20.D	07/26/12 18:09
7		AY65167W456 MS-1SS G	0726T23.D	07/26/12 19:32
8		AY65167W456 MSD-1WT	0726T24.D	07/26/12 20:00
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	17.9
75	30 - 60% of mass 95	47.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.2
173	0 - 2% of mass 174	0.4
174	50 - 100% of mass 95	97.3
175	5 - 9% of mass 174	7.9
176	95 - 101% of mass 174	97.8
177	5 - 9% of mass 176	6.8

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 68268

Lab File ID (Standard): 0719T10.D Date Analyzed: 07/19/12

Instrument ID: Thor Time Analyzed: 13:20

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	461760	6.74	382656	9.88	222464	12.20
	UPPER LIMIT	923520	7.24	765312	10.38	444928	12.70
	LOWER LIMIT	230880	6.24	191328	9.38	111232	11.70
	SAMPLE NO.						
01	120719A LCS-1WT (SS)	459584	6.73	371008	9.87	216768	12.20
02	10ug/L Vol Std 07-26-12	398336	6.73	321152	9.87	193728	12.20
03	120726A LCS-1WT	396608	6.73	324736	9.88	196096	12.20
04	120726A BLK-1WT	393664	6.73	315392	9.88	183424	12.20
05	AY65168W01	393024	6.73	316800	9.87	179392	12.20
06	AY65166W01	397440	6.73	321408	9.87	187456	12.20
07	AY65167W01	379712	6.73	308224	9.87	174144	12.20
08	AY65167W234 MS-1WT	398656	6.73	326336	9.87	192128	12.20
09	AY65167W234 MSD-1WT	396608	6.73	320064	9.87	192576	12.20
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 68268

Lab File ID (Standard): 0725T07.D Date Analyzed: 07/25/12

Instrument ID: Thor Time Analyzed: 12:13

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	782981	6.73	897407	9.87	996199	12.20
	UPPER LIMIT	1565962	7.23	1794814	10.37	1992398	12.70
	LOWER LIMIT	391491	6.23	448704	9.37	498100	11.70
	SAMPLE NO.						
01	LCS gas 300ug/L (SS)	788179	6.73	879850	9.88	1024200	12.20
02	CCV gas 300ug/L	818998	6.73	915509	9.87	1060500	12.20
03	LCS gas 300ug/L	811874	6.72	928441	9.87	1044820	12.20
04	120726A BLK-1WT	814291	6.73	903930	9.88	1008830	12.20
05	AY65168W01	808117	6.73	915058	9.87	1004710	12.20
06	AY65166W01	812071	6.73	926183	9.87	1029510	12.20
07	AY65167W01	780142	6.73	881065	9.87	965055	12.20
08	AY65167W456 MS-1SS GAS	842116	6.73	935797	9.88	1070500	12.20
09	AY65167W456 MSD-1WT GAS	794771	6.73	901502	9.87	995139	12.20
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = -50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

Manual Integration Summary

ARF: 68268

APPL ID	Client ID	Method	Analyte	Type	Comment
AY65166	ES083	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.
AY65167	Blank	EPA 8260B	GASOLINE	Blank	(MI1) Integration does not follow baseline.
AY65167	LCS	EPA 8260B	GASOLINE	LCS	(MI1) Integration does not follow baseline.
AY65167	MS	EPA 8260B	GASOLINE	MS	(MI1) Integration does not follow baseline.
AY65167	MSD	EPA 8260B	GASOLINE	MSD	(MI1) Integration does not follow baseline.
AY65167	ES084	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.
AY65168	ES086 TRIP BLANK	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.

EPA METHOD 8260B
Volatile Organic Compounds
Sample Data

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

ARF: 68268

Sample ID: ES083

APPL ID: AY65166

Sample Collection Date: 07/19/12

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T18
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM

APPL-F1-SC-NoMC-REG MDLs

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

Sample ID: ES083

Sample Collection Date: 07/19/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68268

APPL ID: AY65166

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	104	70-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	102	75-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	103	85-115			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	102	85-120			%	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T18
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T18.D Vial: 43
Acq On : 26 Jul 12 17:14 Operator: DG,RS,HW,ARS,SV
Sample : AY65166W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 9:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	96	397440	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	321408	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	187456	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.94	111	204048	32.80825 ppb	0.00
Spiked Amount 31.881			Recovery = 102.907%		
36) 1,2-DCA-D4(S)	6.33	65	202448	35.02564 ppb	0.00
Spiked Amount 33.647			Recovery = 104.099%		
56) Toluene-D8(S)	8.43	98	721528	37.97251 ppb	0.00
Spiked Amount 37.345			Recovery = 101.682%		
64) 4-Bromofluorobenzene(S)	11.05	95	269449	29.98532 ppb	0.00
Spiked Amount 29.515			Recovery = 101.591%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

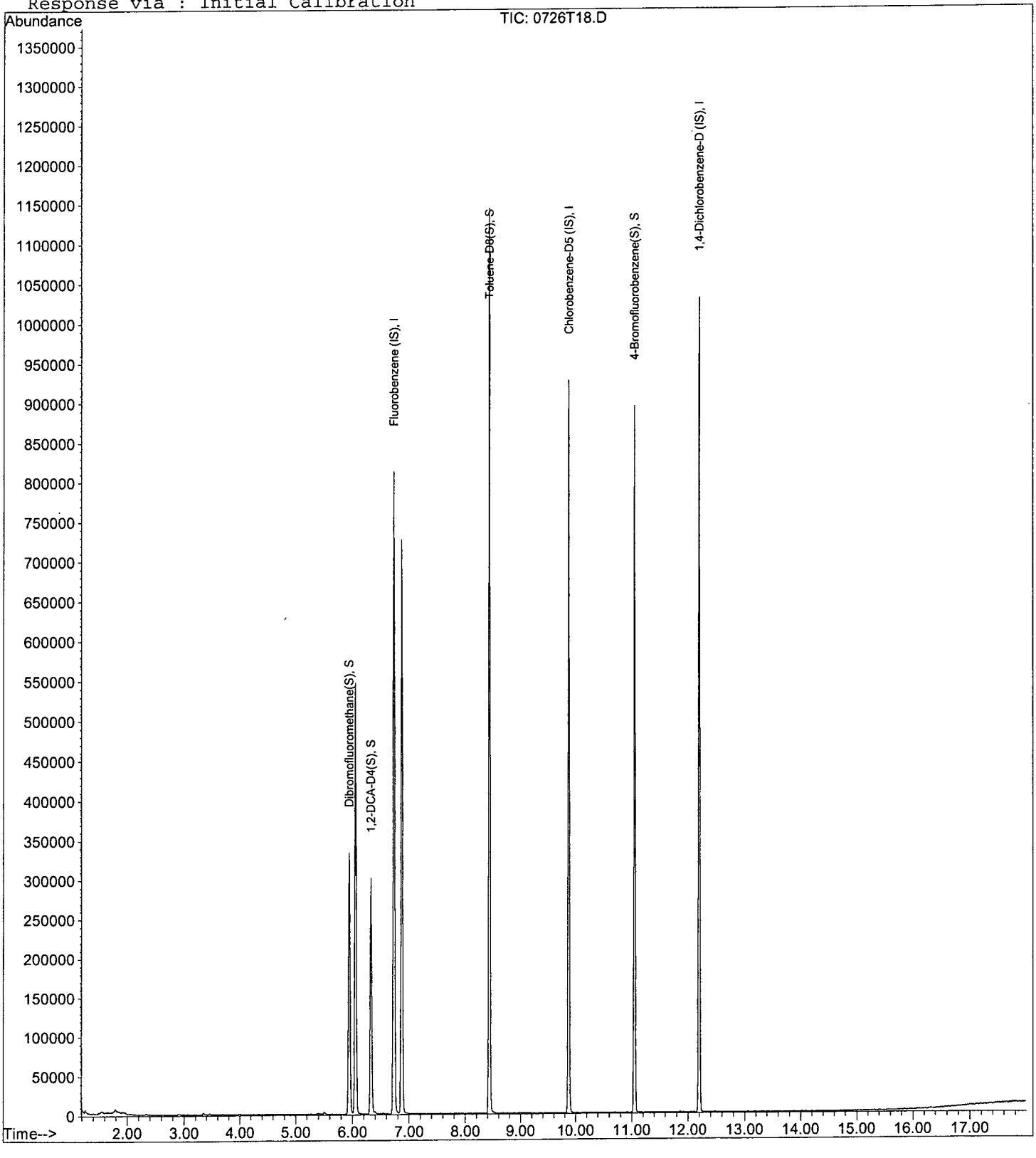
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T18.D
Acq On : 26 Jul 12 17:14
Sample : AY65166W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 43
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 9:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T18.D Vial: 43
Acq On : 26 Jul 12 17:14 Operator: DG,RS,HW,ARS,SV
Sample : AY65166W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 7:39 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	812071	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	926183	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1029507	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10444534m	16.54357	ppb	ND 100

No gasoline pattern detected.
ARS 7/27/12

(#) = qualifier out of range (m) = manual integration
0726T18.D TGAS.M Fri Jul 27 07:39:51 2012 Page 1

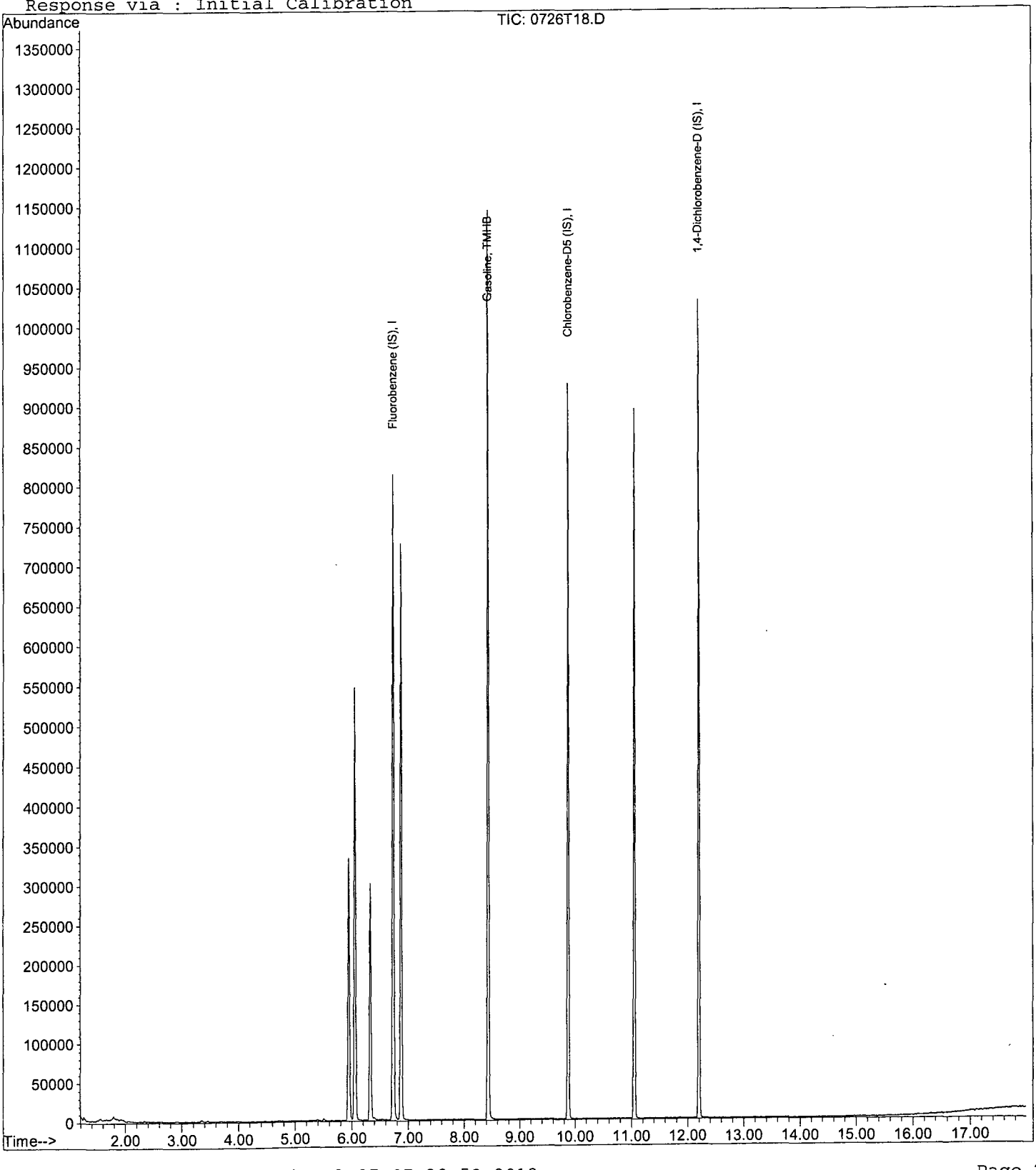
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T18.D
Acq On : 26 Jul 12 17:14
Sample : AY65166W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 43
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 7:39 2012 Quant Results File: TGAS.RES

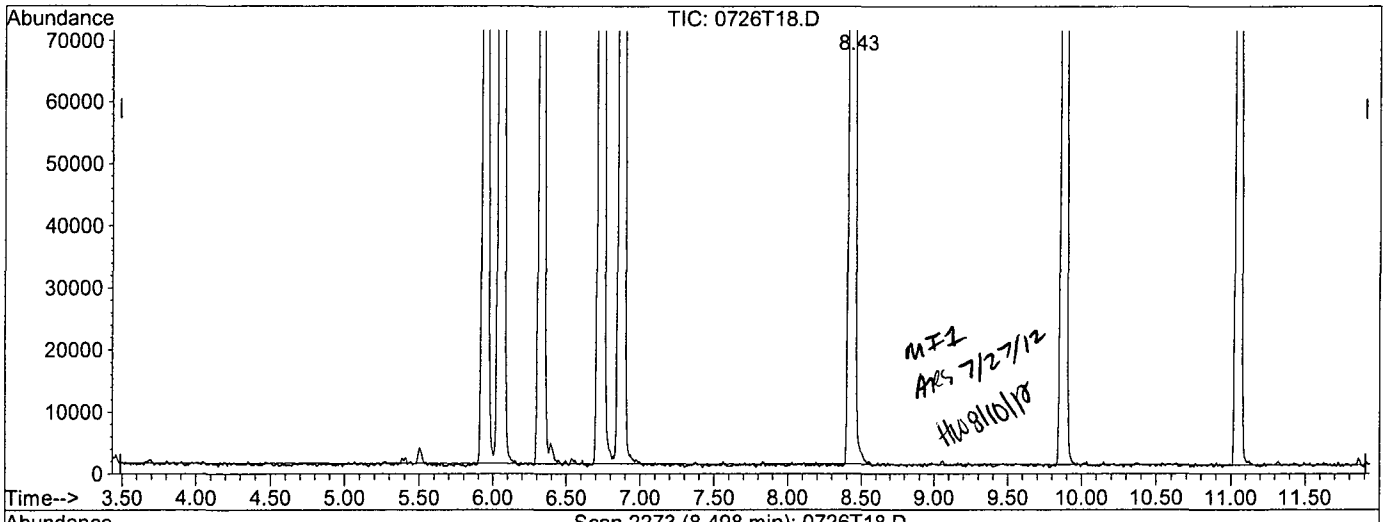
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

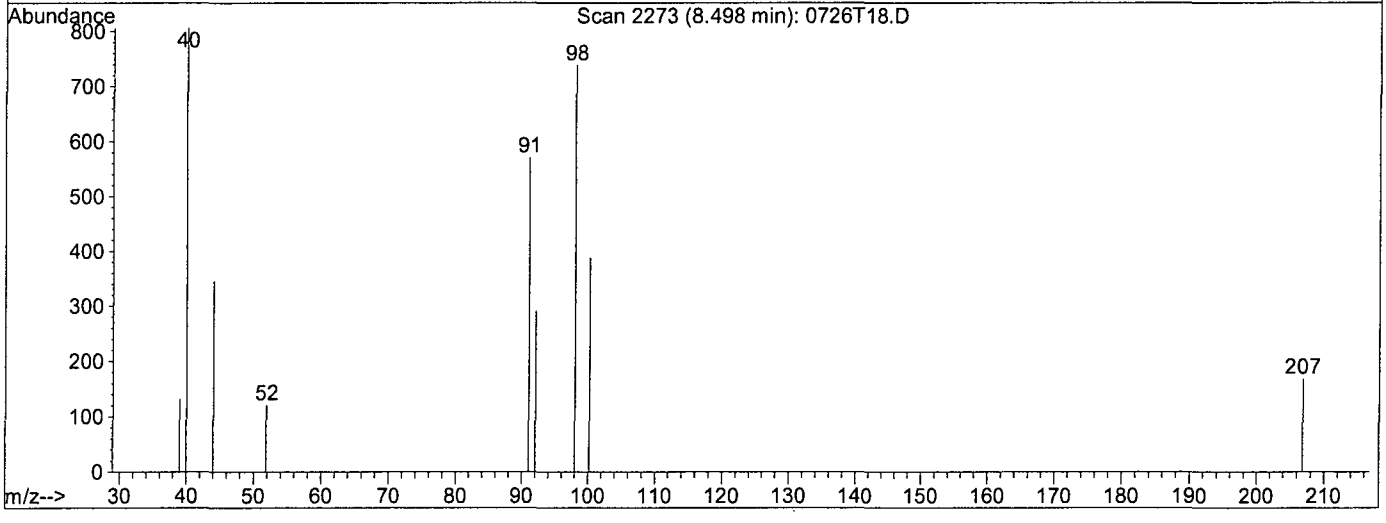


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T18.D Vial: 43
Acq On : 26 Jul 12 17:14 Operator: DG,RS,HW,ARS,SV
Sample : AY65166W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:39 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T18.D

(2) Gasoline (TMHB)

8.50min -54.6082ppb m

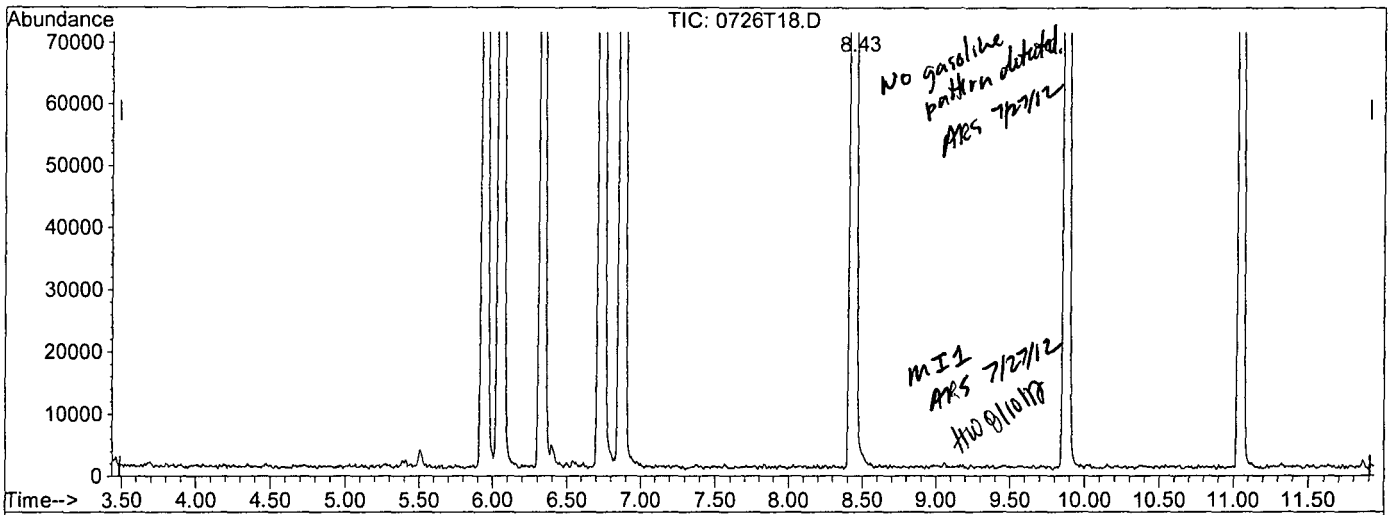
response 7926606

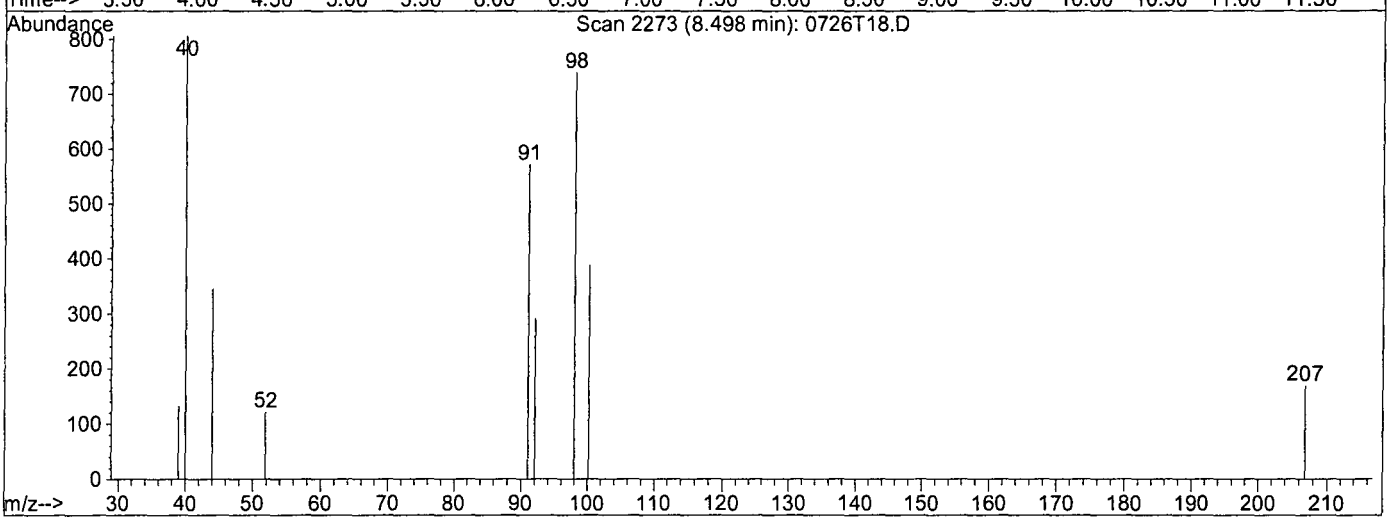
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.24#
0.00	0.00	3.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T18.D Vial: 43
Acq On : 26 Jul 12 17:14 Operator: DG,RS,HW,ARS,SV
Sample : AY65166W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:39 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T18.D

(2) Gasoline (TMHB)

8.43min 16.5436ppb m

response 10444534

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.94#
0.00	0.00	2.80#
0.00	0.00	0.00

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68268

Sample ID: ES084

APPL ID: AY65167

Sample Collection Date: 07/19/12

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	2-BUTANONE	1.0 J	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
EPA 8260B	ACETONE	2.3 J	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
EPA 8260B	BENZENE	1.3	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

J = Estimated value.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T20
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLs

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68268

Sample ID: ES084

APPL ID: AY65167

Sample Collection Date: 07/19/12

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	101	70-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.9	75-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	90.9	85-115			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.6	85-120			%	07/26/12	07/26/12

J = Estimated value.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T20
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T20.D Vial: 45
Acq On : 26 Jul 12 18:09 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 9:07 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	379712	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	308224	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	174144	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.94	111	172228	28.98489 ppb		0.00
Spiked Amount 31.881			Recovery = 90.916%			
36) 1,2-DCA-D4(S)	6.32	65	187901	34.02663 ppb		0.00
Spiked Amount 33.647			Recovery = 101.130%			
56) Toluene-D8(S)	8.43	98	677549	37.18322 ppb		0.00
Spiked Amount 37.345			Recovery = 99.566%			
64) 4-Bromofluorobenzene(S)	11.05	95	251520	29.18736 ppb		0.00
Spiked Amount 29.515			Recovery = 98.888%			
Target Compounds						Qvalue
11) Acetone	2.87	43	4341	2.27562 ppb	J	100 <Y2PQL
26) MEK (2-Butanone)	5.38	43	1287	1.00886 ppb	J	85 <Y2PQL
40) Benzene	6.39	78	22262	1.30627 ppb		98

ARS 7/27/12

(#) = qualifier out of range (m) = manual integration

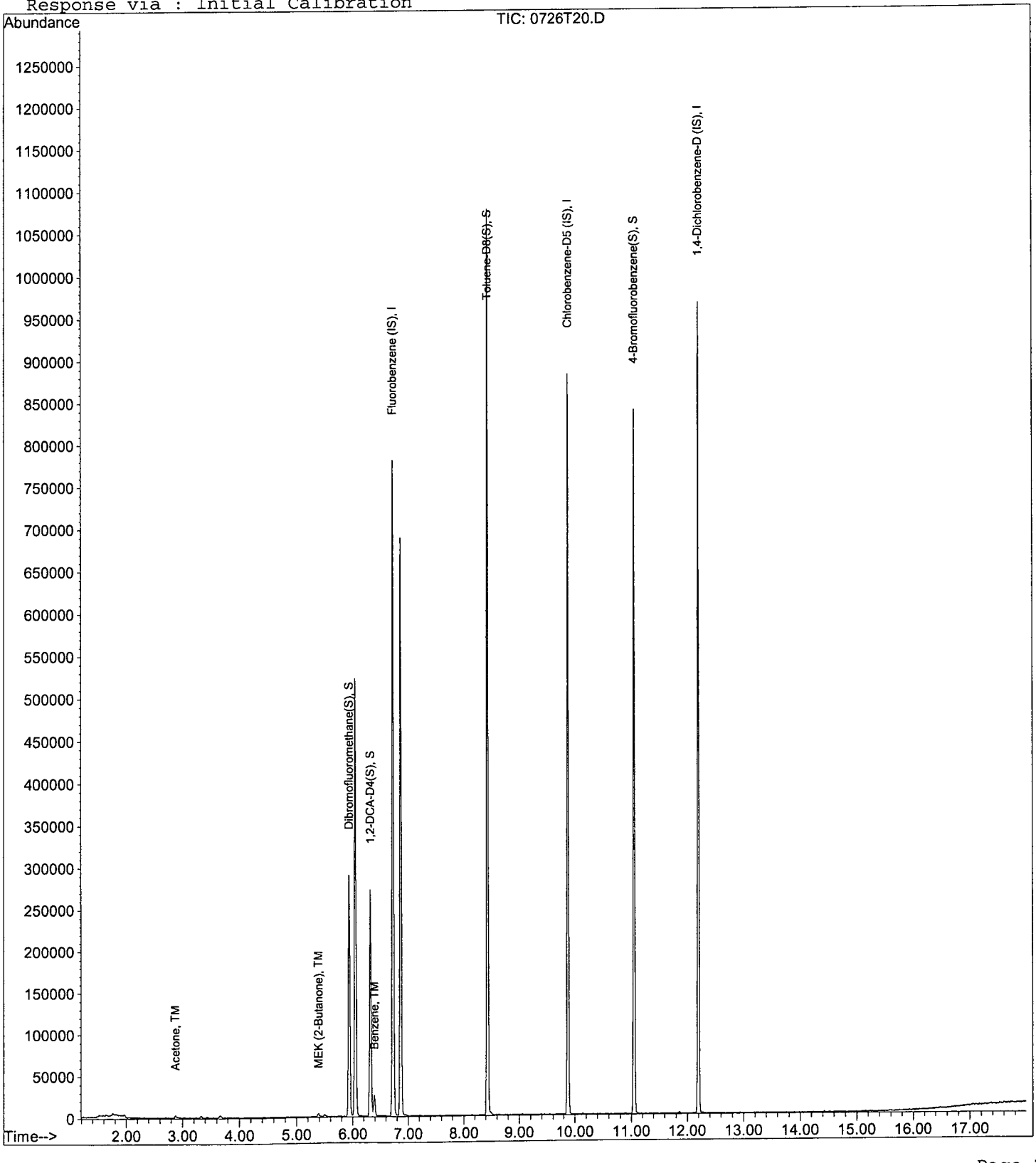
Quantitation Report

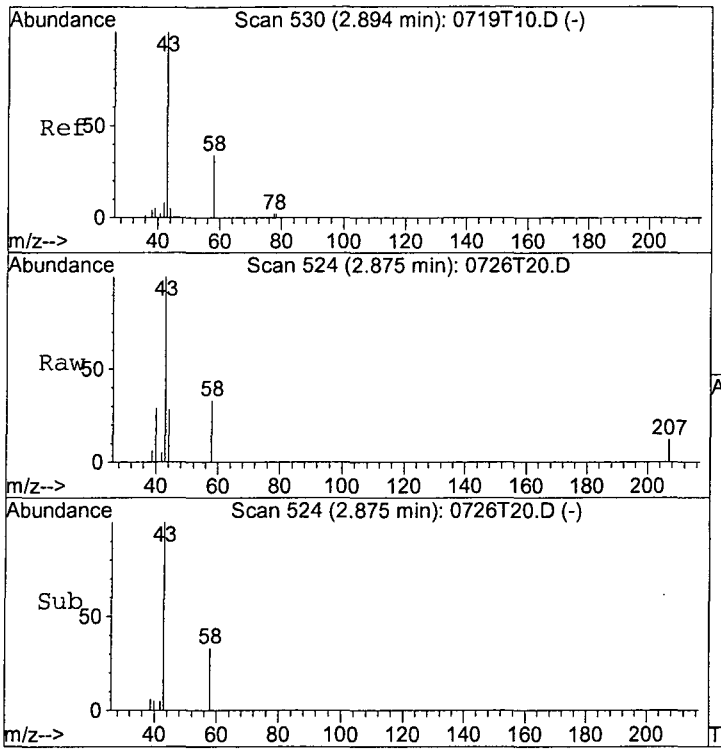
Data File : M:\THOR\DATA\T120725\0726T20.D
Acq On : 26 Jul 12 18:09
Sample : AY65167W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 45
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 9:07 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration

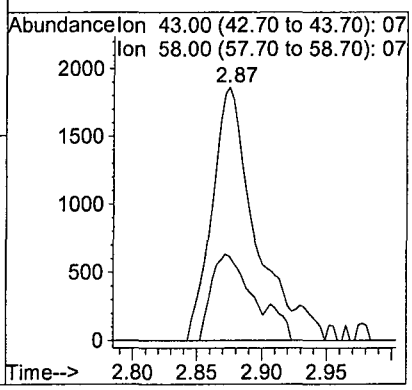


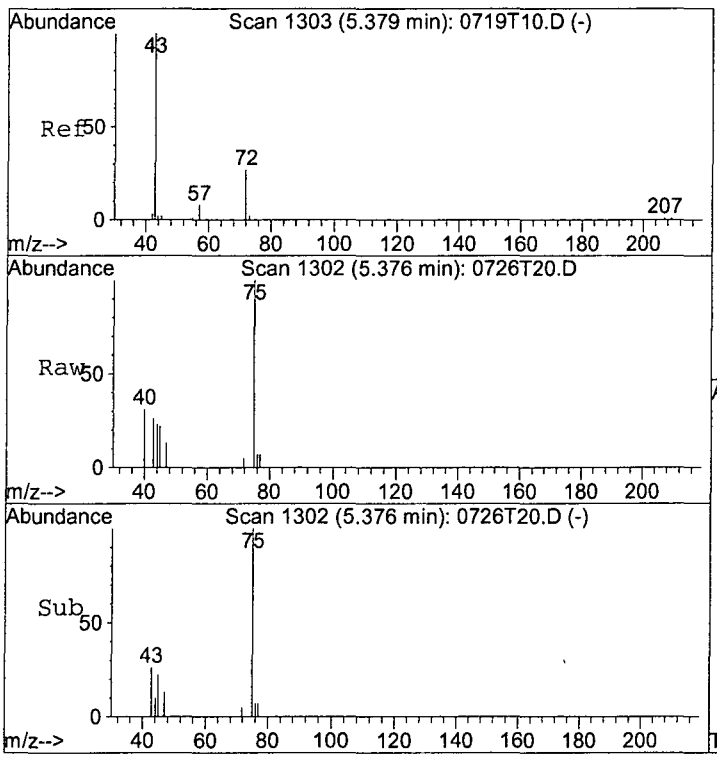


#11
Acetone
Concen: 2.27562 ppb
RT: 2.87 min Scan# 524
Delta R.T. -0.02 min
Lab File: 0726T20.D
Acq: 26 Jul 12 18:09

Tgt Ion: 43 Resp: 4341

Ion	Ratio	Lower	Upper
43	100		
58	33.2	23.4	43.4

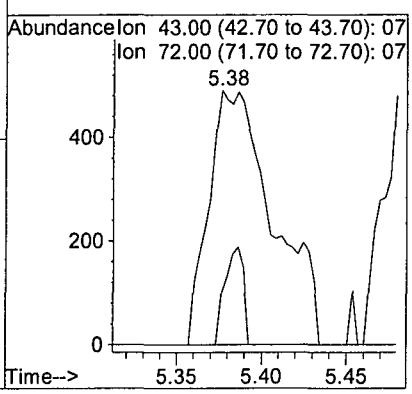


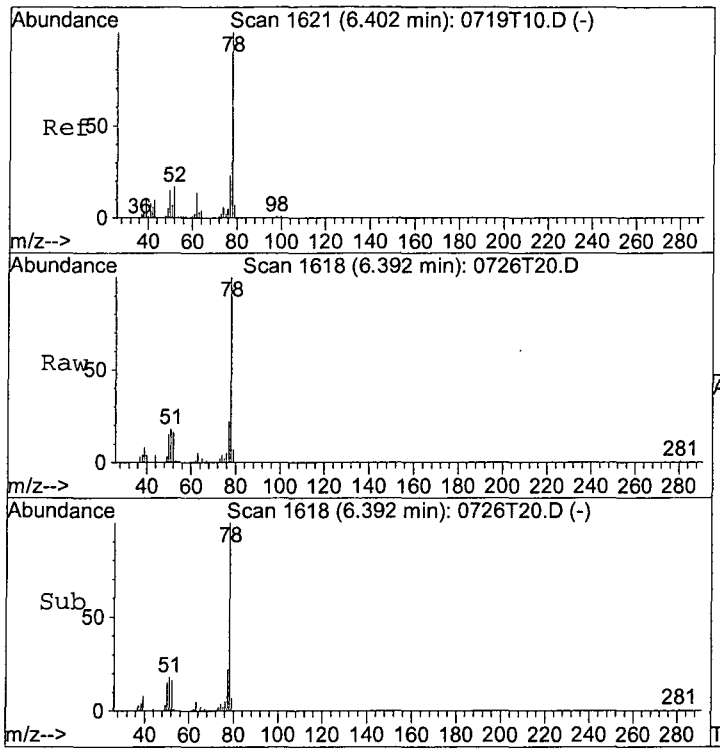


#26
MEK (2-Butanone)
Concen: 1.00886 ppb
RT: 5.38 min Scan# 1302
Delta R.T. -0.00 min
Lab File: 0726T20.D
Acq: 26 Jul 12 18:09

Tgt Ion: 43 Resp: 1287

Ion	Ratio	Lower	Upper
43	100		
72	20.6	19.9	36.9

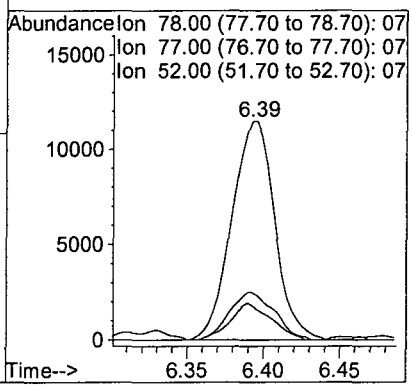




#40
Benzene
Concen: 1.30627 ppb
RT: 6.39 min Scan# 1618
Delta R.T. -0.01 min
Lab File: 0726T20.D
Acq: 26 Jul 12 18:09

Tgt Ion: 78 Resp: 22262

Ion	Ratio	Lower	Upper
78	100		
77	21.7	15.9	29.5
52	15.7	11.6	21.6



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T20.D Vial: 45
Acq On : 26 Jul 12 18:09 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 7:41 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	780142	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	881065	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	965055	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	9719283m	7.28995	ppb	ND 100

No gasoline pattern detected.
ARS 7/27/12

(#) = qualifier out of range (m) = manual integration
0726T20.D TGAS.M Fri Jul 27 07:41:35 2012 Page 1

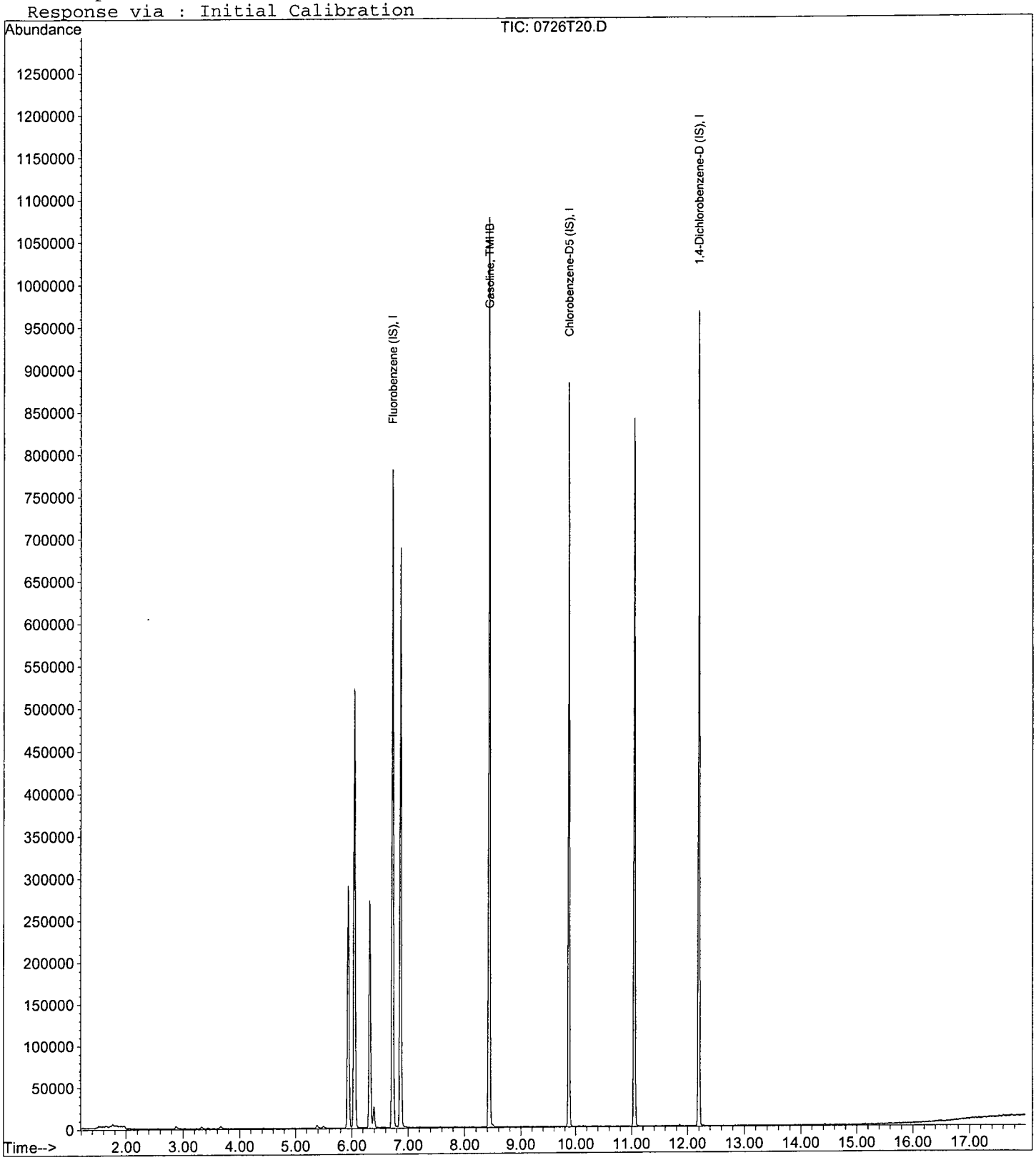
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T20.D
Acq On : 26 Jul 12 18:09
Sample : AY65167W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 45
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 7:41 2012 Quant Results File: TGAS.RES

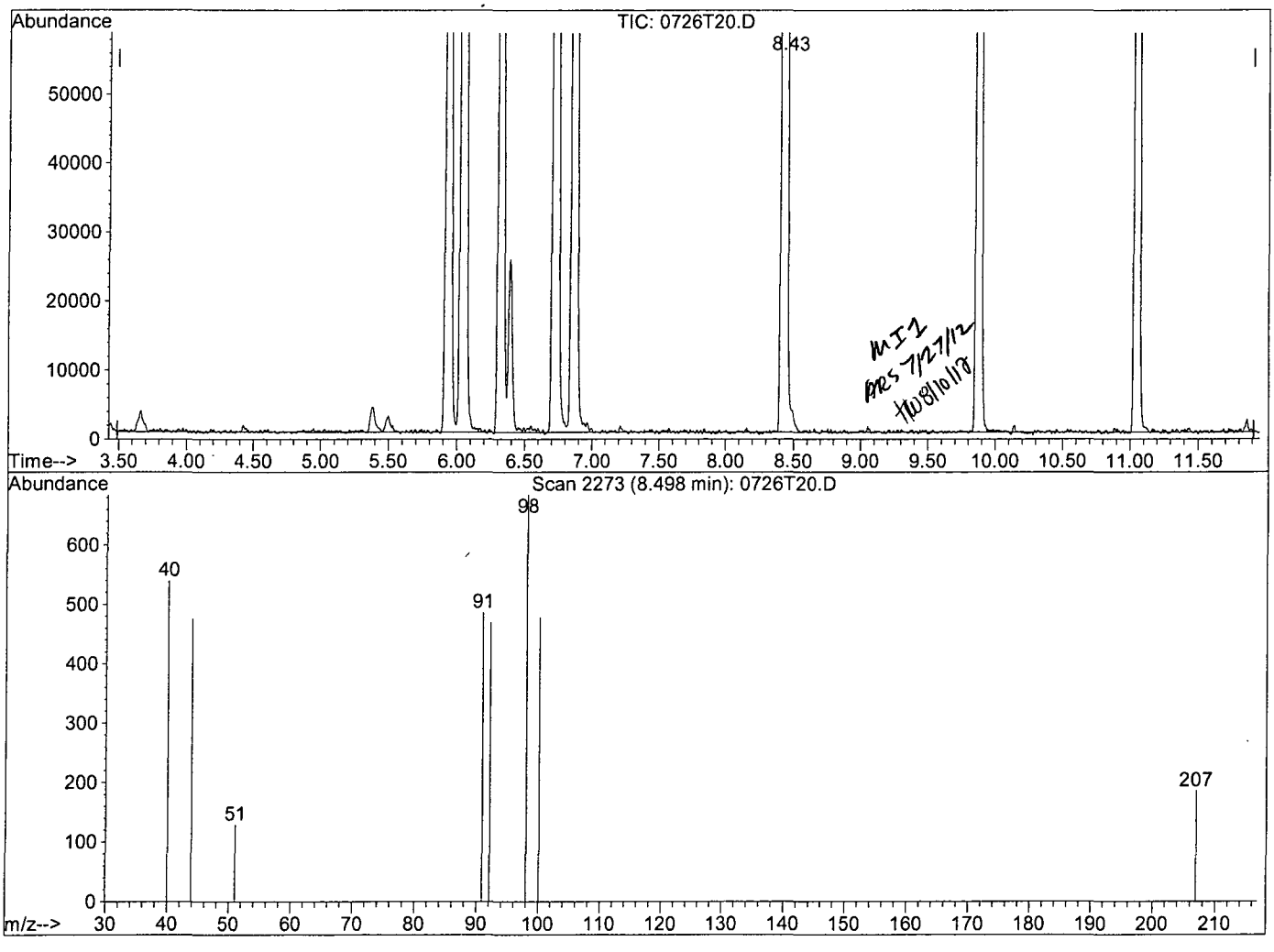
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T20.D Vial: 45
Acq On : 26 Jul 12 18:09 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:41 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration



TIC: 0726T20.D

(2) Gasoline (TMHB)

8.50min -58.8841ppb m

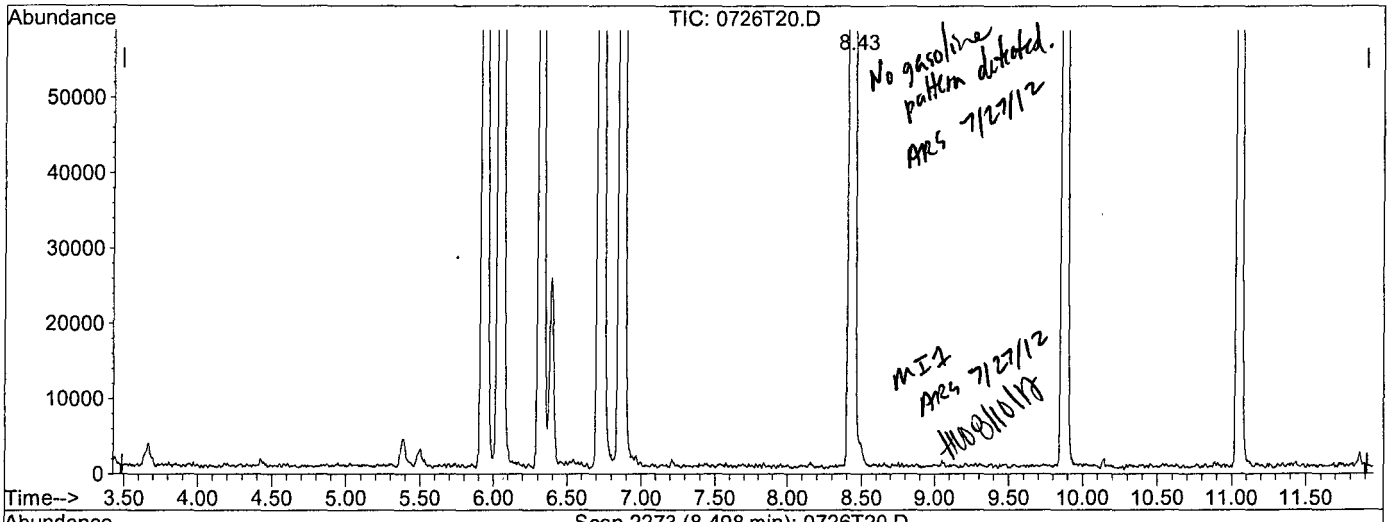
response 7469581

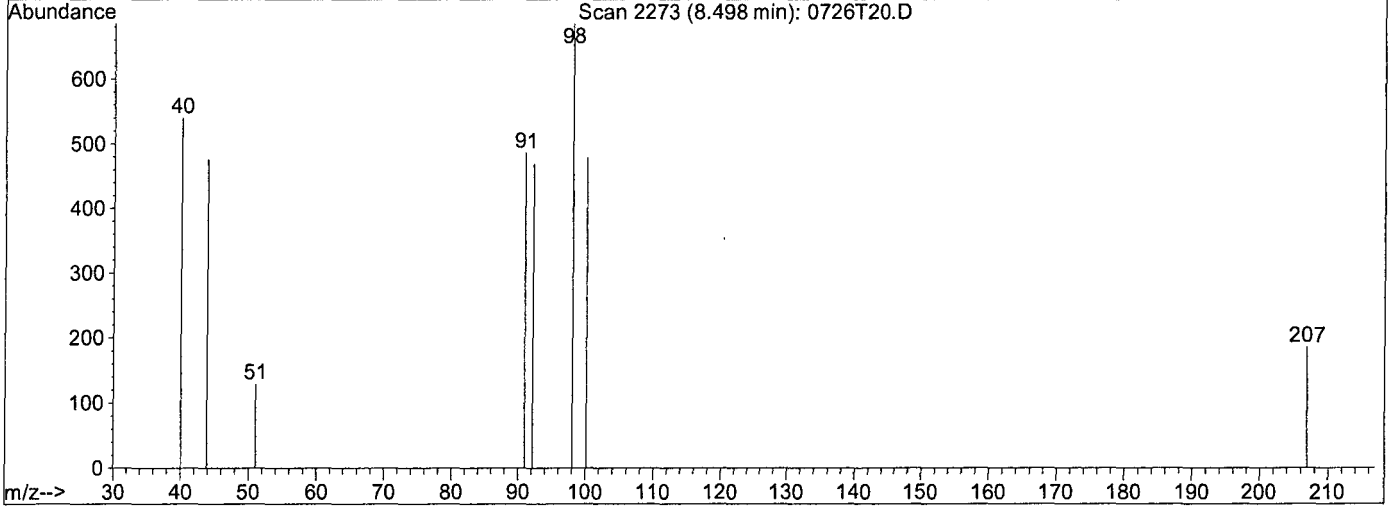
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.23#
0.00	0.00	3.64#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T20.D Vial: 45
Acq On : 26 Jul 12 18:09 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:41 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T20.D

(2) Gasoline (TMHB)

8.43min 7.2899ppb m

response 9719283

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.95#
0.00	0.00	2.80#
0.00	0.00	0.00

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

Sample ID: ES086 TRIP BLANK

Sample Collection Date: 07/19/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68268

APPL ID: AY65168

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T12
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM

APPL-F1-SC-NoMC-REG MDLs

EPA 8260B VOCs + Gas Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68268

Sample ID: ES086 TRIP BLANK

APPL ID: AY65168

Sample Collection Date: 07/19/12

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	101	70-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.6	75-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	85-115			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	99.7	85-120			%	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T12
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 9:58:02 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T12.D Vial: 37
Acq On : 26 Jul 12 14:27 Operator: DG,RS,HW,ARS,SV
Sample : AY65168W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 8:56 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	96	393024	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	316800	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	179392	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.94	111	198118	32.21270 ppb	0.00
Spiked Amount 31.881			Recovery = 101.041%		
36) 1,2-DCA-D4(S)	6.33	65	194410	34.01290 ppb	0.00
Spiked Amount 33.647			Recovery = 101.089%		
56) Toluene-D8(S)	8.43	98	697404	37.23677 ppb	0.00
Spiked Amount 37.345			Recovery = 99.711%		
64) 4-Bromofluorobenzene(S)	11.05	95	257881	29.11541 ppb	0.00
Spiked Amount 29.515			Recovery = 98.644%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

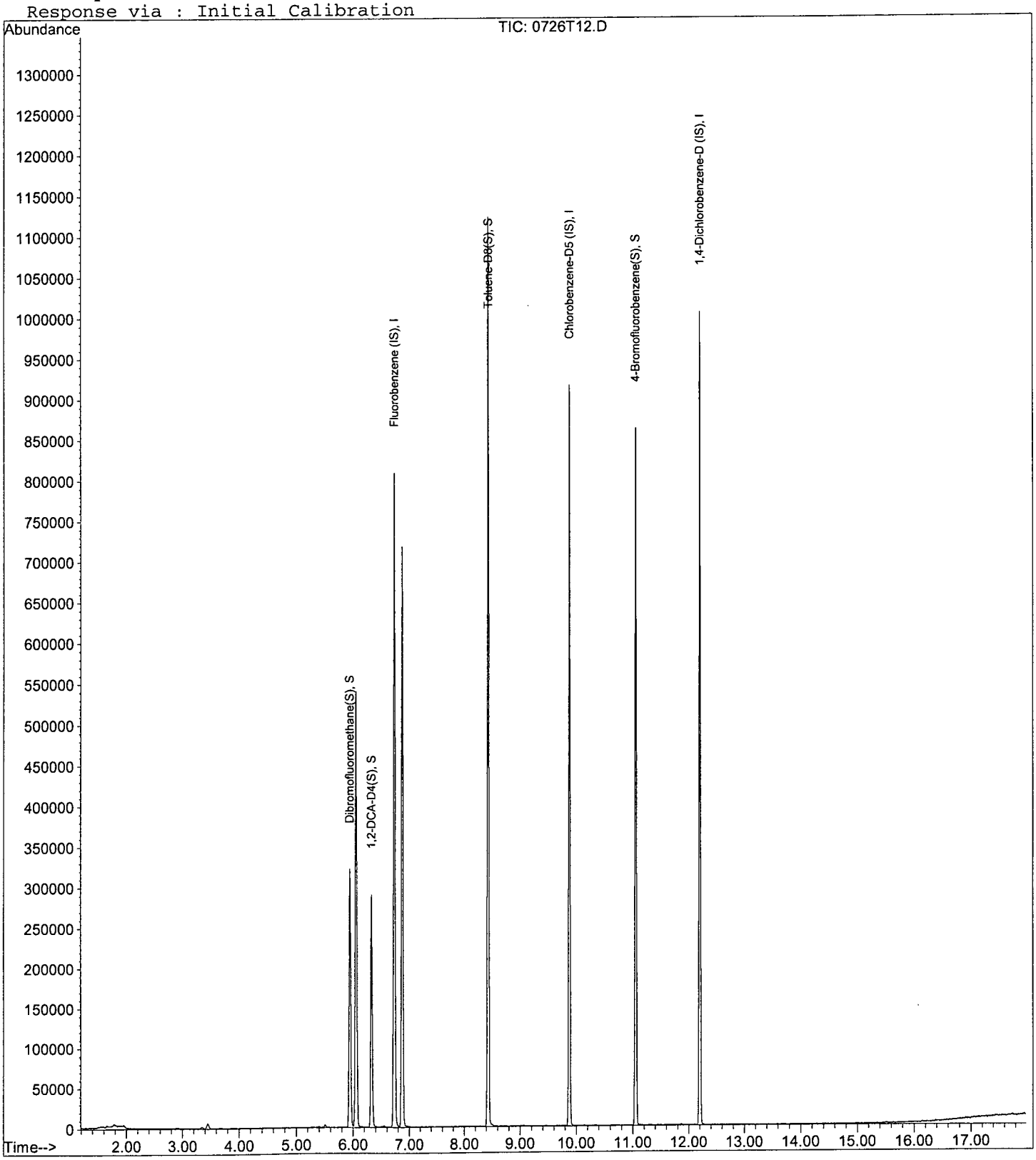
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T12.D
Acq On : 26 Jul 12 14:27
Sample : AY65168W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 37
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 8:56 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T12.D Vial: 37
Acq On : 26 Jul 12 14:27 Operator: DG,RS,HW,ARS,SV
Sample : AY65168W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 15:17 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	808117	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	915058	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1004713	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	9917322m	3.01677	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

(#) = qualifier out of range (m) = manual integration
0726T12.D TGAS.M Thu Jul 26 15:17:26 2012 Page 1

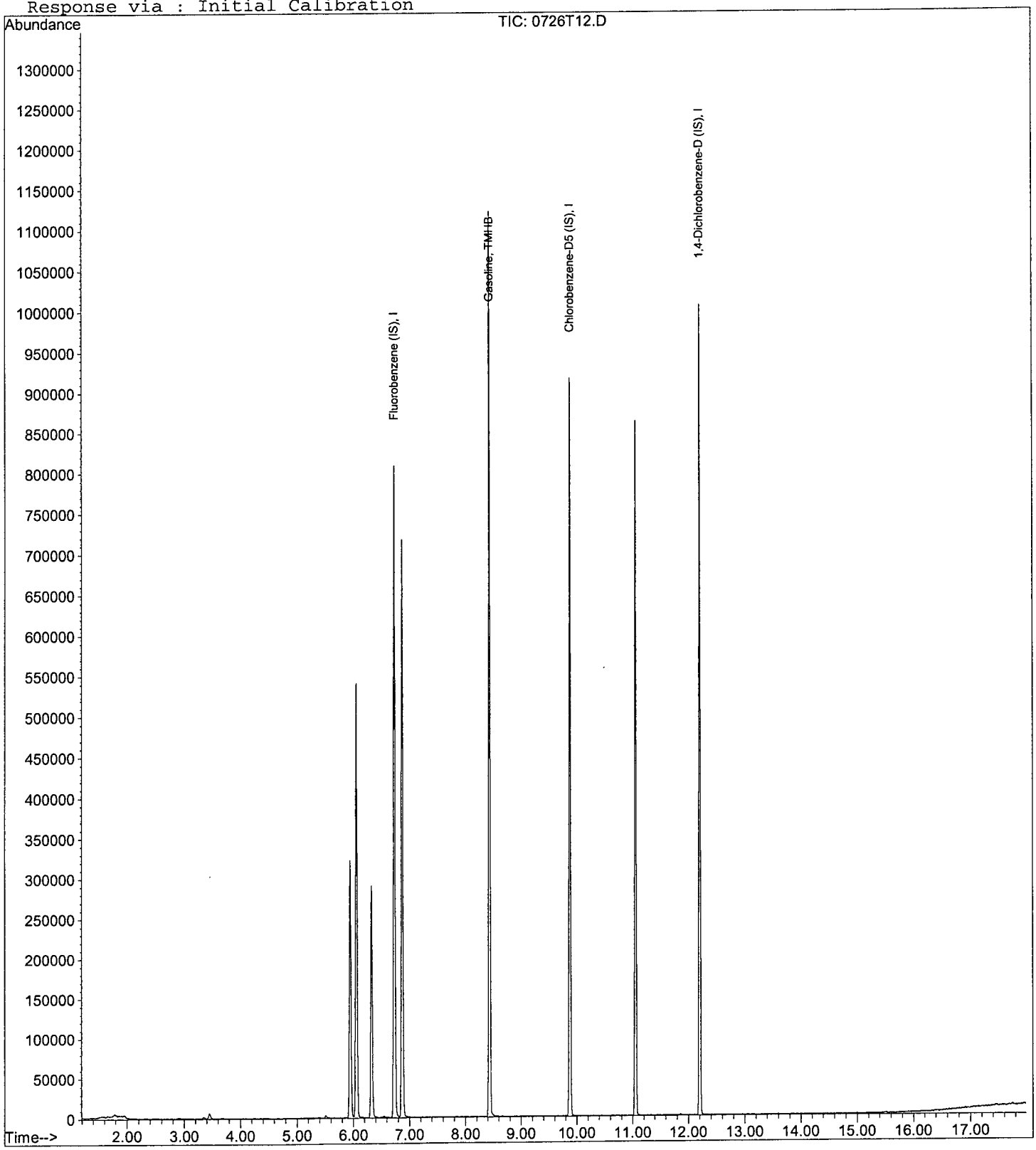
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T12.D
Acq On : 26 Jul 12 14:27
Sample : AY65168W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 37
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 15:17 2012 Quant Results File: TGAS.RES

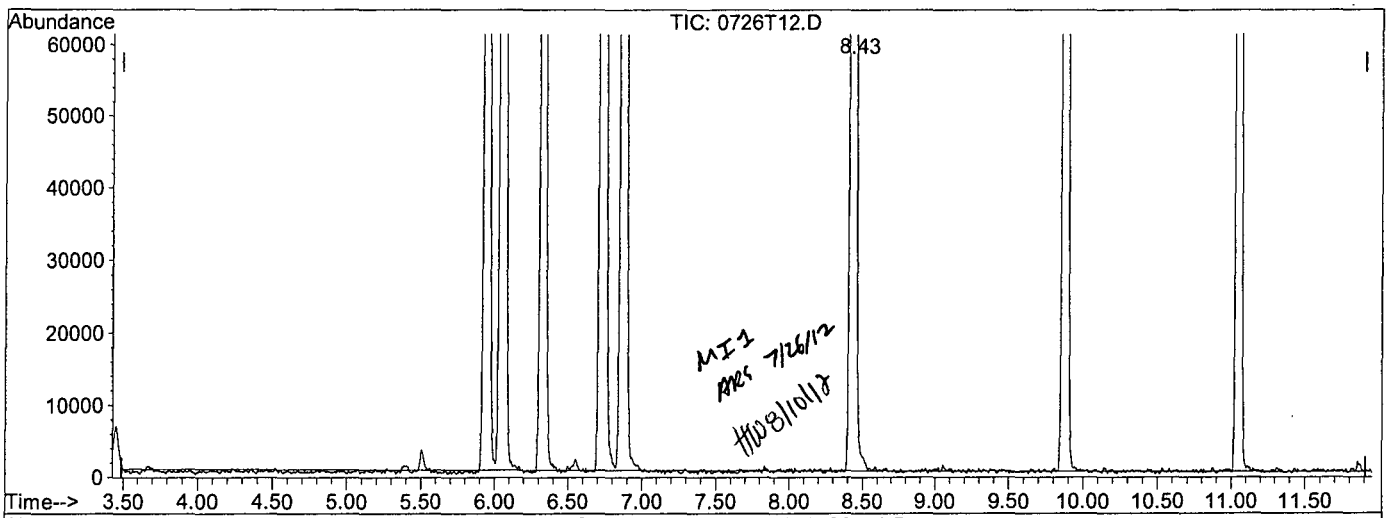
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

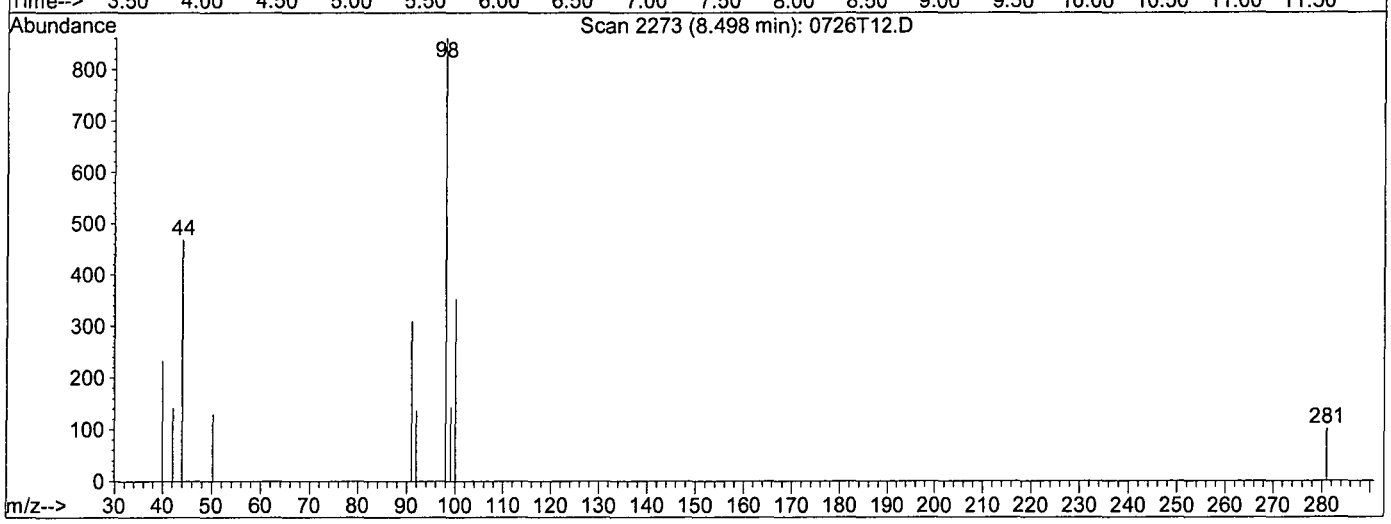


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T12.D Vial: 37
Acq On : 26 Jul 12 14:27 Operator: DG,RS,HW,ARS,SV
Sample : AY65168W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 15:16 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T12.D

(2) Gasoline (TMHB)

8.50min -59.1475ppb m

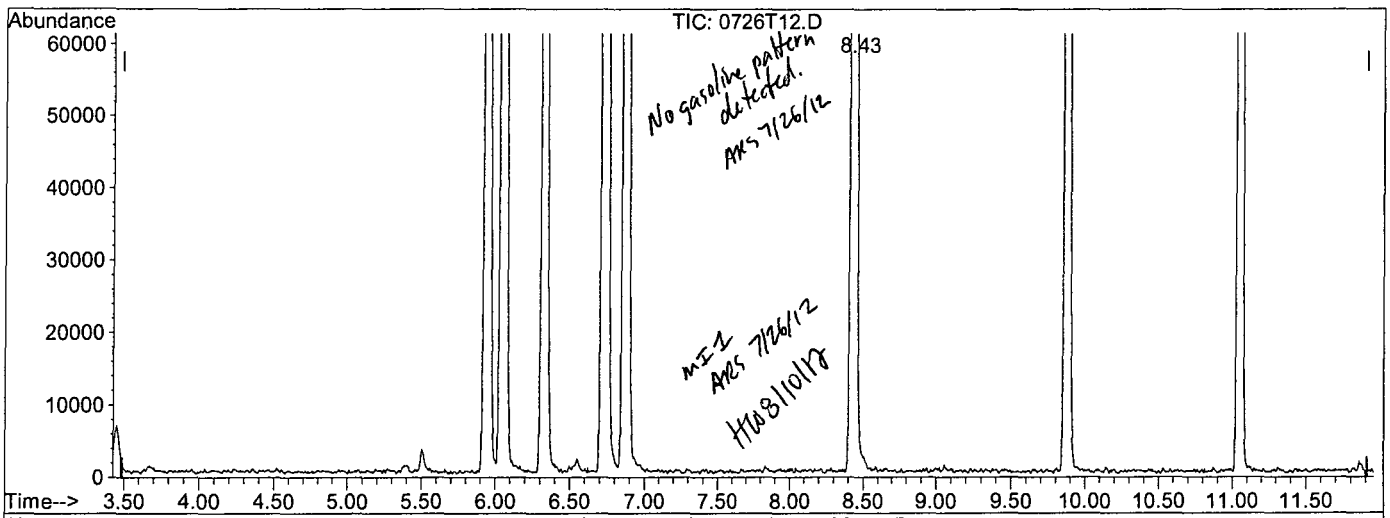
response 7728158

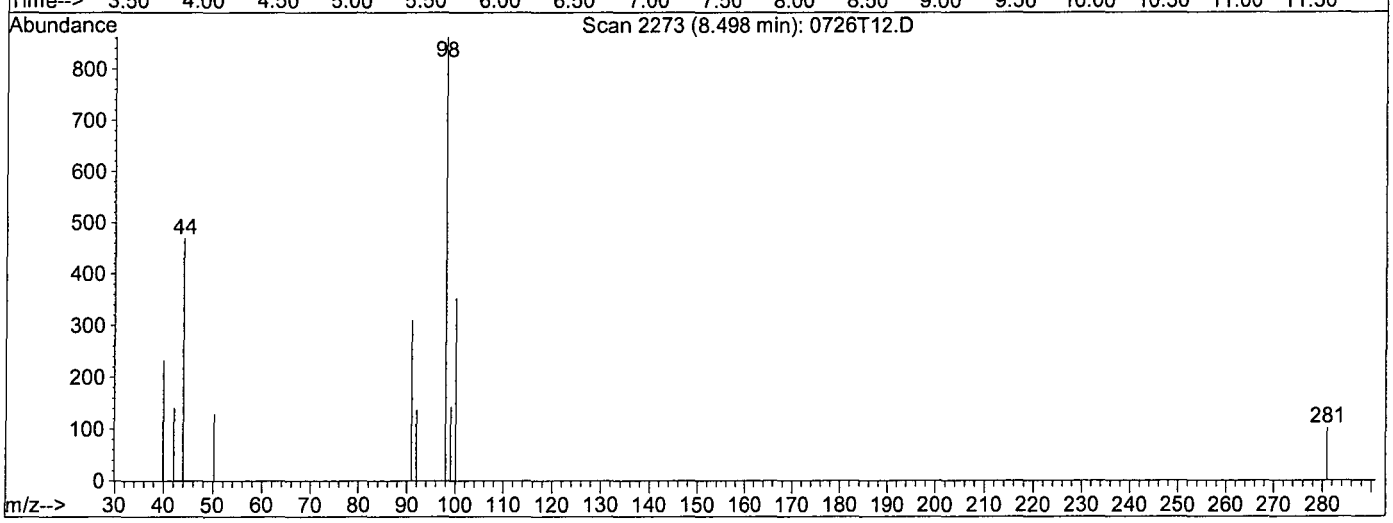
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.27#
0.00	0.00	3.68#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T12.D Vial: 37
Acq On : 26 Jul 12 14:27 Operator: DG,RS,HW,ARS,SV
Sample : AY65168W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 15:17 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T12.D

(2) Gasoline (TMHB)

8.43min 3.0168ppb m

response 9917322

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.99#
0.00	0.00	2.87#
0.00	0.00	0.00

EPA METHOD 8260B
Volatile Organic Compounds
Calibration Data

APPL, INC.

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68268
Case No: Initial Cal. Date: 07/19/12
Matrix: Water Instrument: Thor (TALLW.M) Initials:

		Compound	0719T05.D 0.3	0719T06.D 0.5	0719T07.D 1	0719T08.D 2	0719T09.D 5	0719T10.D 10	0719T11.D 20	0719T12.D 40	0719T13.D 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		NT
11	TML	Acetone	0.3965	0.2944	0.1679	0.1468	0.1007	0.0866	0.0926	0.0801	0.0821		0.16	70	TML	0.999	
12	TM	Freon-113	0.1778	0.1747	0.1931	0.2265	0.2246	0.2168	0.2084	0.2210	0.2060		0.21	9.5	TM		
13	TM*	1,1-DCE	0.3007	0.2729	0.2644	0.2720	0.2744	0.2696	0.2660	0.2835	0.2775		0.28	4.0	TM*		
14	TM	t-Butanol		0.0075	0.0074	0.0072	0.0076	0.0077	0.0092	0.0102			0.01	14	TM		
15	TML	Methyl Acetate	0.8726	0.6035	0.5101	0.4714	0.2802	0.2330	0.2248	0.2202	0.2132		0.40	57	TML	1.000	
16	TM	Iodomethane	0.2492	0.2575	0.2660	0.2419	0.2622	0.2432	0.2408	0.2414	0.2418		0.25	4.0	TM		
17	TM	Acrylonitrile	0.0874	0.0549	0.0692	0.0728	0.0933	0.0806	0.0840	0.0846	0.0838		0.08	15	TM		
18	TML	Methylene chloride	0.3676	0.2647	0.1440	0.1292	0.1165	0.0964	0.0956	0.0949	0.0918		0.16	62	TML	1.000	
19	TML	Carbon disulfide	0.0466	0.0453	0.0322	0.0318	0.0301	0.0270	0.0292	0.0278	0.0258		0.03	23	TML	0.999	
20	TM	Methyl t-butyl ether (MtBE)	0.6119	0.5783	0.5229	0.5275	0.5662	0.5222	0.5070	0.4911	0.4631		0.53	8.6	TM		
21	TM	Trans-1,2-DCE	0.2297	0.2354	0.1695	0.1842	0.1947	0.1734	0.1779	0.1766	0.1709		0.19	13	TM		
22	TM	Diisopropyl Ether	0.1003	0.1361	0.1126	0.1164	0.1317	0.1212	0.1179	0.1198	0.1168		0.12	8.7	TM		
23	TM**	1,1-DCA	0.5526	0.4780	0.4682	0.4954	0.5506	0.5086	0.4958	0.5067	0.4843		0.50	5.9	TM**		
24	TM	Vinyl Acetate	0.2861	0.3189	0.2551	0.2716	0.3128	0.2787	0.2776	0.2848	0.2788		0.28	6.9	TM		
25	TM	Ethyl tert Butyl Ether	0.7356	0.6599	0.6680	0.6558	0.7593	0.6522	0.6460	0.6381	0.5738		0.67	8.2	TM		
26	TML	MEK (2-Butanone)	0.2041	0.1795	0.1594	0.1391	0.1113	0.1135	0.1203	0.1216	0.1272		0.14	23	TML	1.000	
27	TM	Cis-1,2-DCE	0.3407	0.3327	0.3111	0.3113	0.3441	0.3184	0.3199	0.3183	0.3119		0.32	4.0	TM		
28	TM	2,2-Dichloropropane		0.2047	0.2143	0.2086	0.2158	0.2037	0.1976	0.1966	0.1845		0.20	5.0	TM		
29	TM*	Chloroform	0.7181	0.6349	0.6028	0.6230	0.6647	0.6037	0.5996	0.6037	0.5876		0.63	6.6	TM*		
30	TM	Bromochloromethane	0.1510	0.1457	0.1513	0.1633	0.1810	0.1595	0.1543	0.1538	0.1561		0.16	6.5	TM		
31	S	Dibromofluoromethane(S)	0.5051	0.3961	0.3766	0.3856	0.3635	0.3650	0.3693	0.3784	0.3815		0.39	11	S		
32	TM	1,1,1-TCA	0.4433	0.4047	0.3367	0.3737	0.3876	0.3695	0.3618	0.3671	0.3480		0.38	8.5	TM		
33	TM	Cyclohexane	0.1075	0.0984	0.0973	0.1087	0.1023	0.1026	0.0982	0.1080	0.0976		0.10	4.6	TM		
34	TM	1,1-Dichloropropene	0.2952	0.2623	0.2578	0.2666	0.2963	0.2712	0.2714	0.2756	0.2672		0.27	4.9	TM		
35	TM	2,2,4-Trimethylpentane	0.4193	0.3897	0.3643	0.3992	0.4174	0.3920	0.3860	0.4075	0.3655		0.39	5.1	TM		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68768
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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)														

AMS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68268
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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																
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101																
102																
103																
104																
105																

ARS 7/27/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T05.D Vial: 5
Acq On : 19 Jul 12 11:01 Operator: DG,RS,HW,ARS,SV
Sample : 0.3ug/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)	6.74	96	427072	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	343424	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	202048	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	5177	0.77464 ppb		0.00
Spiked Amount 29.744			Recovery =	2.606%		
36) 1,2-DCA-D4(S)	6.33	65	4744	0.76381 ppb		0.00
Spiked Amount 29.083			Recovery =	2.627%		
56) Toluene-D8(S)	8.43	98	16030	0.78954 ppb		0.00
Spiked Amount 30.231			Recovery =	2.613%		
64) 4-Bromofluorobenzene(S)	11.05	95	7369	0.76748 ppb		0.00
Spiked Amount 28.321			Recovery =	2.708%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	615	0.27612 ppb		95
3) Freon 114	1.42	85	725	-0.13478 ppb	#	68
4) Chloromethane	1.45	50	2617	0.40957 ppb		87
5) Vinyl chloride	1.56	62	2565	0.30389 ppb		92
6) Bromomethane	1.87	94	2507	0.46469 ppb		98
7) Chloroethane	1.98	64	1408	0.28963 ppb		99
9) Trichlorofluoromethane	2.24	101	407	0.23329 ppb		93
11) Acetone	2.91	43	2032	0.21001 ppb	#	82
12) Freon-113	2.85	101	911	0.25960 ppb	#	62
13) 1,1-DCE	2.82	61	1541	0.32723 ppb	#	78
14) t-Butanol	3.69	59	2213	15.97947 ppb		92
15) Methyl Acetate	3.35	43	4472	-0.20827 ppb	#	84
16) Iodomethane	2.99	142	1277	0.29980 ppb	#	77
17) Acrylonitrile	3.84	52	448	0.33215 ppb	#	42
18) Methylene chloride	3.45	84	1884	0.26546 ppb		79
19) Carbon disulfide	3.07	76	239	-0.34303 ppb	#	65
20) Methyl t-butyl ether (MtBE	3.91	73	3136	0.34491 ppb	#	79
21) Trans-1,2-DCE	3.87	96	1177	0.36216 ppb	#	64
22) Diisopropyl Ether	4.71	59	514	0.25243 ppb	#	40
23) 1,1-DCA	4.51	63	2832	0.32862 ppb	#	79
24) Vinyl Acetate	4.71	87	1466	0.30118 ppb		75
25) Ethyl tert Butyl Ether	5.21	59	3770	0.33165 ppb		100
26) MEK (2-Butanone)	5.40	43	1046	0.82334 ppb		91
27) Cis-1,2-DCE	5.32	96	1746	0.31627 ppb		76
28) 2,2-Dichloropropane	5.32	77	1192	0.74979 ppb		93
29) Chloroform	5.76	83	3680	0.34387 ppb		87
30) Bromochloromethane	5.63	128	774	0.28796 ppb		75
32) 1,1,1-TCA	5.96	97	2272	0.35284 ppb		87
33) Cyclohexane	6.03	41	551	0.31531 ppb	#	6
34) 1,1-Dichloropropene	6.16	75	1513	0.32355 ppb	#	82
35) 2,2,4-Trimethylpentane	6.55	57	2149	0.31975 ppb		81
37) Carbon Tetrachloride	6.16	117	1836	0.30422 ppb		83
38) Tert Amyl Methyl Ether	6.59	73	4153	0.34325 ppb	#	92
39) 1,2-DCA	6.42	62	2269	0.32331 ppb	#	74
40) Benzene	6.40	78	6818	0.35570 ppb		94
41) TCE	7.14	95	1650	0.31670 ppb		90
42) 2-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

Data File : M:\THOR\DATA\T120719\0719T05.D Vial: 5
Acq On : 19 Jul 12 11:01 Operator: DG,RS,HW,ARS,SV
Sample : 0.3ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
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

(#) = qualifier out of range (m) = manual integration

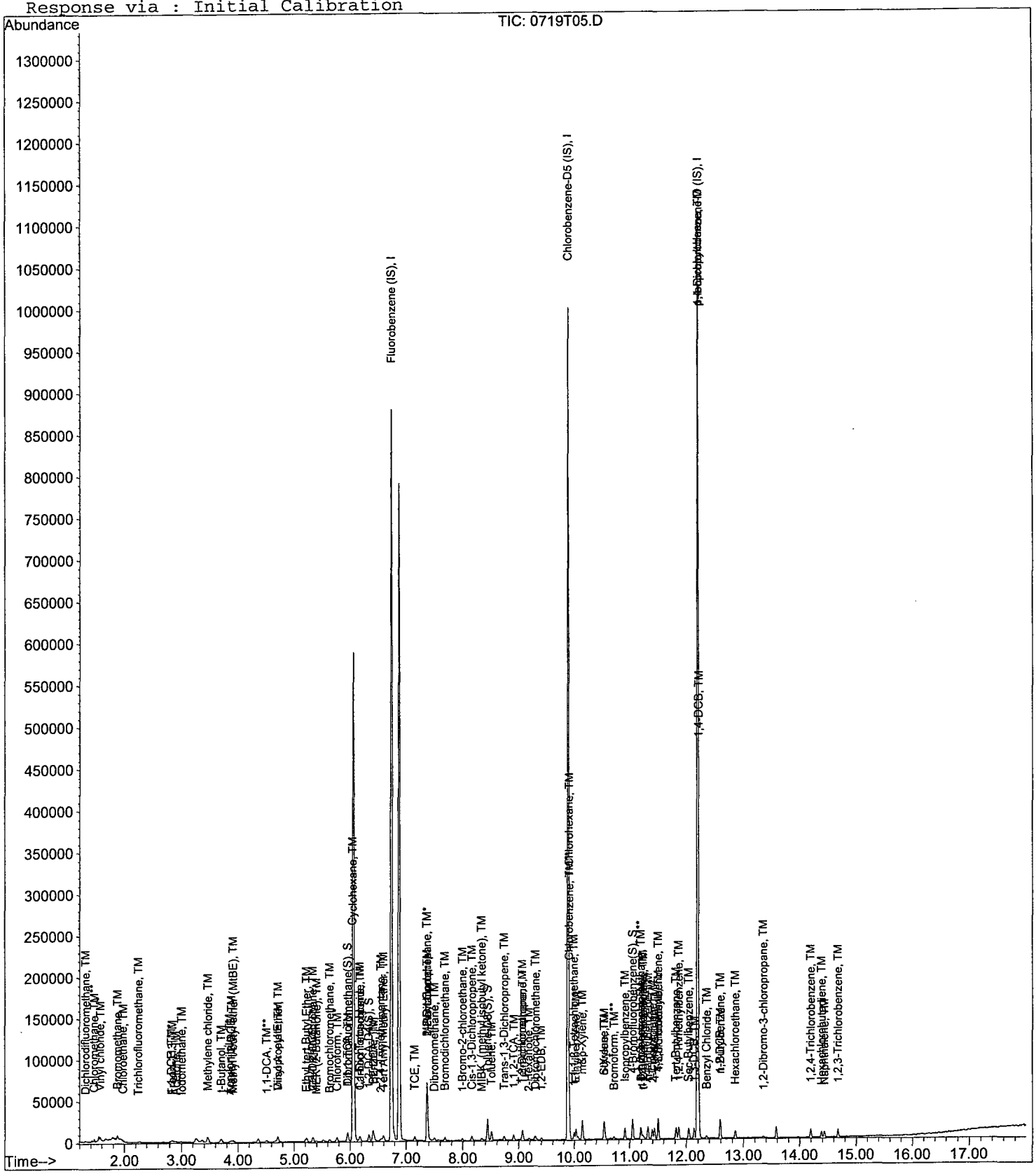
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T05.D
Acq On : 19 Jul 12 11:01
Sample : 0.3ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 5
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T06.D Vial: 6
Acq On : 19 Jul 12 11:29 Operator: DG,RS,HW,ARS,SV
Sample : 0.5ug/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	440576	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	363776	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	205952	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	6980	1.01241 ppb		0.00
Spiked Amount 29.744			Recovery =	3.402%		
36) 1,2-DCA-D4(S)	6.33	65	7179	1.12044 ppb		0.00
Spiked Amount 29.083			Recovery =	3.851%		
56) Toluene-D8(S)	8.43	98	22596	1.05068 ppb		0.00
Spiked Amount 30.231			Recovery =	3.477%		
64) 4-Bromofluorobenzene(S)	11.05	95	10075	0.99060 ppb		0.00
Spiked Amount 28.321			Recovery =	3.499%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	1093	0.47570 ppb		85
3) Freon 114	1.42	85	922	-0.07628 ppb		90
4) Chloromethane	1.45	50	4079	0.61881 ppb		92
5) Vinyl chloride	1.56	62	4275	0.49095 ppb		97
6) Bromomethane	1.87	94	3318	0.59617 ppb		96
7) Chloroethane	1.98	64	2744	0.54714 ppb		97
8) Dichlorofluoromethane	2.18	67	178	0.48209 ppb	#	41
9) Trichlorofluoromethane	2.24	101	742	0.41227 ppb		86
11) Acetone	2.90	43	2594	0.55965 ppb		96
12) Freon-113	2.86	101	1539	0.42512 ppb	#	88
13) 1,1-DCE	2.82	61	2405	0.49505 ppb		96
14) t-Butanol	3.69	59	3316	23.21003 ppb		95
16) Iodomethane	2.98	142	2269	0.51637 ppb	#	76
17) Acrylonitrile	3.82	52	484	0.34784 ppb	#	38
18) Methylene chloride	3.46	84	2332	0.50714 ppb		95
20) Methyl t-butyl ether (MtBE	3.91	73	5096	0.54331 ppb	#	93
21) Trans-1,2-DCE	3.86	96	2074	0.61860 ppb	#	74
22) Diisopropyl Ether	4.70	59	1199	0.57079 ppb	#	86
23) 1,1-DCA	4.51	63	4212	0.47377 ppb	#	92
24) Vinyl Acetate	4.70	87	2810	0.55961 ppb		62
25) Ethyl tert Butyl Ether	5.21	59	5815	0.49588 ppb		97
26) MEK (2-Butanone)	5.39	43	1582	1.04859 ppb	#	79
27) Cis-1,2-DCE	5.33	96	2932	0.51483 ppb		90
28) 2,2-Dichloropropane	5.32	77	1804	1.09997 ppb		93
29) Chloroform	5.76	83	5594	0.50670 ppb		93
30) Bromochloromethane	5.62	128	1284	0.46305 ppb		86
32) 1,1,1-TCA	5.96	97	3566	0.53682 ppb		84
33) Cyclohexane	6.03	41	867	0.48093 ppb	#	20
34) 1,1-Dichloropropene	6.16	75	2311	0.47905 ppb	#	87
35) 2,2,4-Trimethylpentane	6.55	57	3434	0.49528 ppb		94
37) Carbon Tetrachloride	6.17	117	3159	0.50739 ppb		79
38) Tert Amyl Methyl Ether	6.59	73	6331	0.50723 ppb	#	88
39) 1,2-DCA	6.42	62	3515	0.48550 ppb	#	91
40) Benzene	6.40	78	10831	0.54774 ppb		95
41) TCE	7.14	95	2816	0.52393 ppb		86
42) 2-Pentanone	7.36	43	96700	22.83691 ppb		100
43) 1,2-Dichloropropane	7.37	63	3334	0.51674 ppb	#	85
44) Bromodichloromethane	7.68	83	4425	0.49576 ppb	#	92
45) Methyl Cyclohexane	7.36	83	1985	0.51726 ppb		81
46) Dibromomethane	7.50	93	1649	0.46985 ppb		78
48) MIBK (methyl isobutyl ket	8.33	43	1720	0.56481 ppb	#	91

(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120719\0719T06.D Vial: 6
Acq On : 19 Jul 12 11:29 Operator: DG,RS,HW,ARS,SV
Sample : 0.5ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
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

(#) = qualifier out of range (m) = manual integration

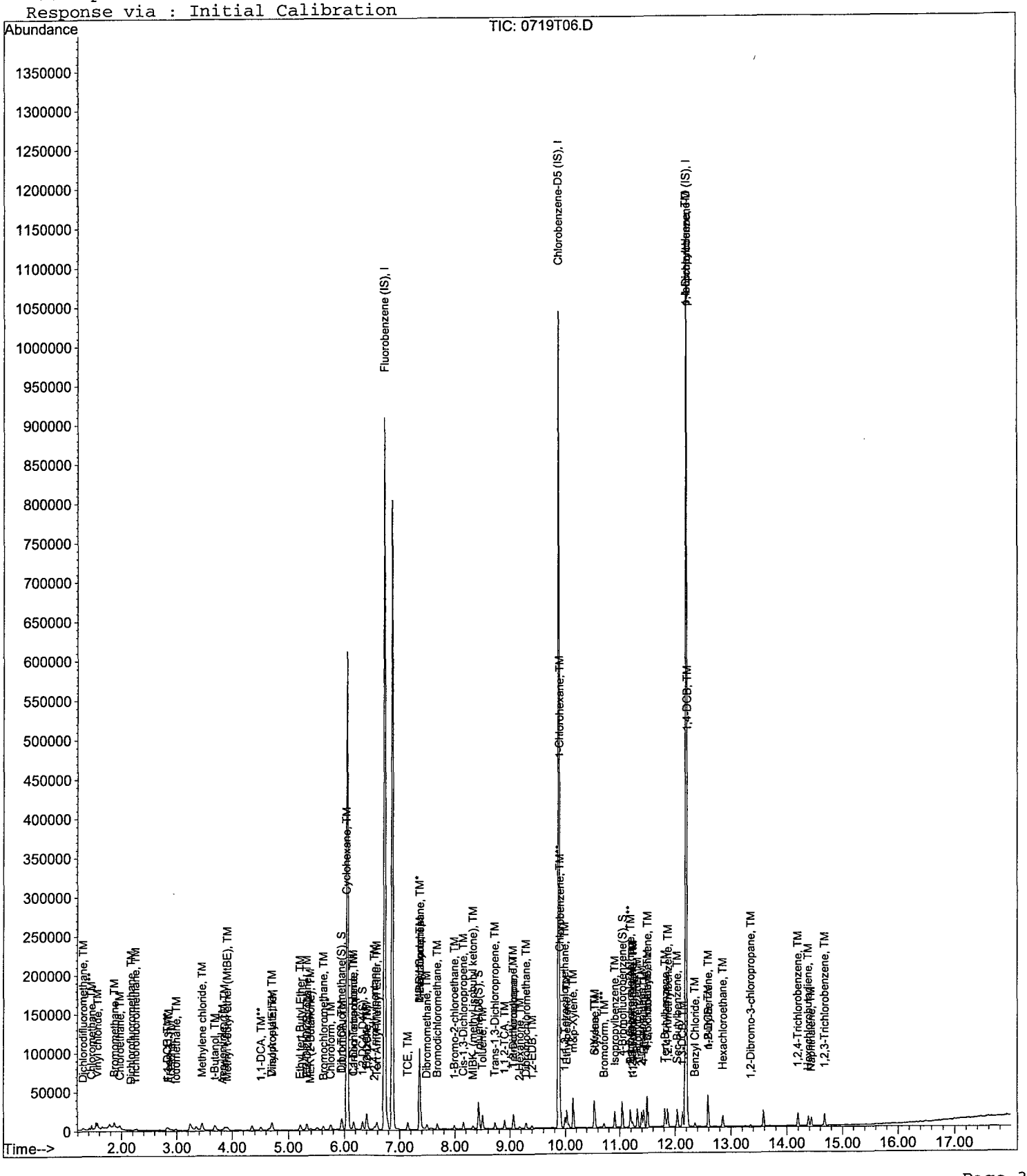
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T06.D
Acq On : 19 Jul 12 11:29
Sample : 0.5ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 6
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T07.D Vial: 7
Acq On : 19 Jul 12 11:57 Operator: DG,RS,HW,ARS,SV
Sample : 1.0ug/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)	6.74	96	442240	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	361536	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	203840	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	13324	1.92530 ppb		0.00
Spiked Amount 29.744			Recovery =	6.472%		
36) 1,2-DCA-D4(S)	6.33	65	12530	1.94822 ppb		0.00
Spiked Amount 29.083			Recovery =	6.698%		
56) Toluene-D8(S)	8.43	98	40197	1.88068 ppb		0.00
Spiked Amount 30.231			Recovery =	6.222%		
64) 4-Bromofluorobenzene(S)	11.05	95	19479	1.92710 ppb		0.00
Spiked Amount 28.321			Recovery =	6.804%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.31	85	2509	1.08786 ppb		90
3) Freon 114	1.42	85	2408	0.42008 ppb		95
4) Chloromethane	1.45	50	7357	1.11191 ppb		88
5) Vinyl chloride	1.56	62	8016	0.91712 ppb		91
6) Bromomethane	1.87	94	6361	1.13863 ppb		87
7) Chloroethane	1.98	64	5042	1.00157 ppb		95
8) Dichlorofluoromethane	2.18	67	223	0.65944 ppb	#	41
9) Trichlorofluoromethane	2.24	101	1709	0.94597 ppb		98
11) Acetone	2.90	43	2970	0.81592 ppb		89
12) Freon-113	2.86	101	3415	0.93978 ppb	#	73
13) 1,1-DCE	2.83	61	4677	0.95909 ppb		93
14) t-Butanol	3.69	59	6579	45.87583 ppb		98
15) Methyl Acetate	3.35	43	9023	0.97185 ppb		97
16) Iodomethane	2.98	142	4706	1.06694 ppb		95
17) Acrylonitrile	3.83	52	1224	0.87635 ppb	#	55
18) Methylene chloride	3.46	84	2548	0.63556 ppb		95
19) Carbon disulfide	3.07	76	570	0.36158 ppb	#	65
20) Methyl t-butyl ether (MtBE	3.91	73	9249	0.98236 ppb	#	88
21) Trans-1,2-DCE	3.87	96	2998	0.89083 ppb		94
22) Diisopropyl Ether	4.70	59	1992	0.94474 ppb		97
23) 1,1-DCA	4.51	63	8283	0.92818 ppb	#	90
24) Vinyl Acetate	4.70	87	4513	0.89537 ppb		98
25) Ethyl tert Butyl Ether	5.21	59	11816	1.00382 ppb		97
26) MEK (2-Butanone)	5.39	43	2819	1.59789 ppb		87
27) Cis-1,2-DCE	5.33	96	5504	0.96281 ppb		89
28) 2,2-Dichloropropane	5.32	77	3790	2.30222 ppb		89
29) Chloroform	5.76	83	10664	0.96229 ppb		98
30) Bromochloromethane	5.62	128	2677	0.96179 ppb		97
32) 1,1,1-TCA	5.96	97	5956	0.89324 ppb		87
33) Cyclohexane	6.03	41	1722	0.95160 ppb	#	36
34) 1,1-Dichloropropene	6.17	75	4561	0.94189 ppb		89
35) 2,2,4-Trimethylpentane	6.56	57	6445	0.92606 ppb		83
37) Carbon Tetrachloride	6.16	117	5937	0.95000 ppb		98
38) Tert Amyl Methyl Ether	6.59	73	12173	0.97161 ppb	#	90
39) 1,2-DCA	6.42	62	7205	0.99143 ppb		93
40) Benzene	6.40	78	18340	0.92399 ppb		97
41) TCE	7.15	95	5307	0.98367 ppb		92
42) 2-Pentanone	7.36	43	207854	48.90262 ppb		98
43) 1,2-Dichloropropane	7.37	63	6147	0.94914 ppb		99
44) Bromodichloromethane	7.68	83	8505	0.94929 ppb		94
45) Methyl Cyclohexane	7.36	83	3516	0.91277 ppb	#	49

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T07.D Vial: 7
Acq On : 19 Jul 12 11:57 Operator: DG,RS,HW,ARS,SV
Sample : 1.0ug/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

	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

(#) = qualifier out of range (m) = manual integration

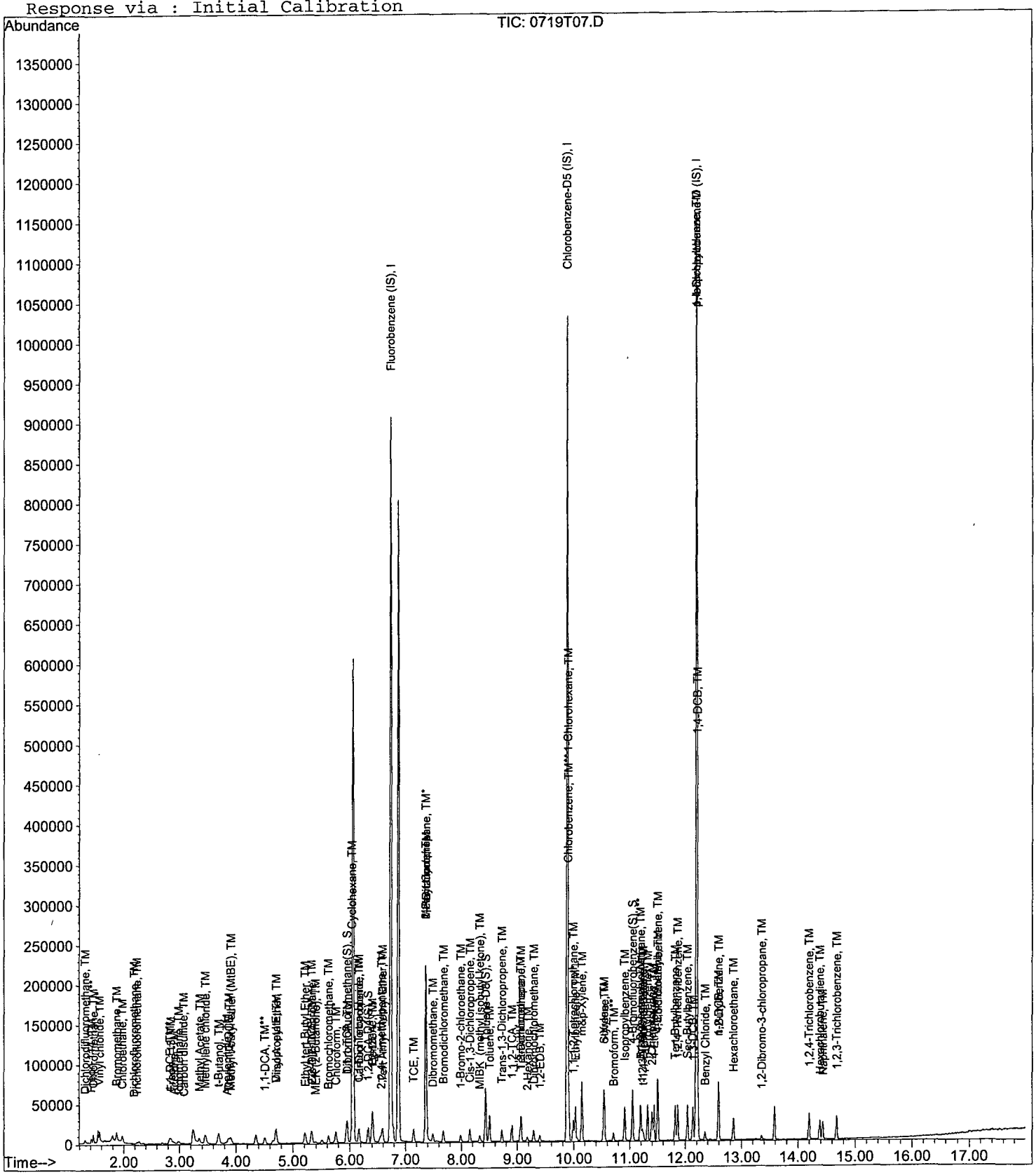
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T07.D
Acq On : 19 Jul 12 11:57
Sample : 1.0ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 7
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

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						
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						Qvalue
2) Dichlorodifluoromethane	1.30	85	4734	2.08028 ppb		100
3) Freon 114	1.41	85	6187	1.71327 ppb		100
4) Chloromethane	1.45	50	13155	2.01503 ppb		94
5) Vinyl chloride	1.56	62	17805	2.06457 ppb		100
6) Bromomethane	1.87	94	11262	2.04311 ppb		88
7) Chloroethane	1.97	64	9122	1.83649 ppb		94
8) Dichlorofluoromethane	2.18	67	573	2.01540 ppb		91
9) Trichlorofluoromethane	2.24	101	3492	1.95899 ppb		95
11) Acetone	2.90	43	5124	2.37170 ppb		95
12) Freon-113	2.86	101	7906	2.20502 ppb		91
13) 1,1-DCE	2.82	61	9495	1.97338 ppb		91
14) t-Butanol	3.69	59	9378	66.27585 ppb		96
15) Methyl Acetate	3.34	43	16454	3.02813 ppb		94
16) Iodomethane	2.98	142	8446	1.94071 ppb		98
17) Acrylonitrile	3.81	52	2540	1.84311 ppb		82
18) Methylene chloride	3.45	84	4510	1.88941 ppb		93
19) Carbon disulfide	3.06	76	1111	1.57628 ppb	#	87
20) Methyl t-butyl ether (MtBE	3.90	73	18413	1.98209 ppb		93
21) Trans-1,2-DCE	3.86	96	6430	1.93640 ppb		99
22) Diisopropyl Ether	4.70	59	4063	1.95295 ppb		91
23) 1,1-DCA	4.51	63	17292	1.96386 ppb		95
24) Vinyl Acetate	4.70	87	9481	1.90640 ppb		92
25) Ethyl tert Butyl Ether	5.21	59	22892	1.97102 ppb		94
26) MEK (2-Butanone)	5.39	43	4855	2.53560 ppb		91
27) Cis-1,2-DCE	5.33	96	10866	1.92643 ppb		91
28) 2,2-Dichloropropane	5.32	77	7282	4.48311 ppb		100
29) Chloroform	5.76	83	21749	1.98906 ppb		98
30) Bromochloromethane	5.62	128	5699	2.07515 ppb		93
32) 1,1,1-TCA	5.96	97	13045	1.98279 ppb		100
33) Cyclohexane	6.04	41	3794	2.12491 ppb	#	44
34) 1,1-Dichloropropene	6.17	75	9305	1.94750 ppb		97
35) 2,2,4-Trimethylpentane	6.55	57	13935	2.02928 ppb		93
37) Carbon Tetrachloride	6.16	117	12292	1.99343 ppb		89
38) Tert Amyl Methyl Ether	6.59	73	24026	1.94355 ppb		97
39) 1,2-DCA	6.42	62	14684	2.04783 ppb		98
40) Benzene	6.40	78	38526	1.96717 ppb		99
41) TCE	7.14	95	10599	1.99108 ppb		93
42) 2-Pentanone	7.36	43	304878	72.69773 ppb		99
43) 1,2-Dichloropropane	7.37	63	13169	2.06083 ppb		98
44) Bromodichloromethane	7.68	83	16800	1.90044 ppb		95
45) Methyl Cyclohexane	7.36	83	8243	2.16879 ppb		82

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

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

	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

(#) = qualifier out of range (m) = manual integration

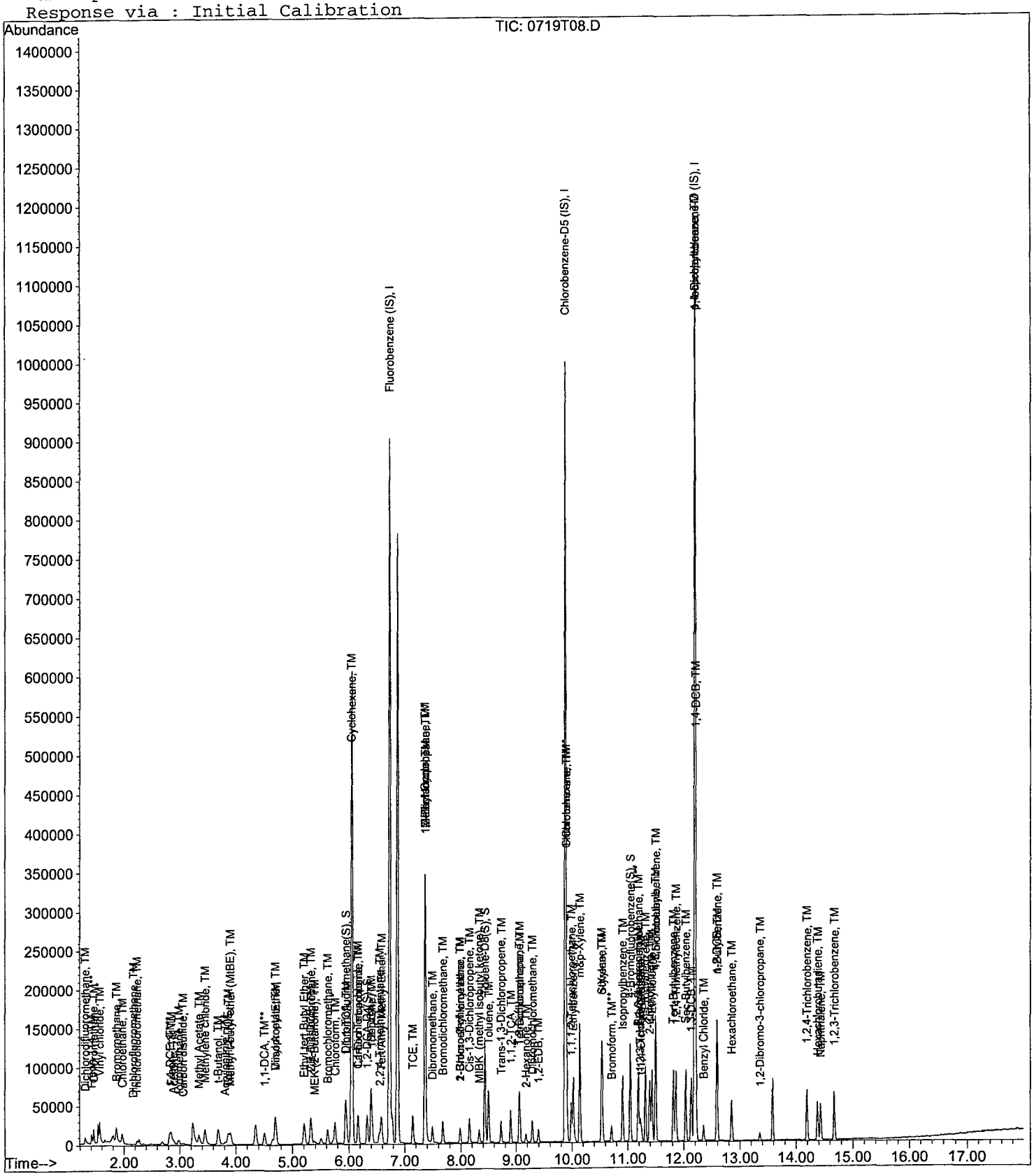
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T08.D
Acq On : 19 Jul 12 12:25
Sample : 2.0ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 8
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



205

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T09.D Vial: 9
Acq On : 19 Jul 12 12:53 Operator: DG,RS,HW,ARS,SV
Sample : 5.0ug/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	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						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

Data File : M:\THOR\DATA\T120719\0719T09.D Vial: 9
Acq On : 19 Jul 12 12:53 Operator: DG,RS,HW,ARS,SV
Sample : 5.0ug/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

	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

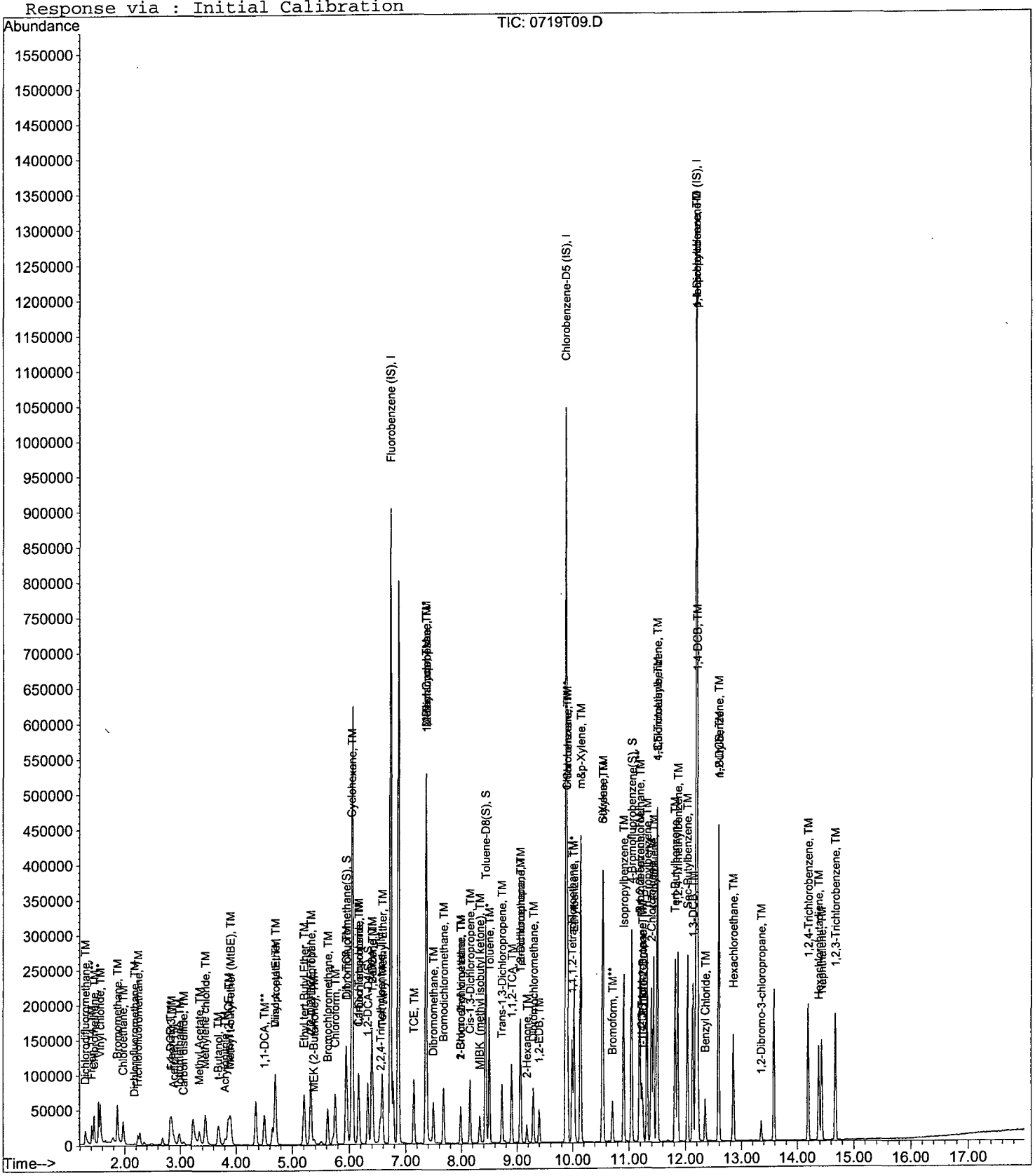
(#) = qualifier out of range (m) = manual integration

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



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Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T10.D Vial: 10
Acq On : 19 Jul 12 13:20 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/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)	6.74	96	461760	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	382656	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	222464	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	168520	23.32155 ppb	0.00
Spiked Amount 29.744			Recovery =	78.409%	
36) 1,2-DCA-D4(S)	6.33	65	155567	23.16569 ppb	0.00
Spiked Amount 29.083			Recovery =	79.654%	
56) Toluene-D8(S)	8.43	98	509225	22.50992 ppb	0.00
Spiked Amount 30.231			Recovery =	74.460%	
64) 4-Bromofluorobenzene(S)	11.05	95	243014	22.71494 ppb	0.00
Spiked Amount 28.321			Recovery =	80.206%	
Target Compounds					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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T10.D Vial: 10
Acq On : 19 Jul 12 13:20 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
46) Dibromomethane	7.49	93	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

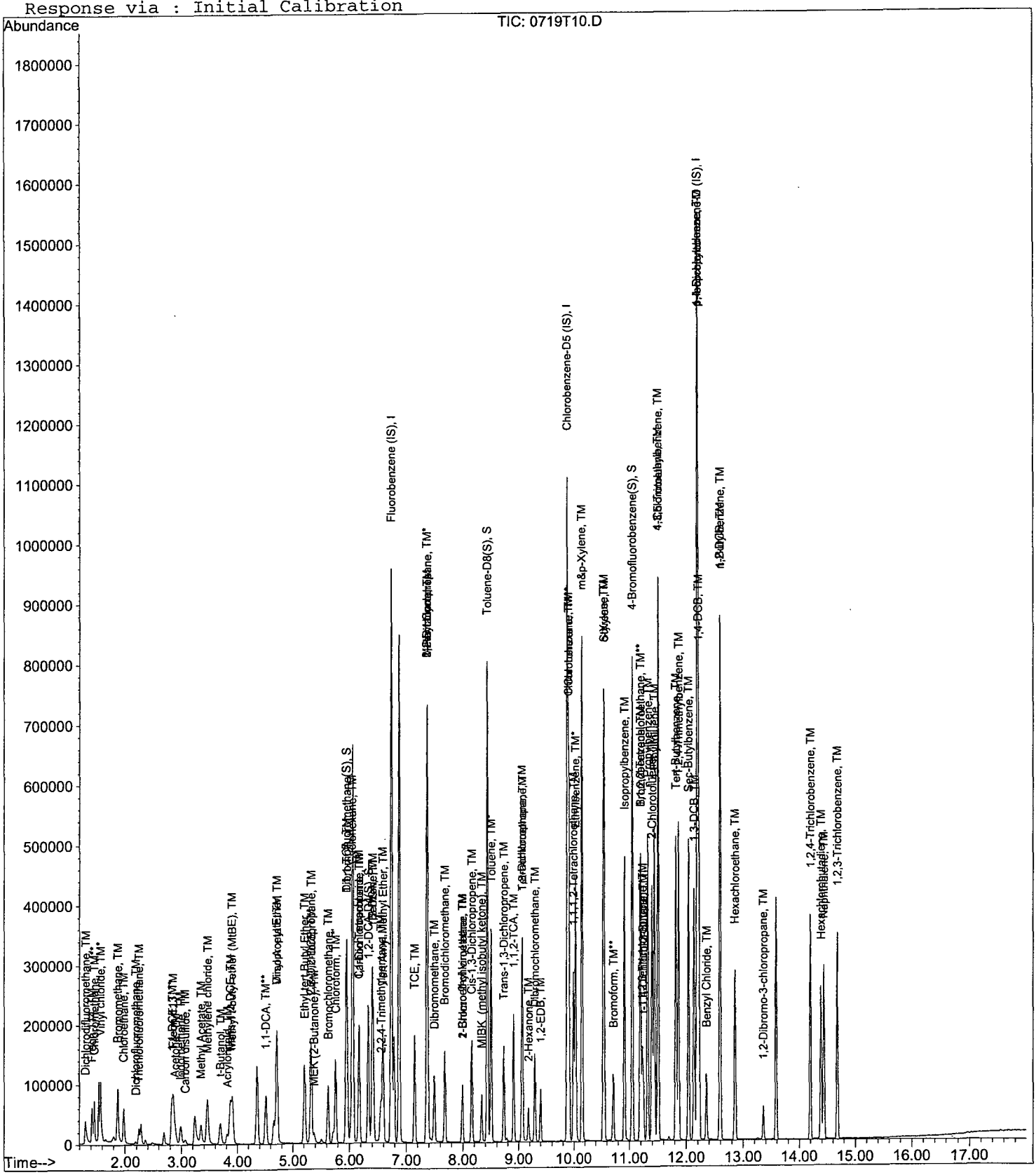
(#) = qualifier out of range (m) = manual integration

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



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Quantitation Report (Not Reviewed)

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						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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T11.D Vial: 11
Acq On : 19 Jul 12 13:48 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Dibromomethane	7.49	93	70661	19.67060	ppb		97
47)	2-Chloroethyl vinyl ether	7.99	106	2760	23.35204	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	60201	19.31427	ppb		100
49)	1-Bromo-2-chloroethane	7.99	63	91400	19.89245	ppb		99
50)	Cis-1,3-Dichloropropene	8.15	75	176747	19.55069	ppb		99
51)	Toluene	8.50	91	471607	19.74924	ppb		98
52)	Trans-1,3-Dichloropropene	8.72	75	158806	19.92258	ppb		97
53)	1,1,2-TCA	8.90	83	102413	19.26196	ppb		100
54)	2-Hexanone	9.18	43	70616	19.75664	ppb		98
57)	1,2-EDB	9.40	107	106822	19.61984	ppb		99
58)	Tetrachloroethene	9.06	166	120268	19.53595	ppb		97
59)	1-Chlorohexane	9.90	91	145778	19.89376	ppb		99
60)	1,1,1,2-Tetrachloroethane	9.99	131	146253	20.33456	ppb		98
61)	m&p-Xylene	10.15	106	462394	41.21236	ppb		99
62)	o-Xylene	10.54	106	240916	20.75709	ppb		99
63)	Styrene	10.55	104	425446	21.57415	ppb		98
65)	1,3-Dichloropropane	9.07	76	188875	19.78566	ppb		99
66)	Dibromochloromethane	9.29	129	145665	20.26776	ppb		100
67)	Chlorobenzene	9.90	112	364549	19.41792	ppb		98
68)	Ethylbenzene	10.03	91	598003	20.25768	ppb		98
69)	Bromoform	10.71	173	98619	20.04032	ppb		96
71)	Isopropylbenzene	10.91	105	578914	20.44949	ppb		98
72)	1,1,2,2-Tetrachloroethane	11.19	83	154333	19.64672	ppb		98
73)	1,2,3-Trichloropropane	11.23	110	42893	19.23842	ppb		91
74)	t-1,4-Dichloro-2-Butene	11.25	53	32354	21.68350	ppb		96
75)	Bromobenzene	11.19	156	185530	19.88027	ppb		98
76)	n-Propylbenzene	11.32	91	758387	20.80665	ppb		98
77)	4-Ethyltoluene	11.43	105	653339	20.87252	ppb		98
78)	2-Chlorotoluene	11.39	91	521845	20.07749	ppb		100
79)	1,3,5-Trimethylbenzene	11.50	105	549841	21.19049	ppb		98
80)	4-Chlorotoluene	11.50	91	530306	20.61267	ppb		99
81)	Tert-Butylbenzene	11.82	119	482018	20.27796	ppb		98
82)	1,2,4-Trimethylbenzene	11.86	105	561538	20.91400	ppb		99
83)	Sec-Butylbenzene	12.04	105	668260	21.05726	ppb		99
84)	p-Isopropyltoluene	12.19	119	566536	21.12796	ppb		99
85)	Benzyl Chloride	12.35	91	154299	19.25622	ppb		98
86)	1,3-DCB	12.14	146	355716	20.15495	ppb		99
87)	1,4-DCB	12.22	146	358848	19.41437	ppb		100
88)	n-Butylbenzene	12.59	91	501731	20.87533	ppb		99
89)	1,2-DCB	12.59	146	337069	19.70479	ppb		99
90)	Hexachloroethane	12.86	117	96458	19.63343	ppb		96
91)	1,2-Dibromo-3-chloropropan	13.36	157	32448	22.04834	ppb		94
92)	1,2,4-Trichlorobenzene	14.20	180	162176	20.68292	ppb		100
93)	Hexachlorobutadiene	14.38	223	64729	19.76145	ppb		95
94)	Naphthalene	14.43	128	476108	21.74583	ppb		99
95)	1,2,3-Trichlorobenzene	14.68	180	231177	20.69267	ppb		99

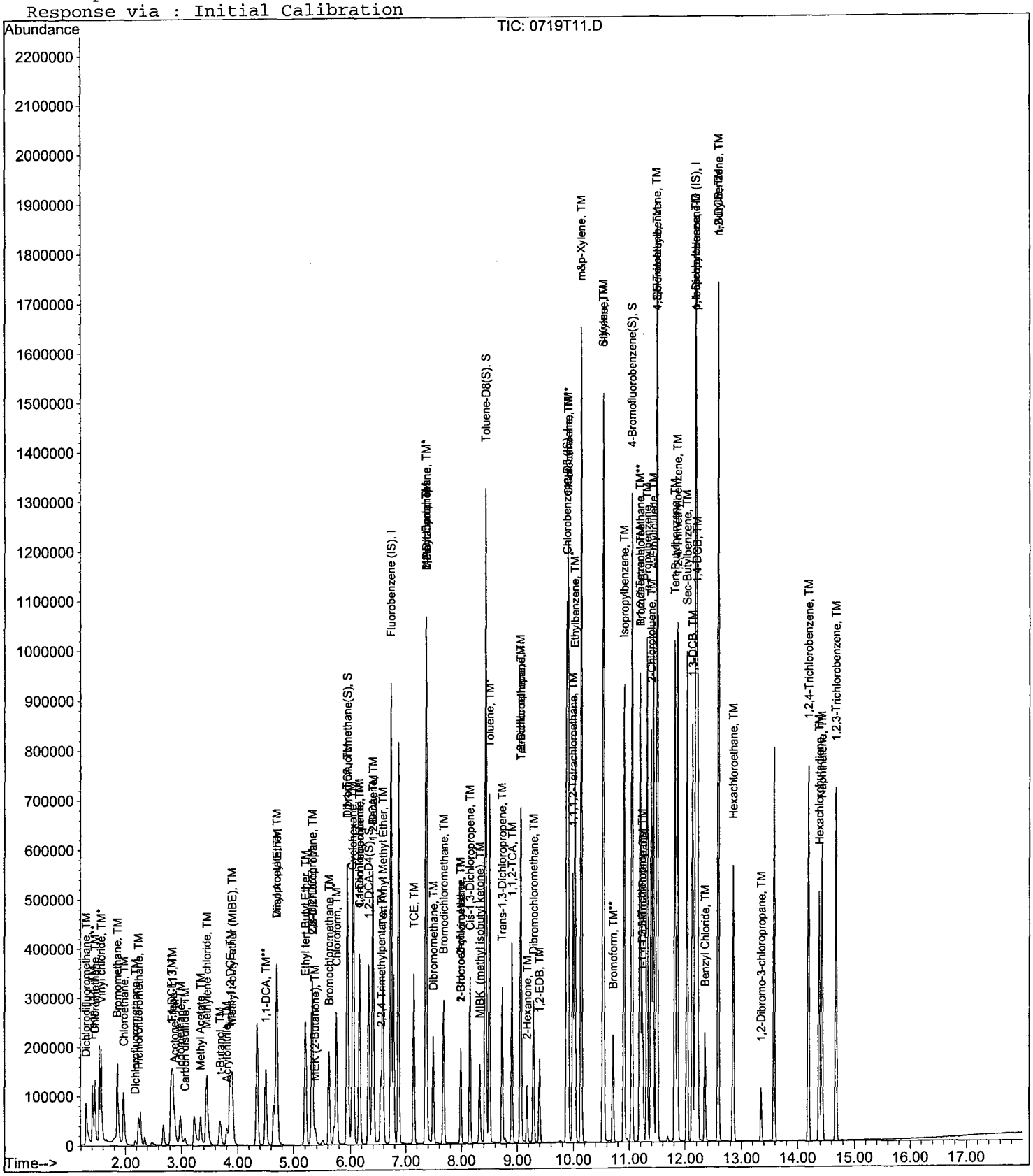
(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120719\0719T11.D
Acq On : 19 Jul 12 13:48
Sample : 20ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 11
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T12.D Vial: 12
Acq On : 19 Jul 12 14:16 Operator: DG,RS,HW,ARS,SV
Sample : 40ug/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	450048	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	369920	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	219712	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	544884	77.36909 ppb		0.00
Spiked Amount 29.744			Recovery = 260.117%			
36) 1,2-DCA-D4(S)	6.33	65	488560	74.64543 ppb		0.00
Spiked Amount 29.083			Recovery = 256.659%			
56) Toluene-D8(S)	8.43	98	1669961	76.36095 ppb		0.00
Spiked Amount 30.231			Recovery = 252.593%			
64) 4-Bromofluorobenzene(S)	11.05	95	804405	77.77781 ppb		0.00
Spiked Amount 28.321			Recovery = 274.630%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	101464	43.22988 ppb		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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T12.D Vial: 12
Acq On : 19 Jul 12 14:16 Operator: DG,RS,HW,ARS,SV
Sample : 40ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Dibromomethane	7.49	93	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

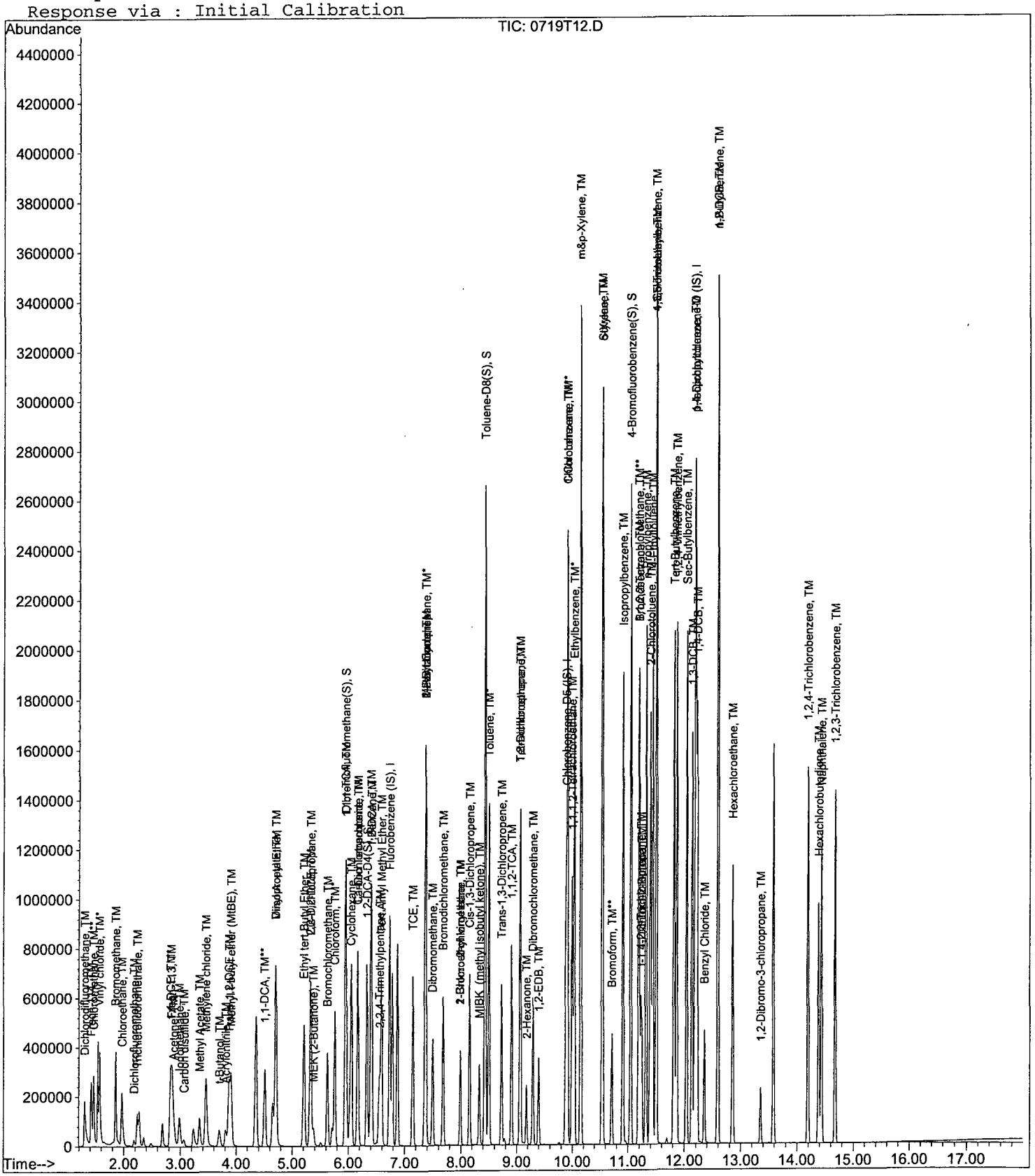
(#) = qualifier out of range (m) = manual integration

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



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T13.D Vial: 13
Acq On : 19 Jul 12 14:44 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	444096	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	369984	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	225280	25.00000 ppb		0.00
System Monitoring Compounds						
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						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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T13.D Vial: 13
Acq On : 19 Jul 12 14:44 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Dibromomethane	7.49	93	343569	97.11750	ppb		95
47)	2-Chloroethyl vinyl ether	7.99	106	11121	99.31396	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	317753	103.51662	ppb		98
49)	1-Bromo-2-chloroethane	7.99	63	444096	98.14420	ppb		99
50)	Cis-1,3-Dichloropropene	8.15	75	923494	103.72652	ppb		98
51)	Toluene	8.50	91	2302514	97.90801	ppb		100
52)	Trans-1,3-Dichloropropene	8.72	75	844862	107.62424	ppb		97
53)	1,1,2-TCA	8.90	83	506640	96.75885	ppb		98
54)	2-Hexanone	9.18	43	374170	106.29789	ppb		96
57)	1,2-EDB	9.40	107	552458	99.59106	ppb		98
58)	Tetrachloroethene	9.06	166	580637	92.57110	ppb		96
59)	1-Chlorohexane	9.90	91	748840	100.29983	ppb		96
60)	1,1,1,2-Tetrachloroethane	9.99	131	746191	101.82778	ppb		98
61)	m&p-Xylene	10.14	106	2312256	202.27283	ppb		97
62)	o-Xylene	10.54	106	1205888	101.97512	ppb		97
63)	Styrene	10.55	104	2181574	108.57892	ppb		97
65)	1,3-Dichloropropane	9.07	76	938122	96.45434	ppb		100
66)	Dibromochloromethane	9.29	129	748578	102.22894	ppb		99
67)	Chlorobenzene	9.90	112	1810618	94.65857	ppb		99
68)	Ethylbenzene	10.03	91	2980271	99.08969	ppb		98
69)	Bromoform	10.71	173	538782	107.45915	ppb		100
71)	Isopropylbenzene	10.91	105	2947712	100.07206	ppb		98
72)	1,1,2,2-Tetrachloroethane	11.19	83	796018	97.38982	ppb		99
73)	1,2,3-Trichloropropane	11.23	110	223287	96.25110	ppb		93
74)	t-1,4-Dichloro-2-Butene	11.25	53	179952	115.90904	ppb		99
75)	Bromobenzene	11.19	156	932826	96.06567	ppb		100
76)	n-Propylbenzene	11.32	91	3839951	101.25032	ppb		100
77)	4-Ethyltoluene	11.43	105	3324604	102.07879	ppb		99
78)	2-Chlorotoluene	11.40	91	2632771	97.35098	ppb		100
79)	1,3,5-Trimethylbenzene	11.50	105	2768017	102.52551	ppb		98
80)	4-Chlorotoluene	11.50	91	2649819	98.98815	ppb		100
81)	Tert-Butylbenzene	11.82	119	2490617	100.69949	ppb		99
82)	1,2,4-Trimethylbenzene	11.86	105	2848266	101.95249	ppb		99
83)	Sec-Butylbenzene	12.04	105	3384214	102.48812	ppb		100
84)	p-Isopropyltoluene	12.19	119	2906241	104.16479	ppb		99
85)	Benzyl Chloride	12.35	91	910665	109.22596	ppb		96
86)	1,3-DCB	12.14	146	1775349	96.67663	ppb		99
87)	1,4-DCB	12.22	146	1789528	93.04875	ppb		100
88)	n-Butylbenzene	12.59	91	2558982	102.32670	ppb		99
89)	1,2-DCB	12.59	146	1688312	94.85606	ppb		99
90)	Hexachloroethane	12.86	117	521928	102.10049	ppb		95
91)	1,2-Dibromo-3-chloropropan	13.35	157	180474	117.85879	ppb		94
92)	1,2,4-Trichlorobenzene	14.20	180	875328	107.28908	ppb		100
93)	Hexachlorobutadiene	14.38	223	327441	96.07540	ppb		95
94)	Naphthalene	14.43	128	2618767	114.95471	ppb		99
95)	1,2,3-Trichlorobenzene	14.68	180	1182785	101.75059	ppb		98

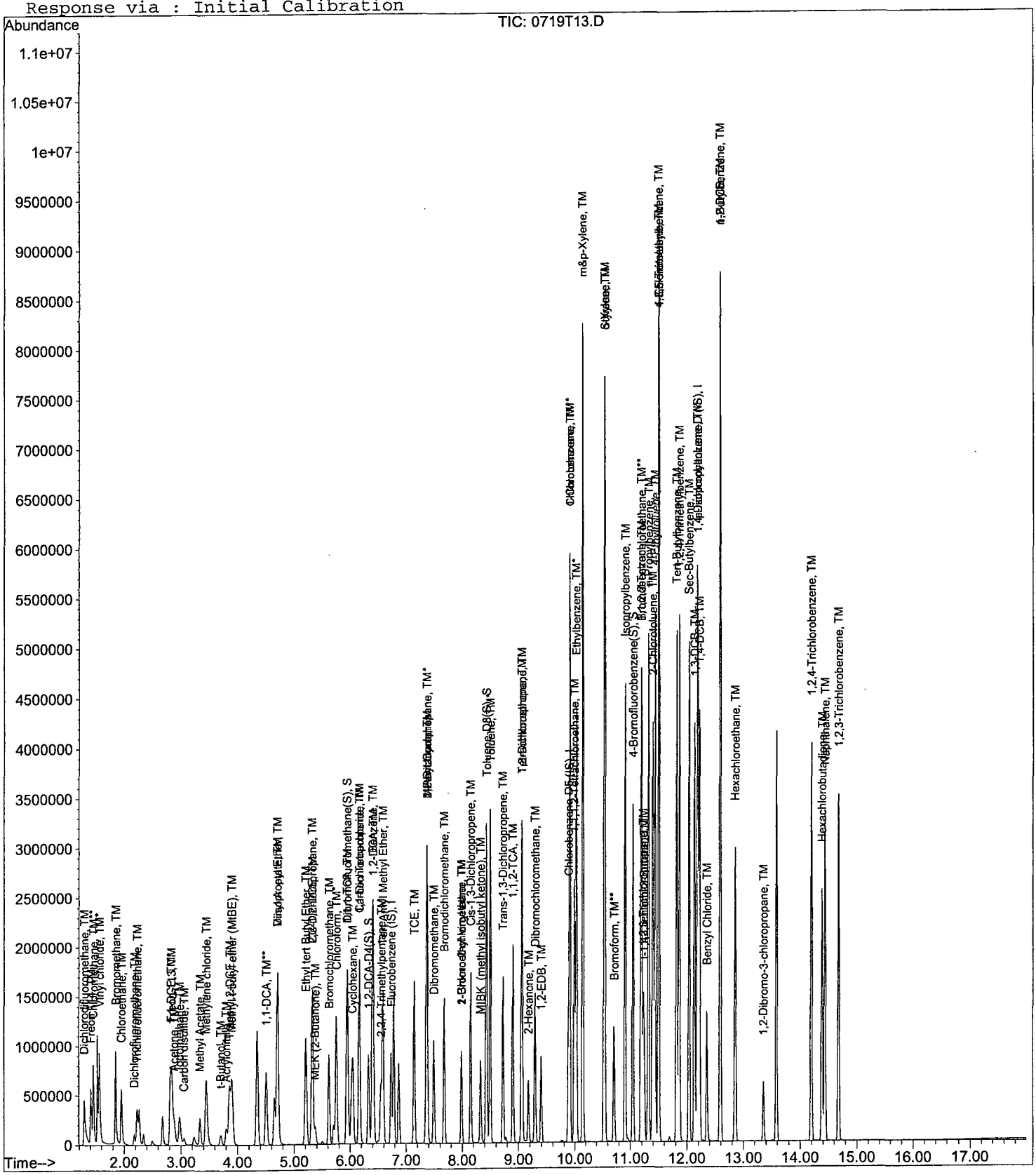
(#) = qualifier out of range (m) = manual integration

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

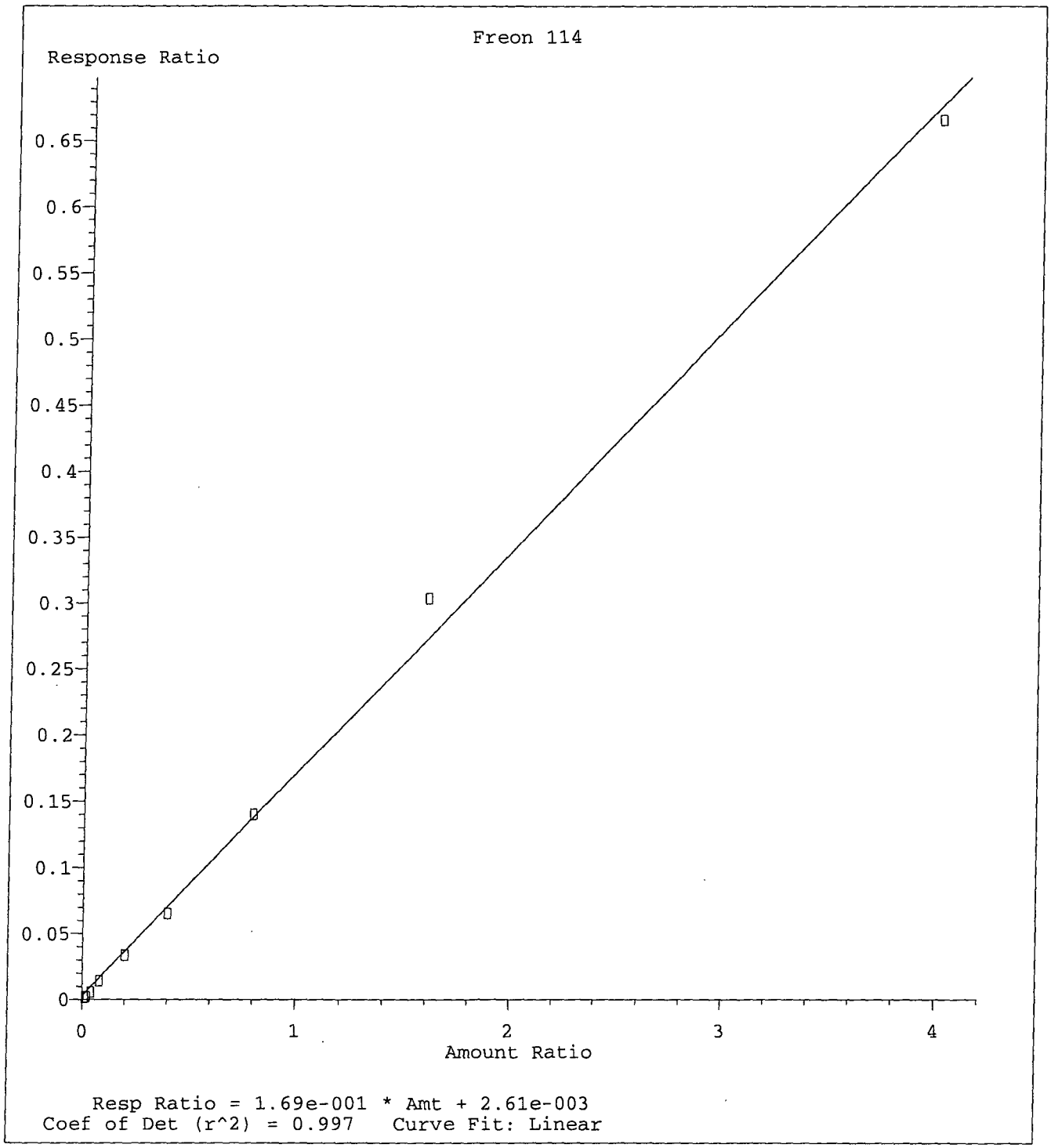
Vial: 13
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

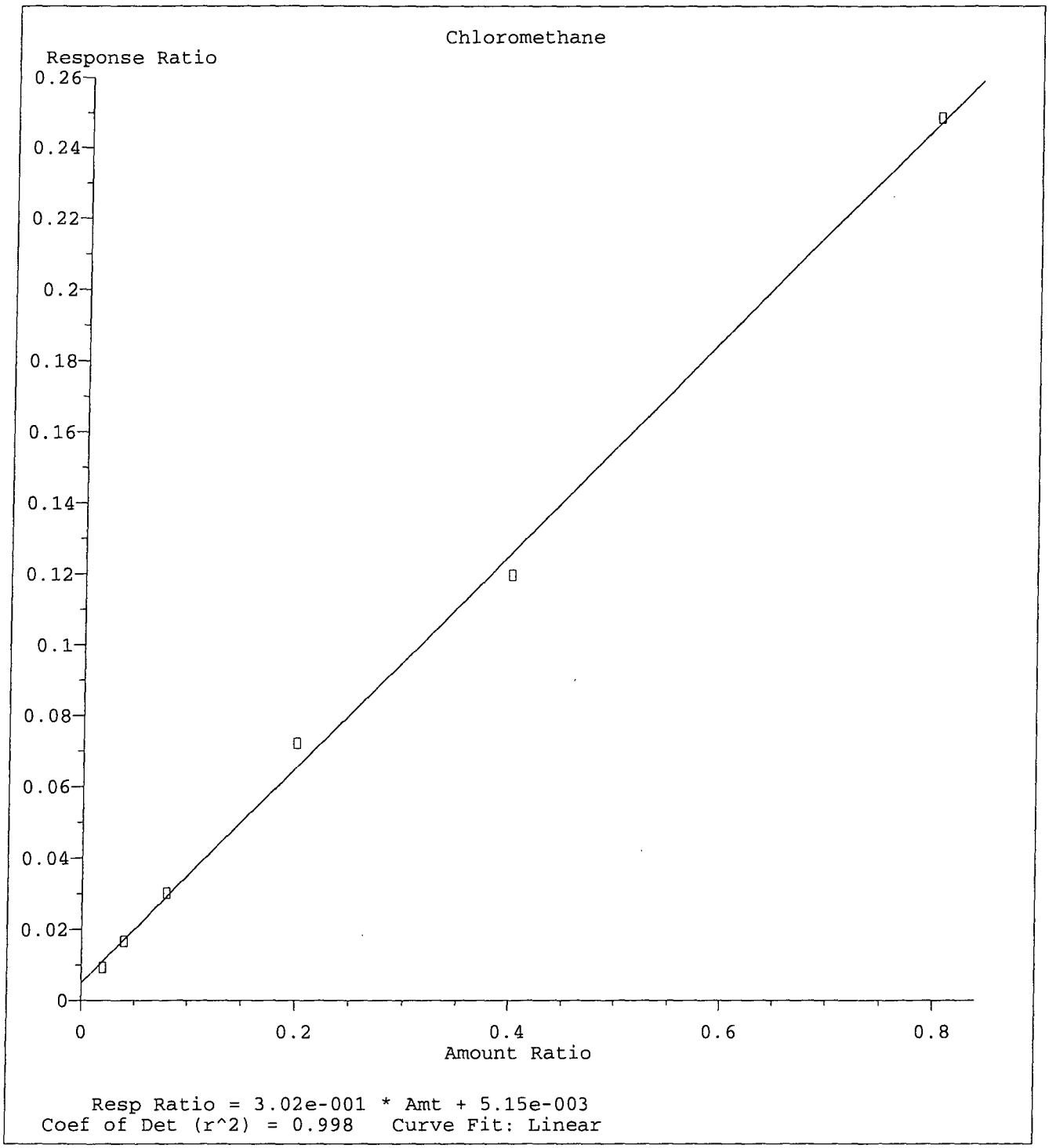
Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



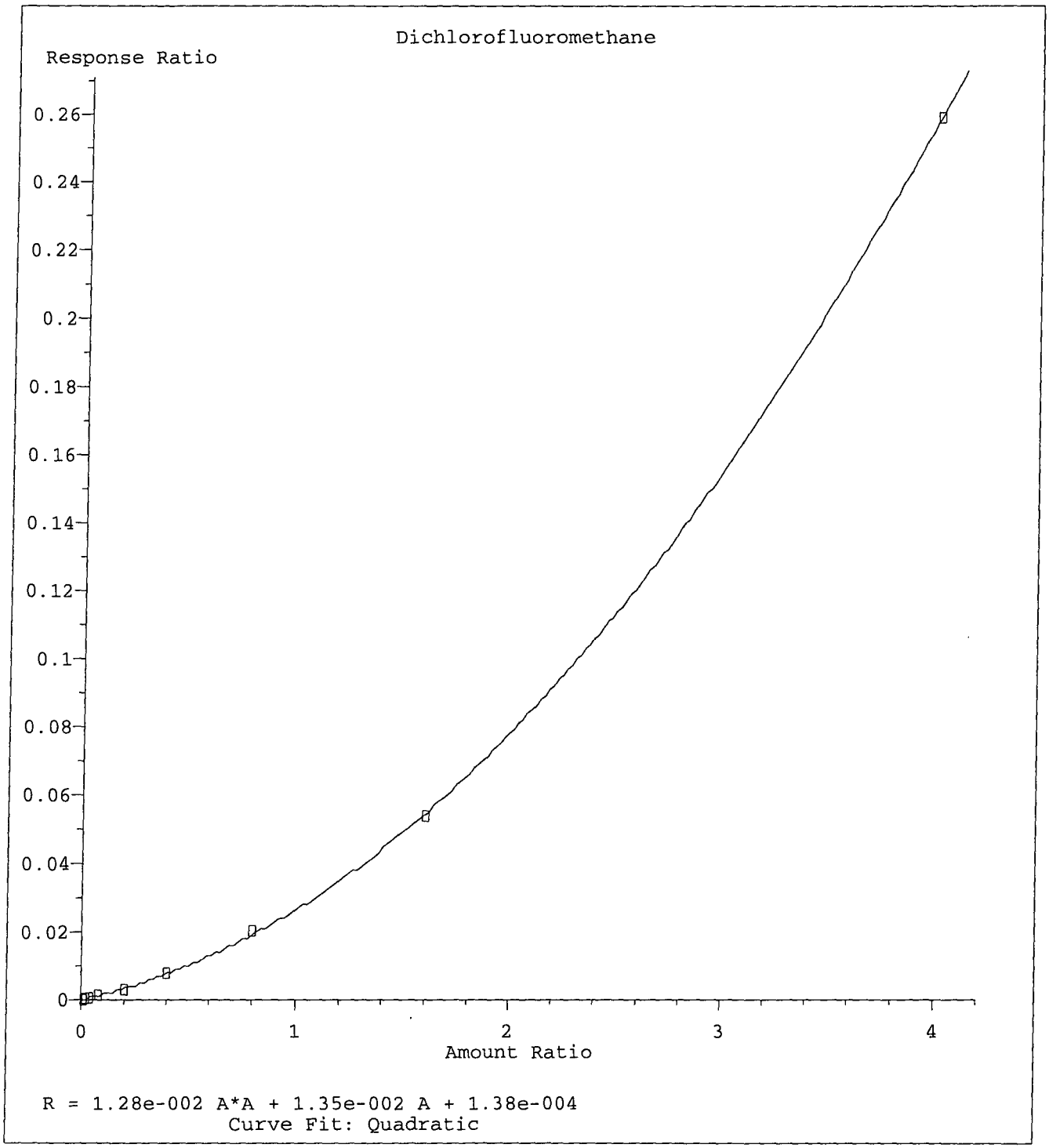
220



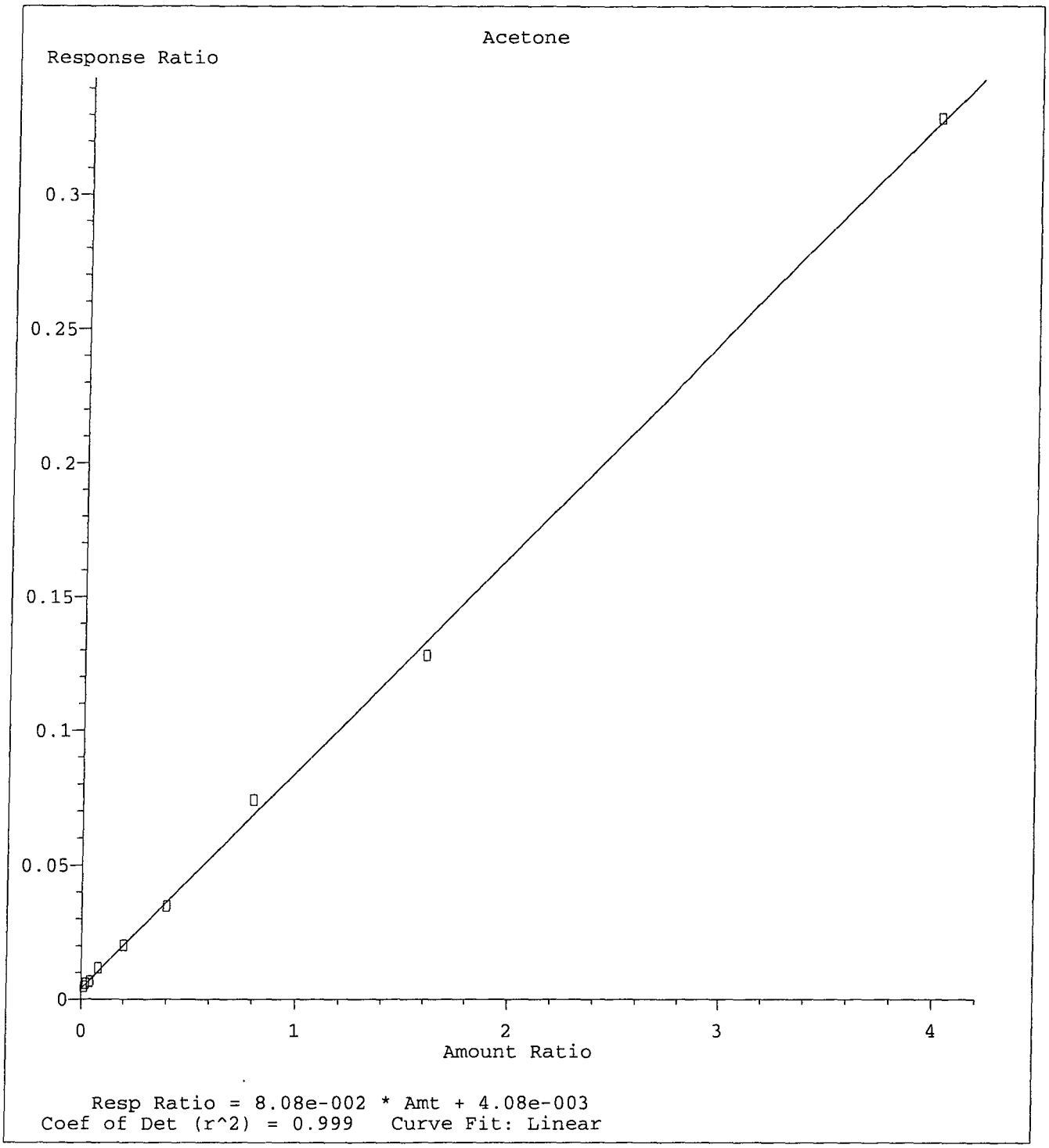
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



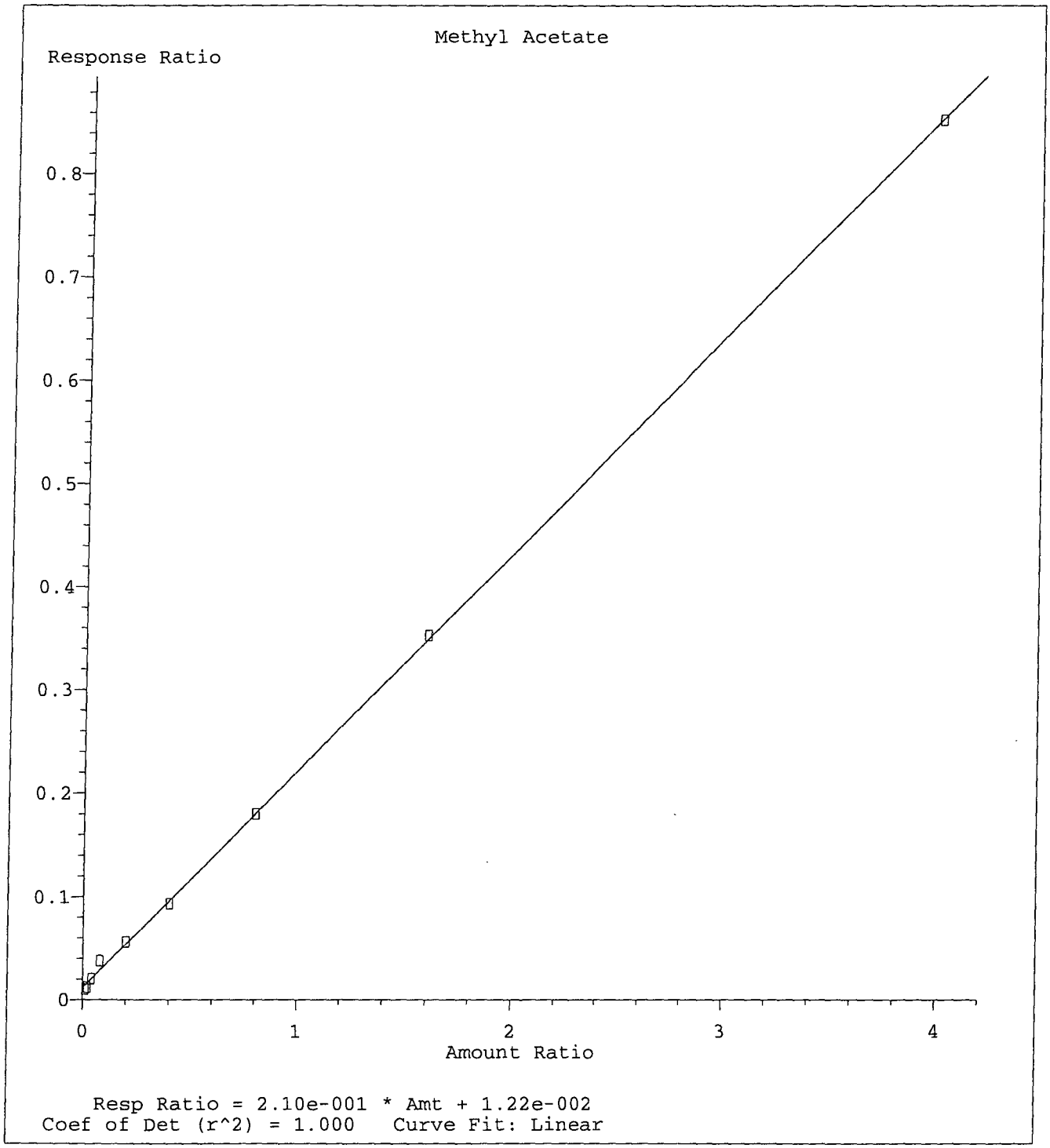
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



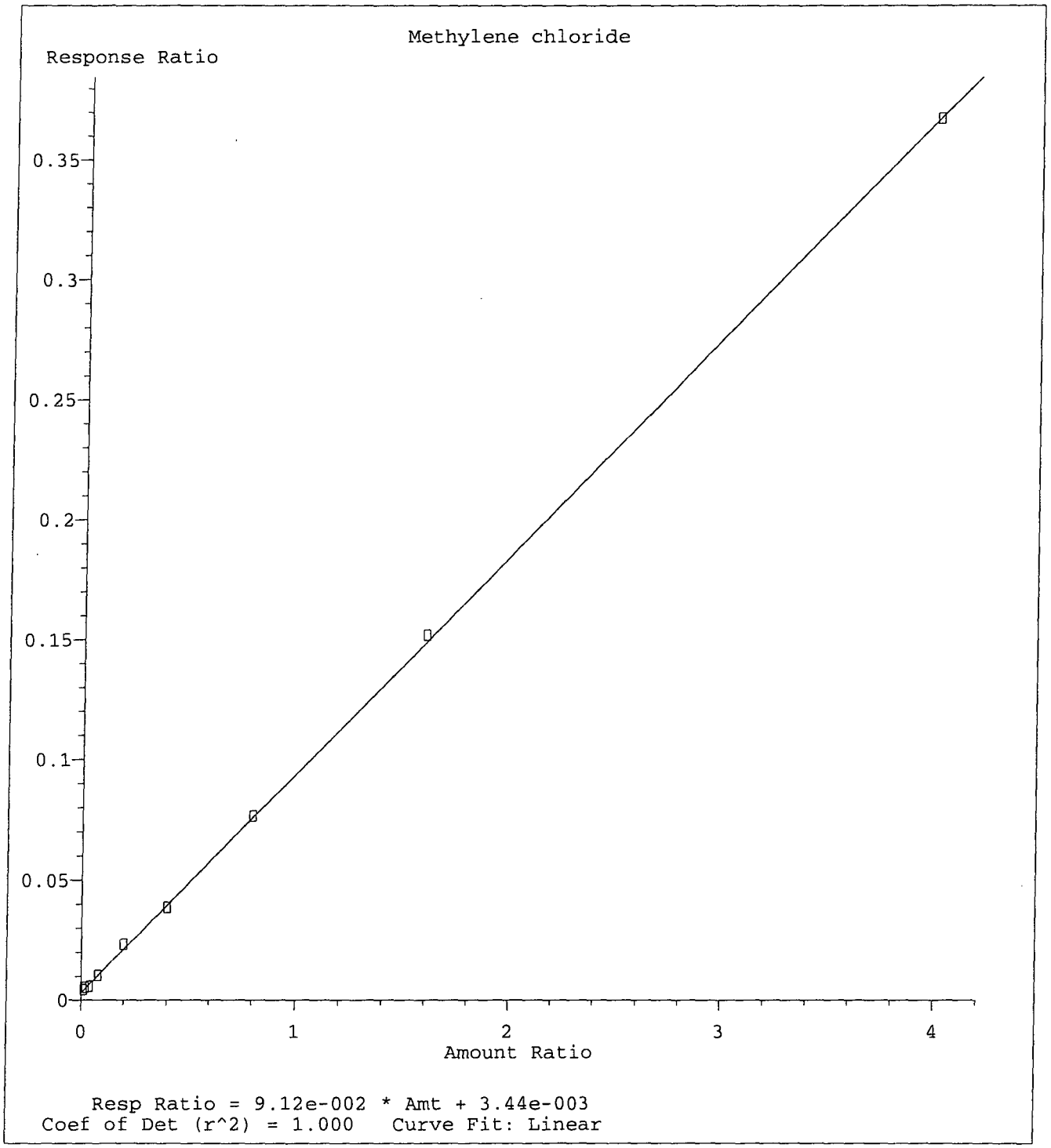
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



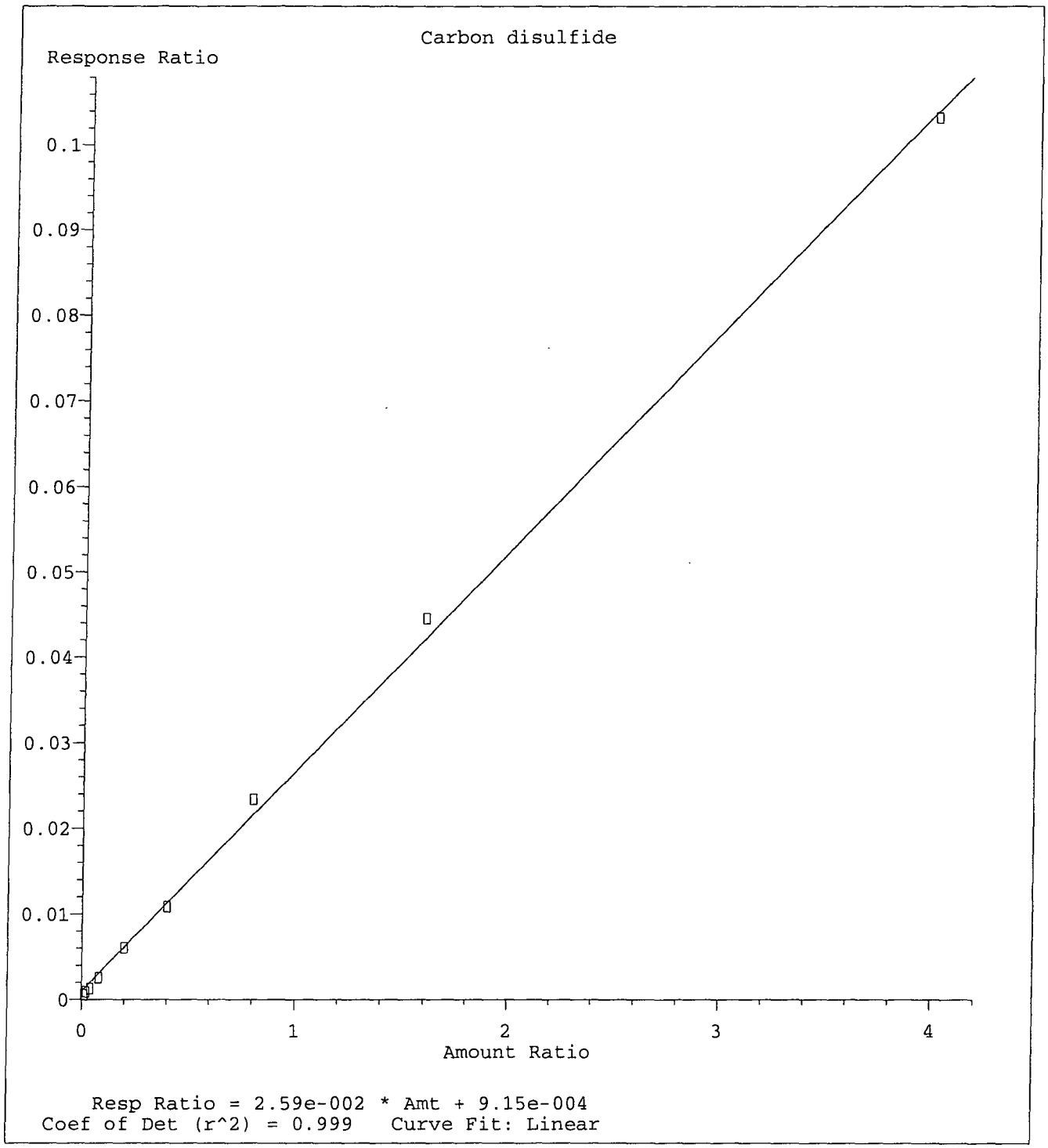
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



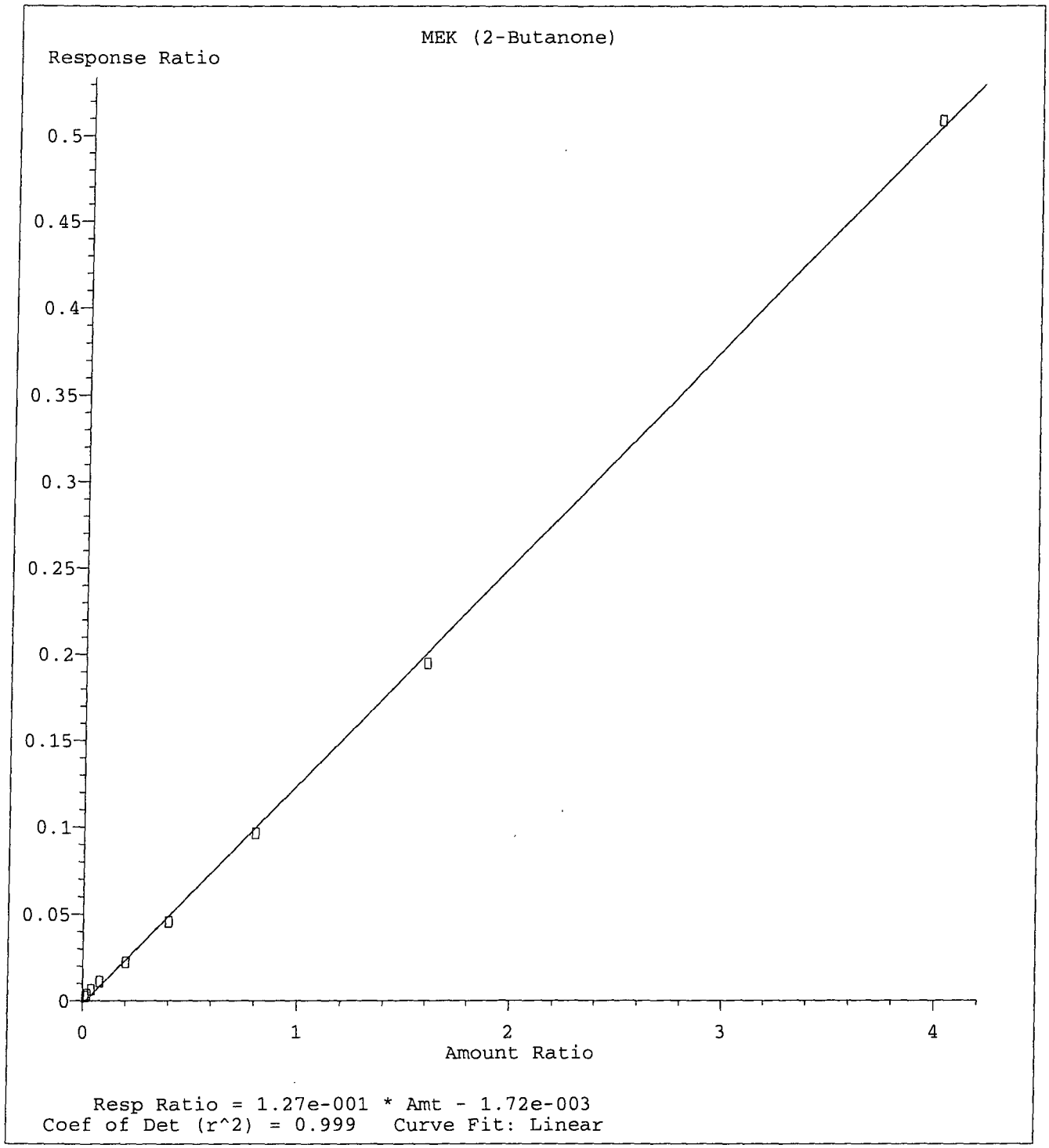
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



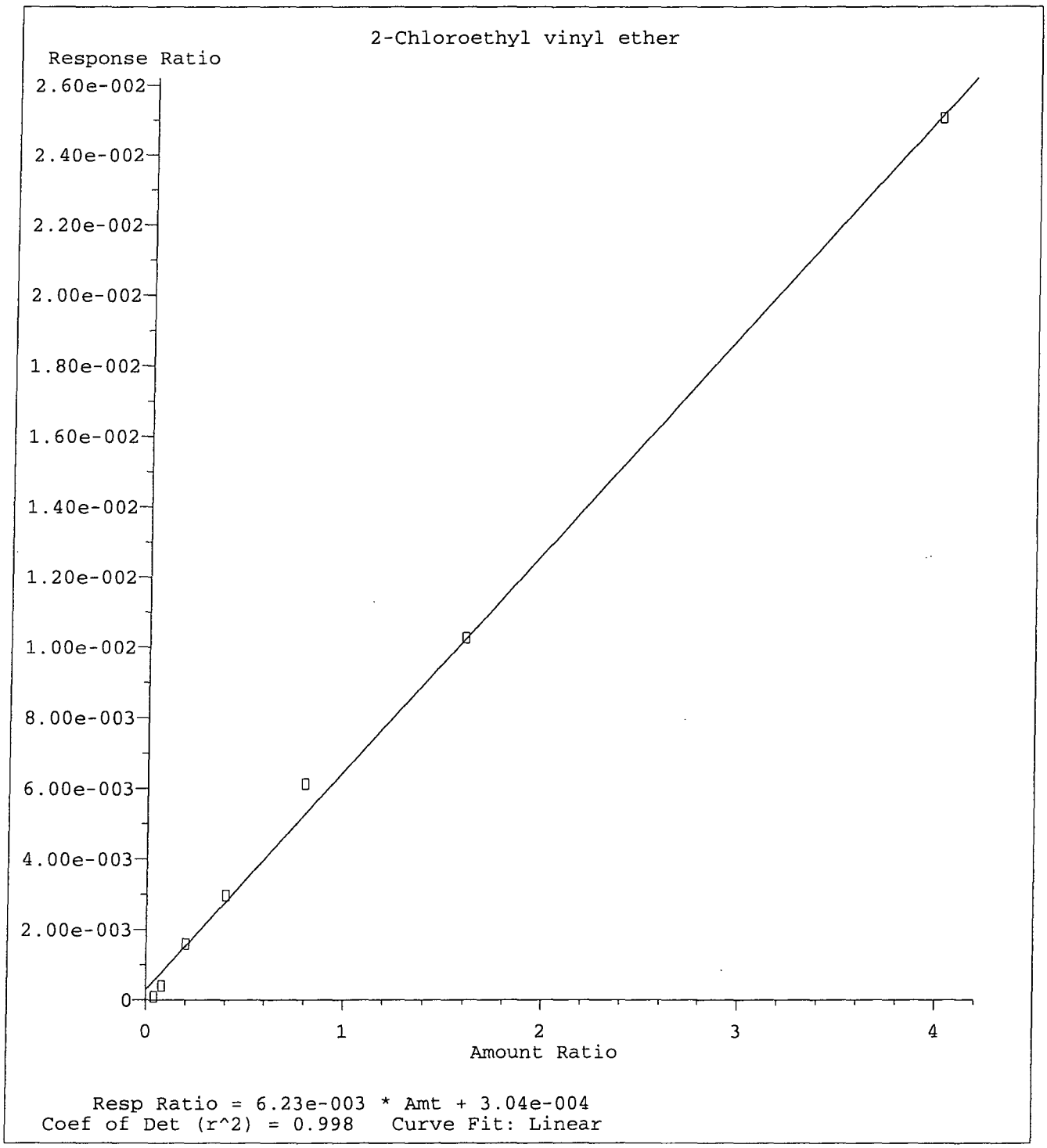
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



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: 68268
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		

MRS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68268
Date Analyzed: 07/19/12
Instrument: Thor
Cal. Date: 07/19/12
Data File: 0719T31.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	TCE	0.3050	0.3245	6.4	TM	
42	TM	2-Pentanone	0.2403	0.2373	1.2	TM	
43	TM*	1,2-Dichloropropane	0.3661	0.3693	0.88	TM*	
44	TM	Bromodichloromethane	0.5065	0.4847	4.3	TM	
45	TM	Methyl Cyclohexane	0.2178	0.2085	4.3	TM	
46	TM	Dibromomethane	0.1991	0.1999	0.37	TM	
47	TML	2-Chloroethyl vinyl ether	0.0061	0.0063	2.4	TML	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		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68268
Date Analyzed: 07/19/12
Instrument: Thor
Cal. Date: 07/19/12
Data File: 0719T31.D

		Compound	MEAN	CCRF	%D		%Drift	
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		*NT
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		
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			5.2			

KRS 7/27/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T31.D Vial: 31
Acq On : 19 Jul 12 23:03 Operator: DG,RS,HW,ARS,SV
Sample : 120719A LCS-1WT (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	459584	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	371008	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	216768	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	225058	31.29333 ppb		0.00
Spiked Amount 31.881			Recovery = 98.155%			
36) 1,2-DCA-D4(S)	6.33	65	220138	32.93626 ppb		0.00
Spiked Amount 33.647			Recovery = 97.888%			
56) Toluene-D8(S)	8.43	98	802051	36.56718 ppb		0.00
Spiked Amount 37.345			Recovery = 97.917%			
64) 4-Bromofluorobenzene(S)	11.05	95	313456	30.21914 ppb		0.00
Spiked Amount 29.515			Recovery = 102.384%			
Target Compounds						Qvalue
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: $\frac{(91788)(25)}{(459584)(0.4941)}$ (1) = 10.10522903 ✓ ARS 7/27/12

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T31.D Vial: 31
Acq On : 19 Jul 12 23:03 Operator: DG,RS,HW,ARS,SV
Sample : 120719A LCS-1WT (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	Bromodichloromethane	7.68	83	89098	9.56942	ppb		98
45)	Methyl Cyclohexane	7.36	83	38326	9.57410	ppb		95
46)	Dibromomethane	7.49	93	36747	10.03731	ppb		99
47)	2-Chloroethyl vinyl ether	7.99	106	1154	8.86120	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	32328	10.17680	ppb		97
49)	1-Bromo-2-chloroethane	7.99	63	45864	9.79426	ppb		99
50)	Cis-1,3-Dichloropropene	8.15	75	86842	9.42535	ppb		98
51)	Toluene	8.50	91	246468	10.12718	ppb		98
52)	Trans-1,3-Dichloropropene	8.72	75	75443	9.28657	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

ARS 7/27/12

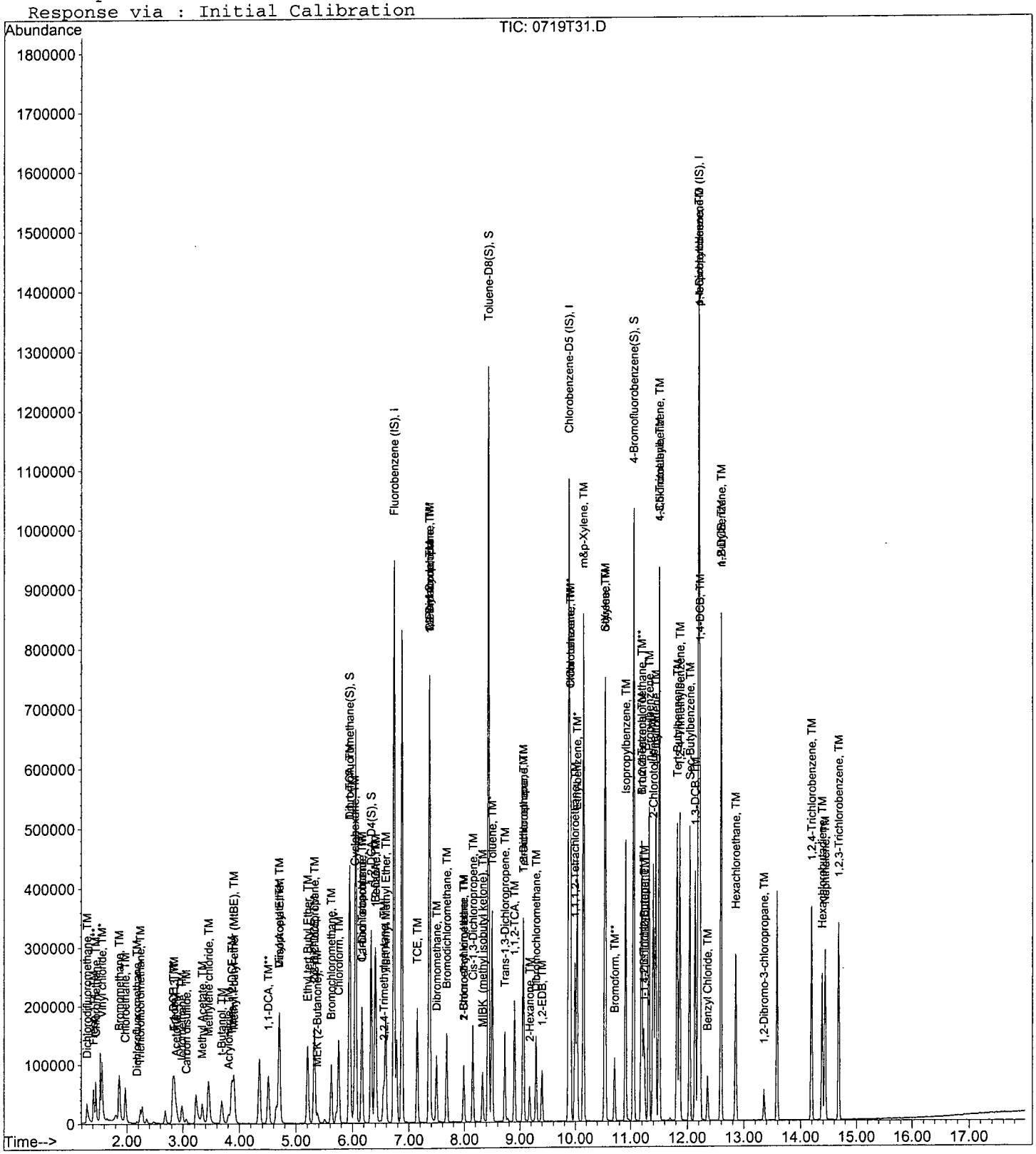
(#) = qualifier out of range (m) = manual integration
0719T31.D TALLW.M Fri Jul 20 10:53:42 2012

Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T31.D Vial: 31
Acq On : 19 Jul 12 23:03 Operator: DG,RS,HW,ARS,SV
Sample : 120719A LCS-1WT (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

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



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68268
Date Analyzed: 07/26/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0726T04.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.1266	0.1292	2.0	TM	
3	TML	Freon 114	0.1578	0.1753	11	TML	0.06
4	TM**L	Chloromethane	0.3709	0.2583	30	TM**L	19
5	TM*	Vinyl chloride	0.4941	0.4570	7.5	TM*	
6	TM	Bromomethane	0.3158	0.2823	11	TM	
7	TM	Chloroethane	0.2846	0.2656	6.7	TM	
8	TMQ	Dichlorofluoromethane	0.0241	0.0148	39	TMQ	18
9	TM	Trichlorofluoromethane	0.1021	0.1190	17	TM	
10	TMQ	Acrolein	0.0000	0.0062	0.00	TMQ	
11	TML	Acetone	0.1608	0.0985	39	TML	9.4
12	TM	Freon-113	0.2054	0.2207	7.4	TM	
13	TM*	1,1-DCE	0.2757	0.2691	2.4	TM*	
14	TM	t-Butanol	0.0081	0.0081	0.42	TM	
15	TML	Methyl Acetate	0.4032	0.2393	41	TML	0.76
16	TM	Iodomethane	0.2493	0.2345	6.0	TM	
17	TM	Acrylonitrile	0.0790	0.0817	3.4	TM	
18	TML	Methylene chloride	0.1556	0.0951	39	TML	5.2
19	TML	Carbon disulfide	0.0329	0.0247	25	TML	14
20	TM	Methyl t-butyl ether (MtBE)	0.5322	0.5090	4.4	TM	
21	TM	Trans-1,2-DCE	0.1902	0.1672	12	TM	
22	TM	Diisopropyl Ether	0.1192	0.1236	3.7	TM	
23	TM**	1,1-DCA	0.5045	0.5046	0.02	TM**	
24	TM	Vinyl Acetate	0.2849	0.2831	0.63	TM	
25	TM	Ethyl tert Butyl Ether	0.6654	0.6589	0.99	TM	
26	TML	MEK (2-Butanone)	0.1418	0.1256	11	TML	2.5
27	TM	Cis-1,2-DCE	0.3232	0.3311	2.5	TM	
28	TM	2,2-Dichloropropane	0.2032	0.2119	4.3	TM	
29	TM*	Chloroform	0.6265	0.6180	1.4	TM*	
30	TM	Bromochloromethane	0.1573	0.1556	1.1	TM	
31	S	Dibromofluoromethane(S)	0.3912	0.3943	0.80	S	
32	TM	1,1,1-TCA	0.3769	0.3716	1.4	TM	
33	TM	Cyclohexane	0.1023	0.0939	8.2	TM	
34	TM	1,1-Dichloropropene	0.2737	0.2693	1.6	TM	
35	TM	2,2,4-Trimethylpentane	0.3934	0.4057	3.1	TM	
36	S	1,2-DCA-D4(S)	0.3636	0.3686	1.4	S	
37	TM	Carbon Tetrachloride	0.3533	0.3519	0.39	TM	
38	TM	Tert Amyl Methyl Ether	0.7083	0.7079	0.06	TM	
39	TM	1,2-DCA	0.4108	0.4035	1.8	TM	
40	TM	Benzene	1.122	1.042	7.1	TM	
		Average			9.1		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68268
Date Analyzed: 07/26/12
Instrument: Thor
Cal. Date: 07/25/12
Data File: 0726T04.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	TCE	0.3050	0.2876	5.7	TM	
42	TM	2-Pentanone	0.2403	0.2386	0.71	TM	
43	TM*	1,2-Dichloropropane	0.3661	0.3625	0.97	TM*	
44	TM	Bromodichloromethane	0.5065	0.5084	0.37	TM	
45	TM	Methyl Cyclohexane	0.2178	0.2158	0.89	TM	
46	TM	Dibromomethane	0.1991	0.2043	2.6	TM	
47	TML	2-Chloroethyl vinyl ether	0.0061	0.0063	2.3	TML	12
48	TM	MIBK (methyl isobutyl ketone)	0.1728	0.1649	4.6	TM	
49	TM	1-Bromo-2-chloroethane	0.2547	0.2586	1.5	TM	
50	TM	Cis-1,3-Dichloropropene	0.5012	0.5056	0.88	TM	
51	TM*	Toluene	1.324	1.324	0.00	TM*	
52	TM	Trans-1,3-Dichloropropene	0.4419	0.4496	1.7	TM	
53	TM	1,1,2-TCA	0.2948	0.2925	0.76	TM	
54	TM	2-Hexanone	0.1982	0.1994	0.64	TM	
55	I	Chlorobenzene-D5 (IS)	ISTD			I	
56	S	Toluene-D8(S)	1.478	1.501	1.6	S	
57	TM	1,2-EDB	0.3748	0.3856	2.9	TM	
58	TM	Tetrachloroethene	0.4238	0.4311	1.7	TM	
59	TM	1-Chlorohexane	0.5045	0.5120	1.5	TM	
60	TM	1,1,1,2-Tetrachloroethane	0.4952	0.4998	0.94	TM	
61	TM	m&p-Xylene	0.7724	0.8035	4.0	TM	
62	TM	o-Xylene	0.7990	0.8480	6.1	TM	
63	TM	Styrene	1.358	1.420	4.6	TM	
64	S	4-Bromofluorobenzene(S)	0.6990	0.7267	4.0	S	
65	TM	1,3-Dichloropropane	0.6572	0.6785	3.2	TM	
66	TM	Dibromochloromethane	0.4948	0.5142	3.9	TM	
67	TM**	Chlorobenzene	1.292	1.310	1.3	TM**	
68	TM*	Ethylbenzene	2.032	2.075	2.1	TM*	
69	TM**	Bromoform	0.3388	0.3590	6.0	TM**	
70	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
71	TM	Isopropylbenzene	3.269	3.309	1.2	TM	
72	TM**	1,1,2,2-Tetrachloroethane	0.9070	0.9174	1.1	TM**	
73	TM	1,2,3-Trichloropropane	0.2574	0.2596	0.84	TM	
74	TM	t-1,4-Dichloro-2-Butene	0.1723	0.2025	18	TM	
75	TM	Bromobenzene	1.078	1.068	0.89	TM	
76	TM	n-Propylbenzene	4.209	4.343	3.2	TM	
77	TM	4-Ethyltoluene	3.614	3.796	5.0	TM	
78	TM	2-Chlorotoluene	3.001	3.077	2.5	TM	
79	TM	1,3,5-Trimethylbenzene	2.996	3.151	5.2	TM	
80	TM	4-Chlorotoluene	2.971	3.044	2.5	TM	
		Average			2.8		

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: 68268
Date Analyzed: 07/26/12
Instrument: Thor
Cal. Date: 07/25/12
Data File: 0726T04.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Tert-Butylbenzene	2.745	2.792	1.7	TM	
82	TM	1,2,4-Trimethylbenzene	3.100	3.240	4.5	TM	
83	TM	Sec-Butylbenzene	3.664	3.916	6.9	TM	
84	TM	p-Isopropyltoluene	3.096	3.274	5.7	TM	
85	TM	Benzyl Chloride	0.9252	0.9863	6.6	TM	
86	TM	1,3-DCB	2.038	2.073	1.7	TM	
87	TM	1,4-DCB	2.134	2.138	0.16	TM	
88	TM	n-Butylbenzene	2.775	2.924	5.4	TM	
89	TM	1,2-DCB	1.975	2.011	1.8	TM	
90	TM	Hexachloroethane	0.5673	0.5550	2.2	TM	
91	TM	1,2-Dibromo-3-chloropropane	0.1699	0.1892	11	TM	
92	TM	1,2,4-Trichlorobenzene	0.9054	0.9093	0.43	TM	
93	TM	Hexachlorobutadiene	0.3782	0.3896	3.0	TM	
94	TM	Naphthalene	2.528	2.619	3.6	TM	
95	TM	1,2,3-Trichlorobenzene	1.290	1.317	2.1	TM	
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			3.8		

ARS 7/27/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T04.D Vial: 29
Acq On : 26 Jul 12 10:46 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/L Vol Std 07-26-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:06 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	398336	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	321152	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	193728	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.94	111	200318	32.13606 ppb		0.00
Spiked Amount 31.881			Recovery = 100.799%			
36) 1,2-DCA-D4(S)	6.32	65	197620	34.11344 ppb		0.00
Spiked Amount 33.647			Recovery = 101.386%			
56) Toluene-D8(S)	8.43	98	720301	37.93815 ppb		0.00
Spiked Amount 37.345			Recovery = 101.588%			
64) 4-Bromofluorobenzene(S)	11.05	95	275538	30.68737 ppb		0.00
Spiked Amount 29.515			Recovery = 103.970%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.28	85	20584	10.20168 ppb		98
3) Freon 114	1.39	85	27926	9.99425 ppb		88
4) Chloromethane	1.43	50	41158	8.12483 ppb		98
5) Vinyl chloride	1.54	62	72811	9.24853 ppb		99
6) Bromomethane	1.85	94	44988	8.94048 ppb		95
7) Chloroethane	1.95	64	42318	9.33277 ppb		96
8) Dichlorofluoromethane	2.16	67	2357	8.15476 ppb		88
9) Trichlorofluoromethane	2.22	101	18964	11.65401 ppb		95
11) Acetone	2.87	43	15701	10.93625 ppb		95
12) Freon-113	2.83	101	35158	10.74157 ppb		93
13) 1,1-DCE	2.80	61	42874	9.76104 ppb		98
14) t-Butanol	3.67	59	16079	124.47769 ppb		98
15) Methyl Acetate	3.32	43	38136	9.92354 ppb		99
16) Iodomethane	2.96	142	37360	9.40380 ppb		98
17) Acrylonitrile	3.79	52	13014	10.34464 ppb		81
18) Methylene chloride	3.43	84	15151	9.48248 ppb		98
19) Carbon disulfide	3.05	76	3929	8.64622 ppb	#	87
20) Methyl t-butyl ether (MtBE	3.88	73	81107	9.56410 ppb		97
21) Trans-1,2-DCE	3.84	96	26647	8.79065 ppb		89
22) Diisopropyl Ether	4.69	59	19686	10.36546 ppb		91
23) 1,1-DCA	4.49	63	80395	10.00189 ppb		95
24) Vinyl Acetate	4.69	87	45113	9.93687 ppb		95
25) Ethyl tert Butyl Ether	5.19	59	104979	9.90141 ppb		99
26) MEK (2-Butanone)	5.37	43	20005	10.25031 ppb		96
27) Cis-1,2-DCE	5.32	96	52760	10.24648 ppb		91
28) 2,2-Dichloropropane	5.31	77	33764	10.42720 ppb		91
29) Chloroform	5.75	83	98466	9.86467 ppb		97
30) Bromochloromethane	5.61	128	24790	9.88814 ppb		95
32) 1,1,1-TCA	5.95	97	59207	9.85810 ppb		92
33) Cyclohexane	6.03	41	14959	9.17770 ppb		93
34) 1,1-Dichloropropene	6.16	75	42905	9.83684 ppb		97
35) 2,2,4-Trimethylpentane	6.54	57	64643	10.31205 ppb		96
37) Carbon Tetrachloride	6.15	117	56070	9.96085 ppb		92
38) Tert Amyl Methyl Ether	6.58	73	112785	9.99431 ppb		99
39) 1,2-DCA	6.41	62	64294	9.82217 ppb		99
40) Benzene	6.39	78	166002	9.28513 ppb		99
41) TCE	7.14	95	45825	9.43003 ppb		99
42) 2-Pentanone	7.36	43	475166	124.11594 ppb		100
43) 1,2-Dichloropropane	7.37	63	57766	9.90259 ppb		100

(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120725\0726T04.D Vial: 29
Acq On : 26 Jul 12 10:46 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/L Vol Std 07-26-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:06 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
44)	Bromodichloromethane	7.67	83	80999	10.03720	ppb	98
45)	Methyl Cyclohexane	7.35	83	34388	9.91121	ppb	98
46)	Dibromomethane	7.49	93	32545	10.25640	ppb	98
47)	2-Chloroethyl vinyl ether	7.98	106	999	8.84903	ppb	100
48)	MIBK (methyl isobutyl ket	8.32	43	26280	9.54494	ppb	95
49)	1-Bromo-2-chloroethane	7.98	63	41208	10.15305	ppb	100
50)	Cis-1,3-Dichloropropene	8.15	75	80563	10.08832	ppb	98
51)	Toluene	8.50	91	210933	9.99972	ppb	100
52)	Trans-1,3-Dichloropropene	8.72	75	71643	10.17479	ppb	97
53)	1,1,2-TCA	8.90	83	46611	9.92446	ppb	98
54)	2-Hexanone	9.17	43	31774	10.06364	ppb	94
57)	1,2-EDB	9.40	107	49540	10.28844	ppb	95
58)	Tetrachloroethene	9.05	166	55383	10.17231	ppb	96
59)	1-Chlorohexane	9.90	91	65775	10.14949	ppb	97
60)	1,1,1,2-Tetrachloroethane	9.99	131	64208	10.09434	ppb	97
61)	m&p-Xylene	10.14	106	206429	20.80390	ppb	100
62)	o-Xylene	10.54	106	108934	10.61263	ppb	96
63)	Styrene	10.55	104	182400	10.45858	ppb	99
65)	1,3-Dichloropropane	9.06	76	87161	10.32421	ppb	98
66)	Dibromochloromethane	9.29	129	66056	10.39253	ppb	100
67)	Chlorobenzene	9.90	112	168239	10.13286	ppb	98
68)	Ethylbenzene	10.03	91	266504	10.20819	ppb	98
69)	Bromoform	10.71	173	46121	10.59745	ppb	99
71)	Isopropylbenzene	10.91	105	256398	10.12215	ppb	98
72)	1,1,2,2-Tetrachloroethane	11.19	83	71093	10.11458	ppb	99
73)	1,2,3-Trichloropropane	11.23	110	20117	10.08407	ppb	99
74)	t-1,4-Dichloro-2-Butene	11.25	53	15689	11.75131	ppb	90
75)	Bromobenzene	11.19	156	82758	9.91078	ppb	99
76)	n-Propylbenzene	11.32	91	336546	10.31918	ppb	98
77)	4-Ethyltoluene	11.43	105	294163	10.50301	ppb	99
78)	2-Chlorotoluene	11.39	91	238448	10.25301	ppb	98
79)	1,3,5-Trimethylbenzene	11.50	105	244143	10.51569	ppb	100
80)	4-Chlorotoluene	11.50	91	235882	10.24689	ppb	100
81)	Tert-Butylbenzene	11.82	119	216392	10.17400	ppb	98
82)	1,2,4-Trimethylbenzene	11.86	105	251104	10.45204	ppb	97
83)	Sec-Butylbenzene	12.04	105	303423	10.68549	ppb	100
84)	p-Isopropyltoluene	12.19	119	253700	10.57402	ppb	99
85)	Benzyl Chloride	12.35	91	76432	10.66038	ppb	97
86)	1,3-DCB	12.13	146	160661	10.17369	ppb	100
87)	1,4-DCB	12.22	146	165656	10.01635	ppb	99
88)	n-Butylbenzene	12.59	91	226597	10.53674	ppb	100
89)	1,2-DCB	12.59	146	155808	10.17964	ppb	98
90)	Hexachloroethane	12.86	117	43009	9.78378	ppb	93
91)	1,2-Dibromo-3-chloropropan	13.36	157	14662	11.13450	ppb	87
92)	1,2,4-Trichlorobenzene	14.20	180	70464	10.04343	ppb	98
93)	Hexachlorobutadiene	14.38	223	30194	10.30220	ppb	86
94)	Naphthalene	14.43	128	202923	10.35837	ppb	99
95)	1,2,3-Trichlorobenzene	14.68	180	102072	10.21099	ppb	97

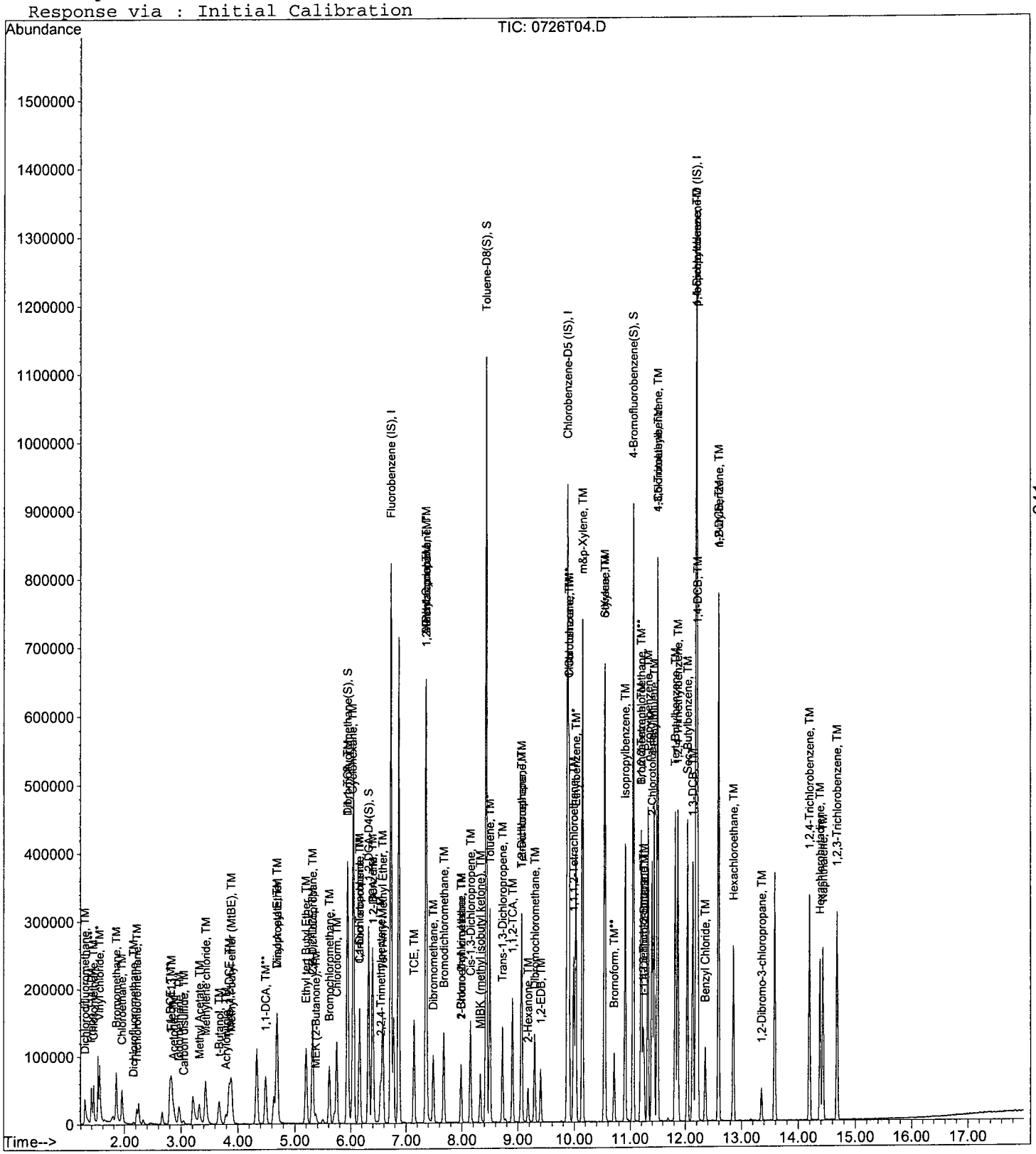
(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120725\0726T04.D
Acq On : 26 Jul 12 10:46
Sample : 10ug/L Vol Std 07-26-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 29
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 11:06 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



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VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68268
Case No: Initial Cal. Date: 07/25/12
Matrix: Water Instrument: Thor (TGAS.M) Initials:

			0725T04.D	0725T05.D	0725T06.D	0725T07.D	0725T08.D	0725T09.D	0725T10.D							
		Compound	20	50	100	300	600	800	1000				Avg	%RSD		r2
1	I	Fluorobenzene (IS)	ISTD													
2	TMHBL	Gasoline	16.5	7.205	4.047	2.093	1.605	1.465	1.393				4.9	113	TMHBL	1.000
3	I	Chlorobenzene-D5 (IS)	ISTD													
4	I	1,4-Dichlorobenzene-D (IS)	ISTD													
5																
6																
7																
8																
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ARS 7/26/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0725T03.D Vial: 2
Acq On : 25 Jul 12 10:22 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 8:59 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	383424	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	310848	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	187136	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	196549	32.75773 ppb		0.00
Spiked Amount 31.881			Recovery = 102.750%			
36) 1,2-DCA-D4(S)	6.33	65	189874	34.05104 ppb		0.00
Spiked Amount 33.647			Recovery = 101.202%			
56) Toluene-D8(S)	8.43	98	687242	37.39680 ppb		0.00
Spiked Amount 37.345			Recovery = 100.140%			
64) 4-Bromofluorobenzene(S)	11.05	95	268751	30.92365 ppb		0.00
Spiked Amount 29.515			Recovery = 104.773%			
Target Compounds						Qvalue
4) Chloromethane	1.45	50	159	-0.39190 ppb	#	74
6) Bromomethane	1.78	94	376	0.07763 ppb	#	3
11) Acetone	2.90	43	3396	1.47860 ppb		98
14) t-Butanol	3.69	59	126	1.01338 ppb	#	72
15) Methyl Acetate	3.34	43	3113	-0.48779 ppb		93
18) Methylene chloride	3.45	84	326	-0.71073 ppb		84
23) 1,1-DCA	4.34	63	775	0.10017 ppb	#	1
26) MEK (2-Butanone)	5.39	43	1036	0.87321 ppb	#	46
34) 1,1-Dichloropropene	6.05	75	22005	5.24130 ppb	#	48
35) 2,2,4-Trimethylpentane	6.55	57	913	0.15131 ppb		91
37) Carbon Tetrachloride	6.05	117	28709	5.29852 ppb	#	14
38) Tert Amyl Methyl Ether	6.73	73	8830	0.81289 ppb	#	29
39) 1,2-DCA	6.40	62	6268	0.99480 ppb	#	74
40) Benzene	6.40	78	769435	44.71126 ppb		98
48) MIBK (methyl isobutyl ket	8.43	43	1645	0.62070 ppb	#	1
51) Toluene	8.50	91	828486	40.80362 ppb		100
58) Tetrachloroethene	9.06	166	842	0.15978 ppb		84
59) 1-Chlorohexane	10.03	91	895259	142.72325 ppb	#	17
61) m&p-Xylene	10.14	106	710590	73.98703 ppb		98
62) o-Xylene	10.54	106	355718	35.80371 ppb		99
63) Styrene	10.54	104	17860	1.05802 ppb	#	1
68) Ethylbenzene	10.03	91	895459	35.43670 ppb		99
79) 1,3,5-Trimethylbenzene	11.50	105	3503	0.15620 ppb		89
81) Tert-Butylbenzene	11.86	119	92293	4.49215 ppb	#	73
82) 1,2,4-Trimethylbenzene	11.86	105	731223	31.50884 ppb		99
83) Sec-Butylbenzene	11.86	105	709314	25.85946 ppb	#	55
94) Naphthalene	14.43	128	598073	31.60454 ppb		99

ARS 7/26/12

(#) = qualifier out of range (m) = manual integration

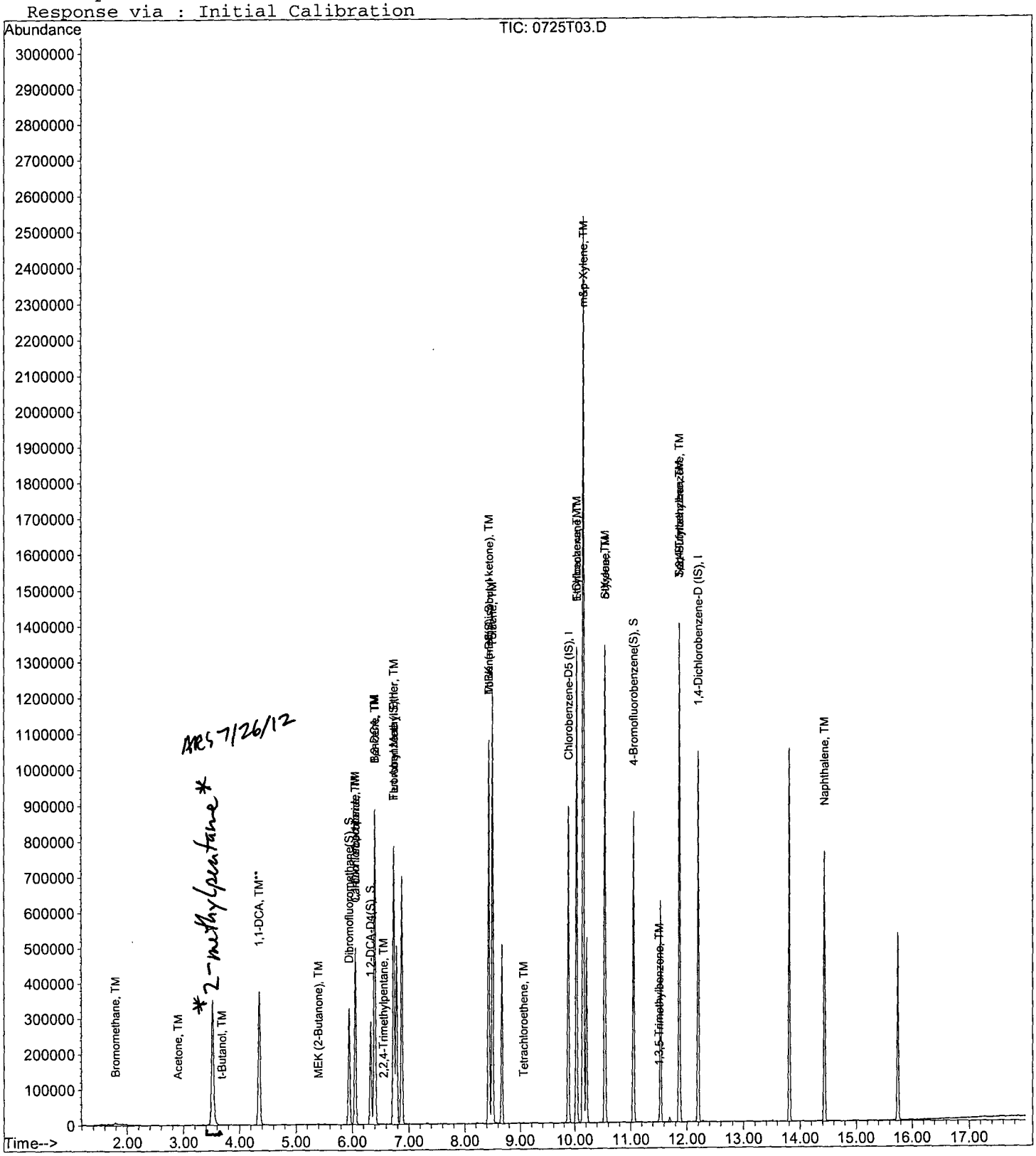
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T03.D
Acq On : 25 Jul 12 10:22
Sample : VOC MIX MARKER
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 2
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 8:59 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:59 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	757122	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	882358	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	975664	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10003915m	-268.75372	ppb	100

(#) = qualifier out of range (m) = manual integration

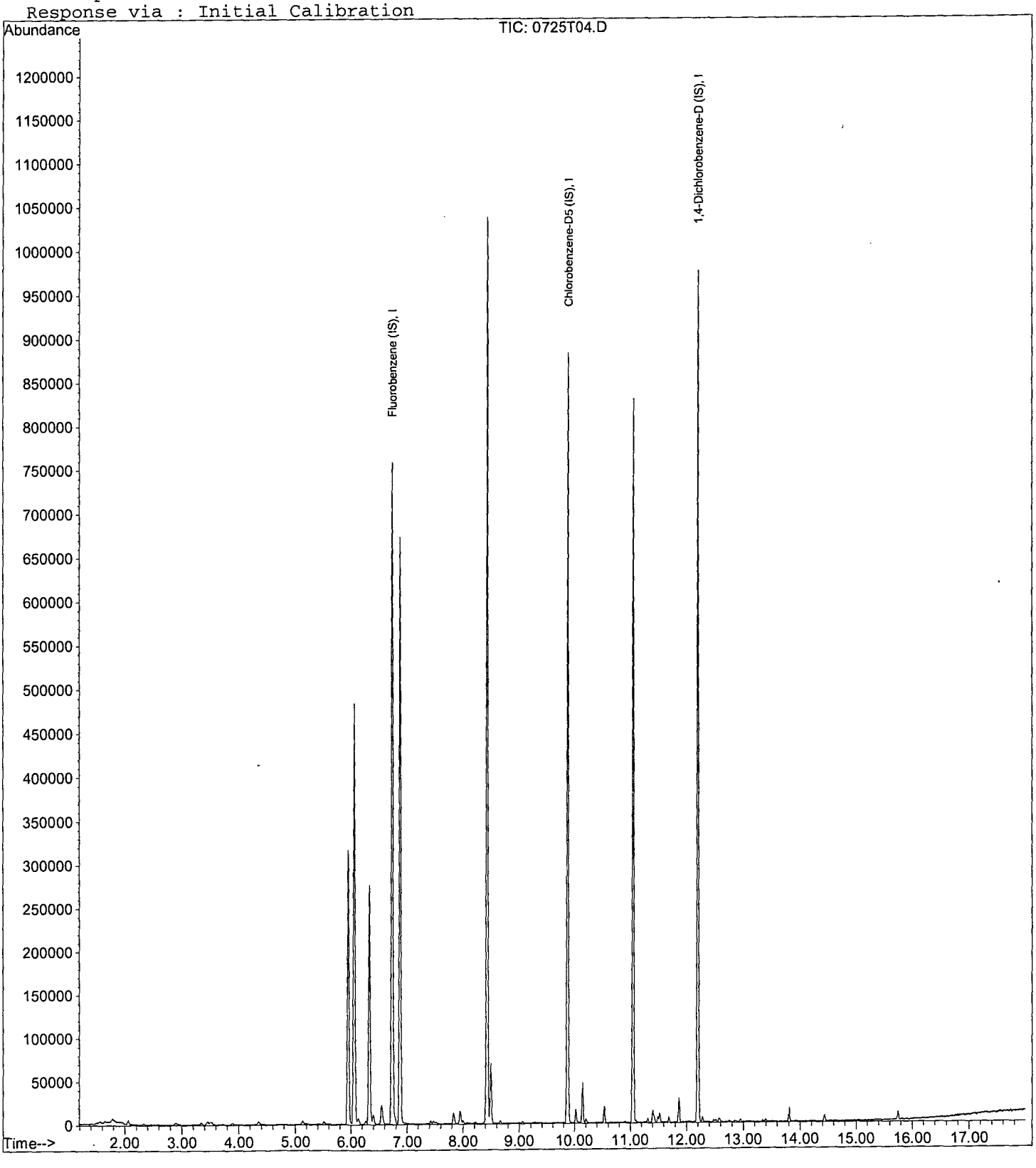
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D
Acq On : 25 Jul 12 10:50
Sample : 20ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 3
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:59 2012 Quant Results File: TGAS.RES

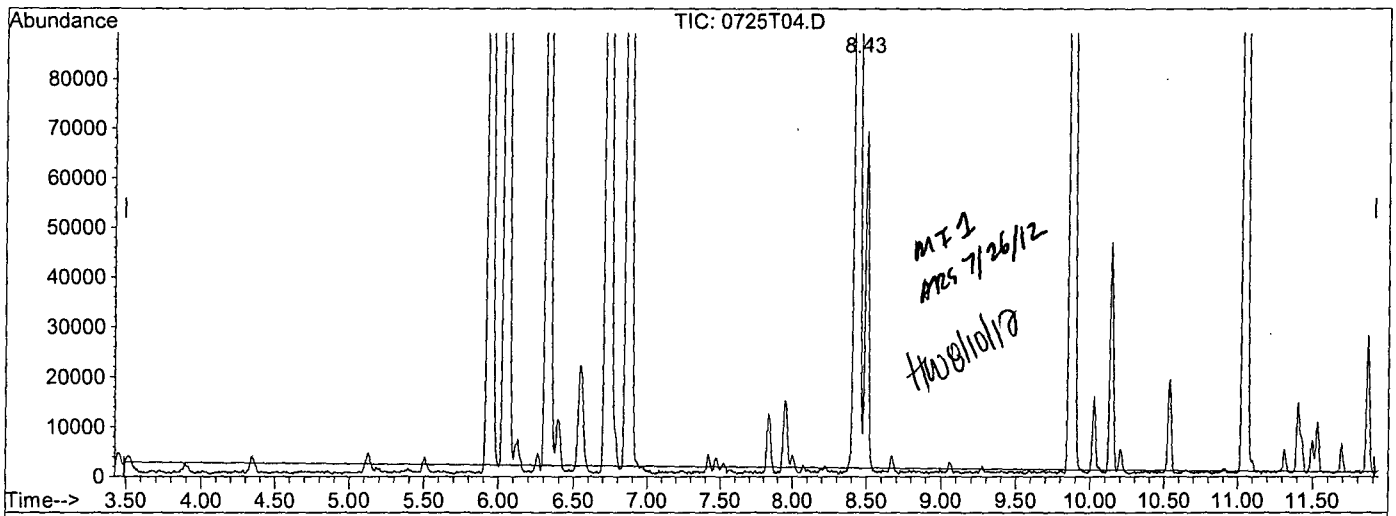
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

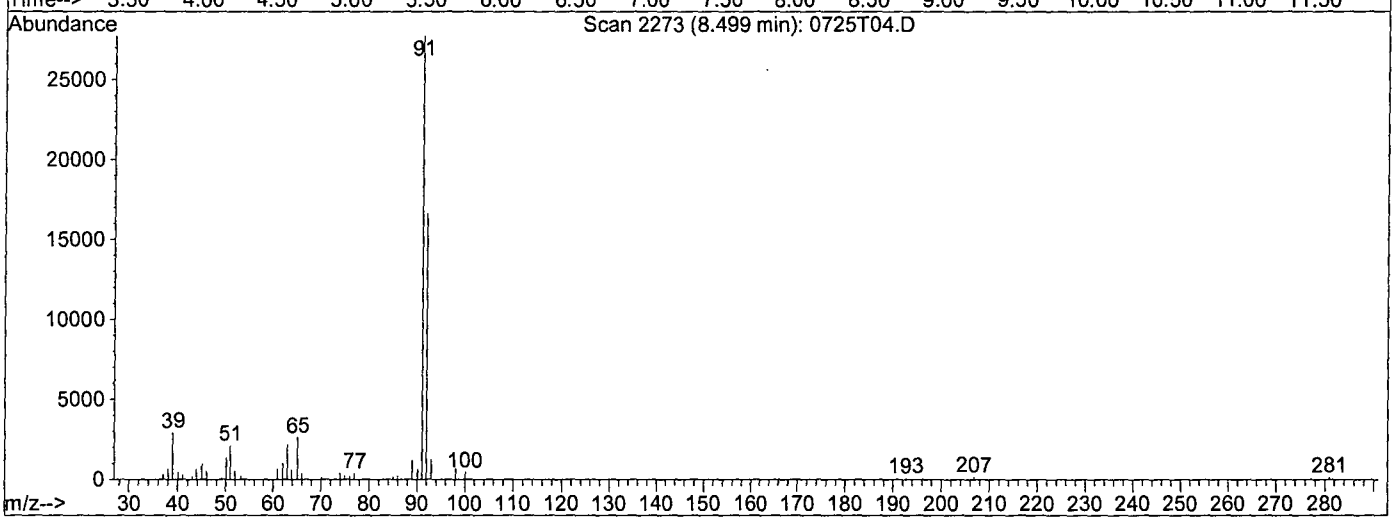


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T04.D

(2) Gasoline (TMHB)

8.50min -376.6351ppb m

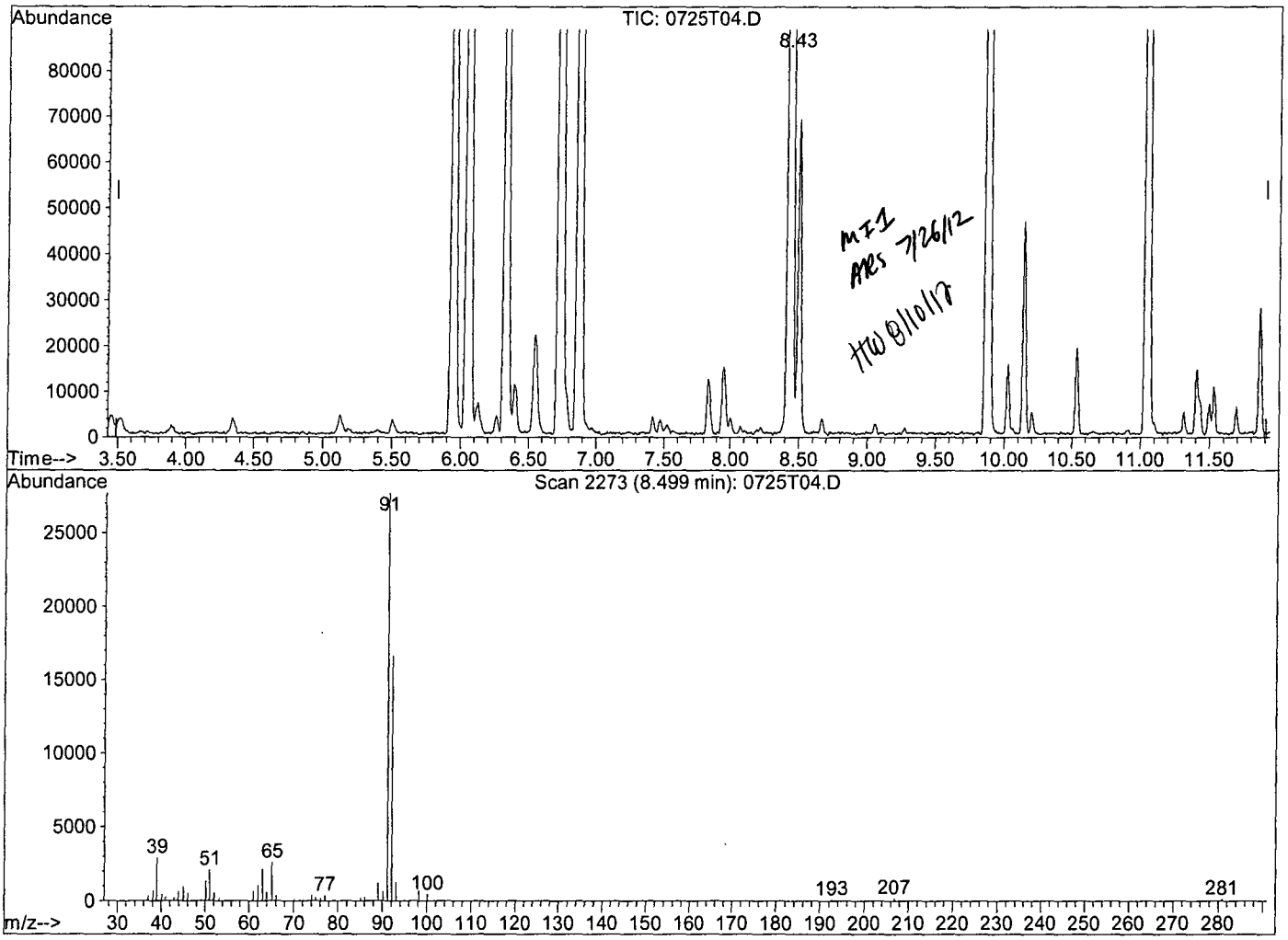
response 7759068

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	1.20#
0.00	1.40	3.55#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:59 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration



TIC: 0725T04.D

(2) Gasoline (TMHB)

8.43min -268.7537ppb m

response 10003915

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.93#
0.00	1.40	2.76#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	757407	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	877869	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	954185	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10913490m	-225.23930	ppb	100

(#) = qualifier out of range (m) = manual integration

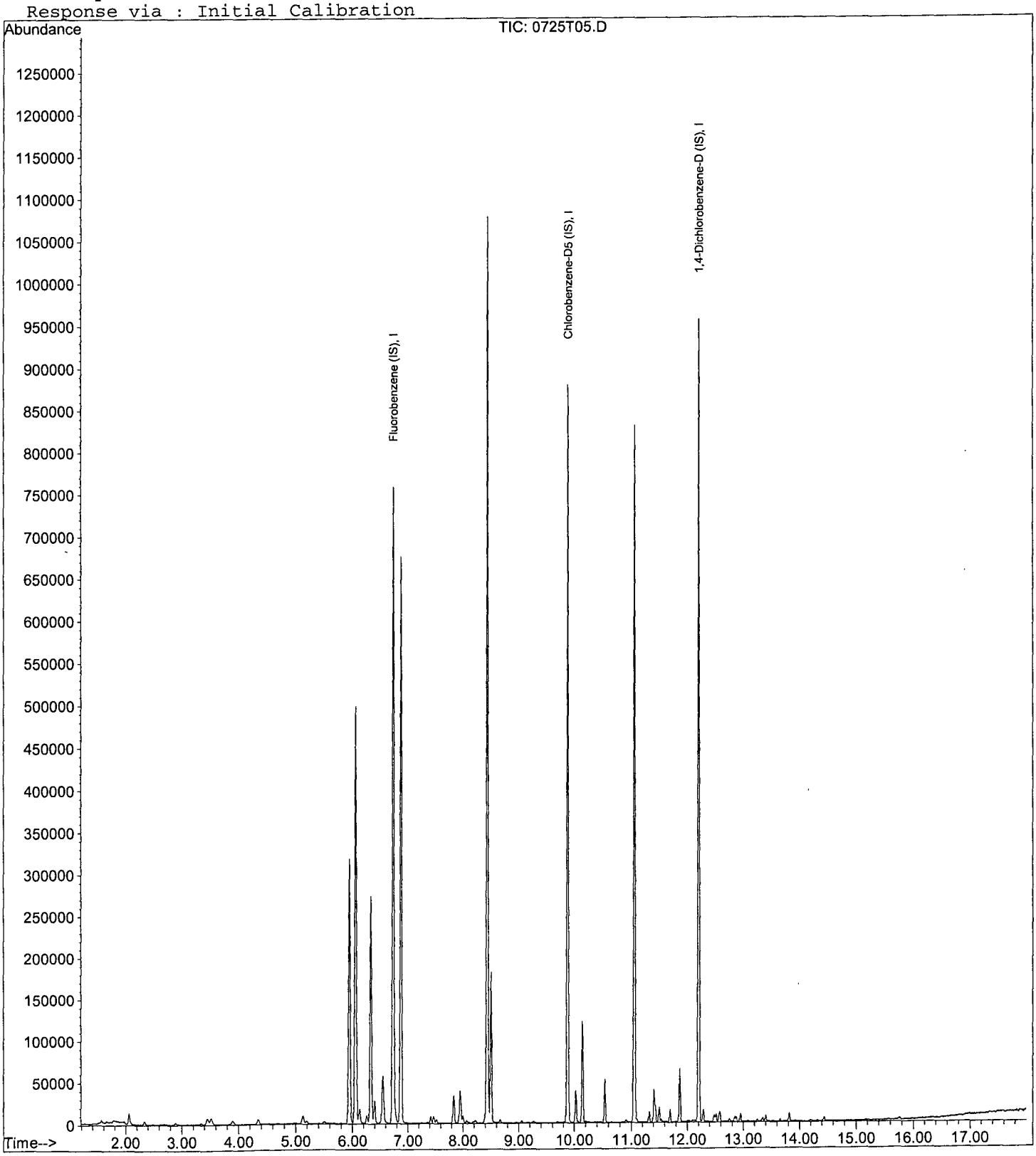
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D
Acq On : 25 Jul 12 11:17
Sample : 50ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 4
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

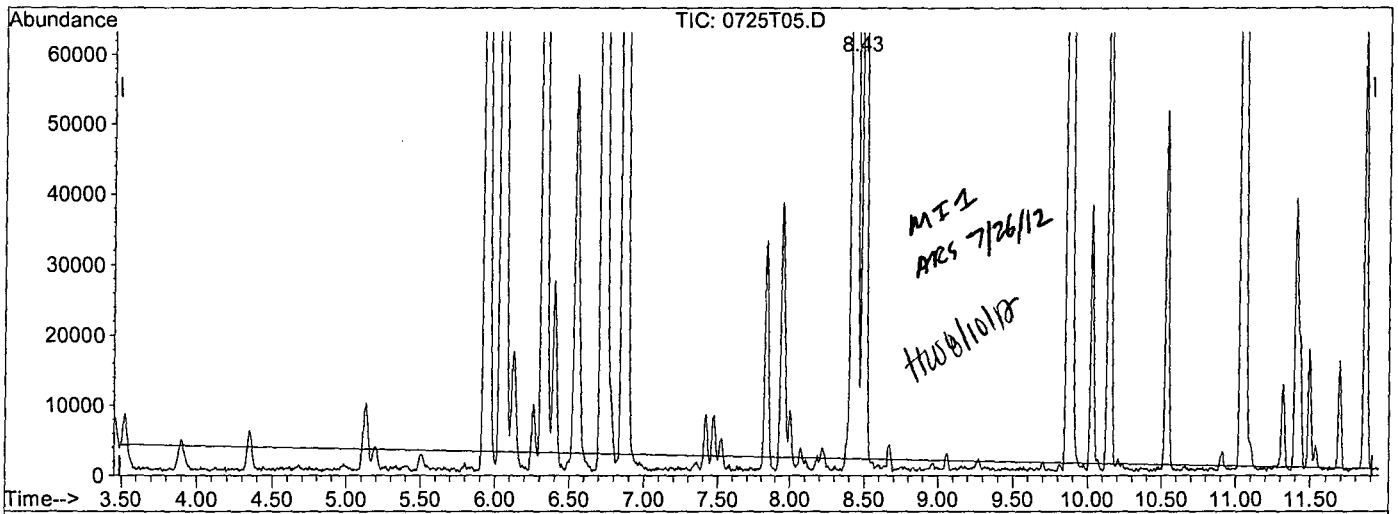
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

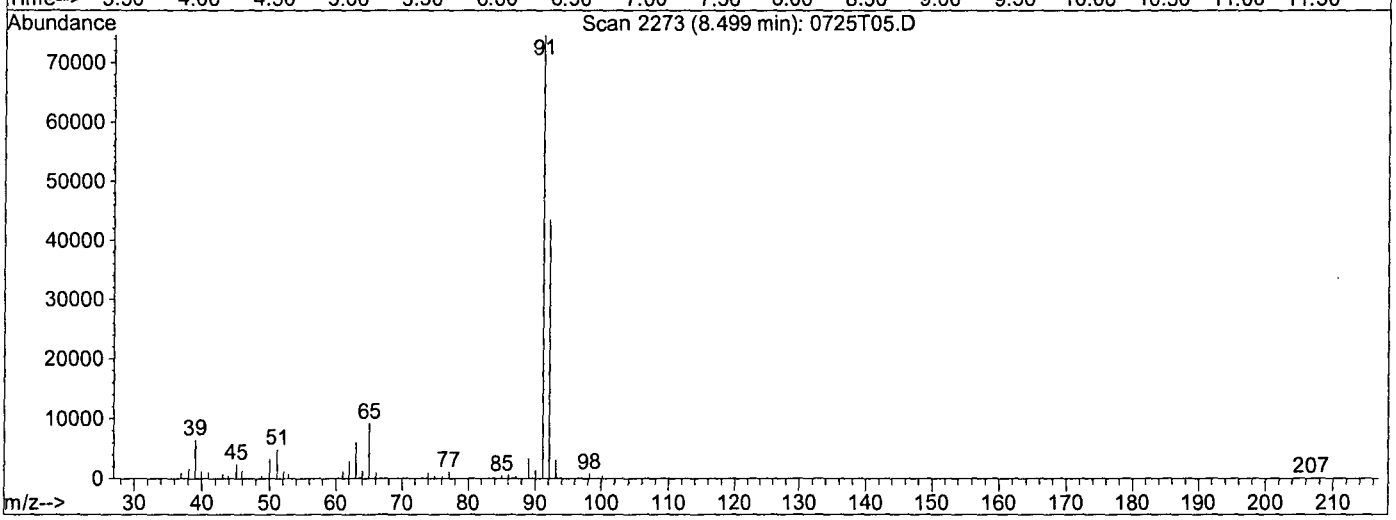


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T05.D

(2) Gasoline (TMHB)

8.50min -333.5537ppb m

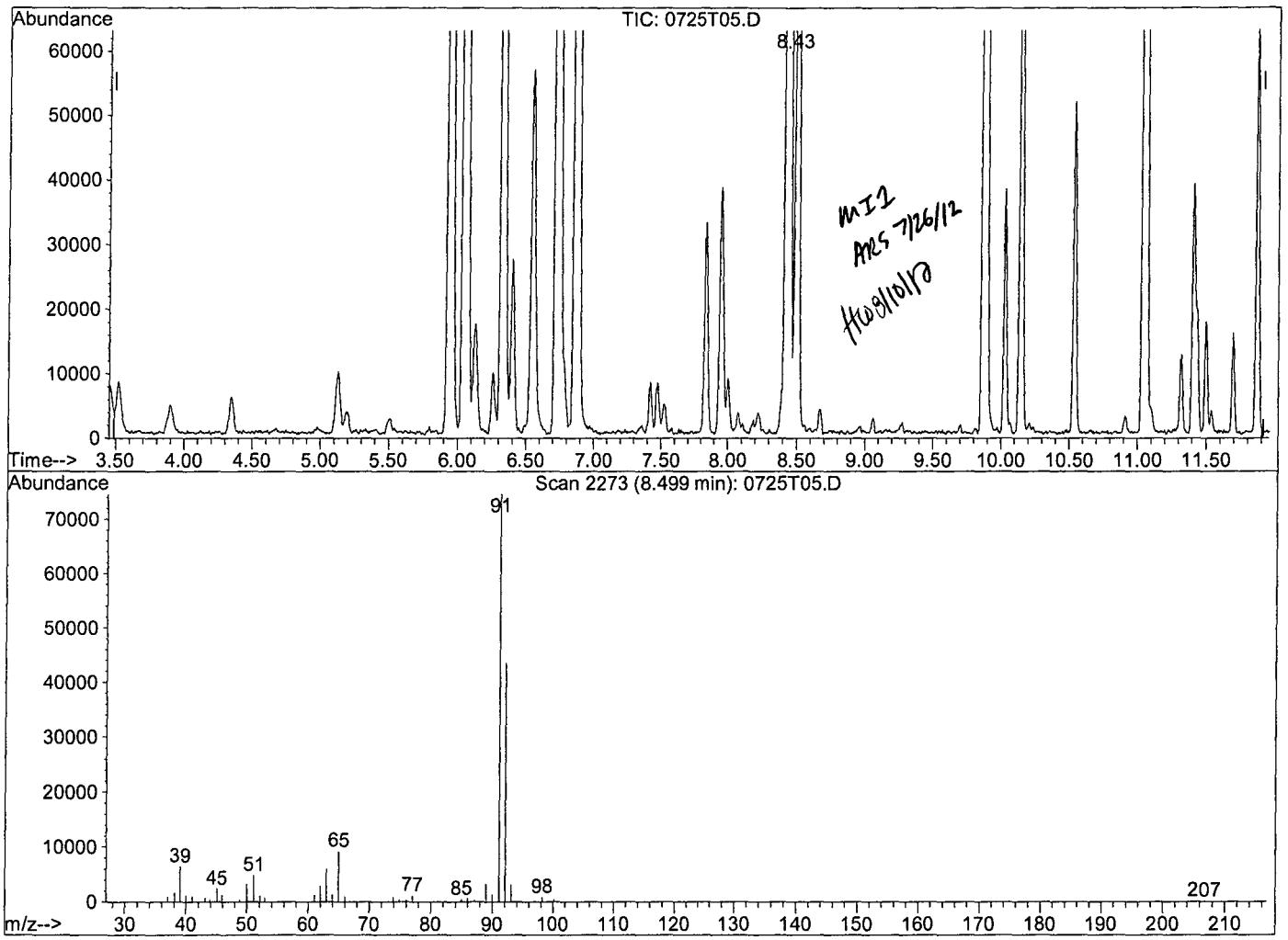
response 8658785

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	1.05#
0.00	1.40	3.08#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:58 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration



TIC: 0725T05.D

(2) Gasoline (TMHB)

8.43min -225.2393ppb m

response 10913490

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.83#
0.00	1.40	2.44#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	774747	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	873528	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	976201	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	12540540m	-160.56049	ppb	100

(#) = qualifier out of range (m) = manual integration

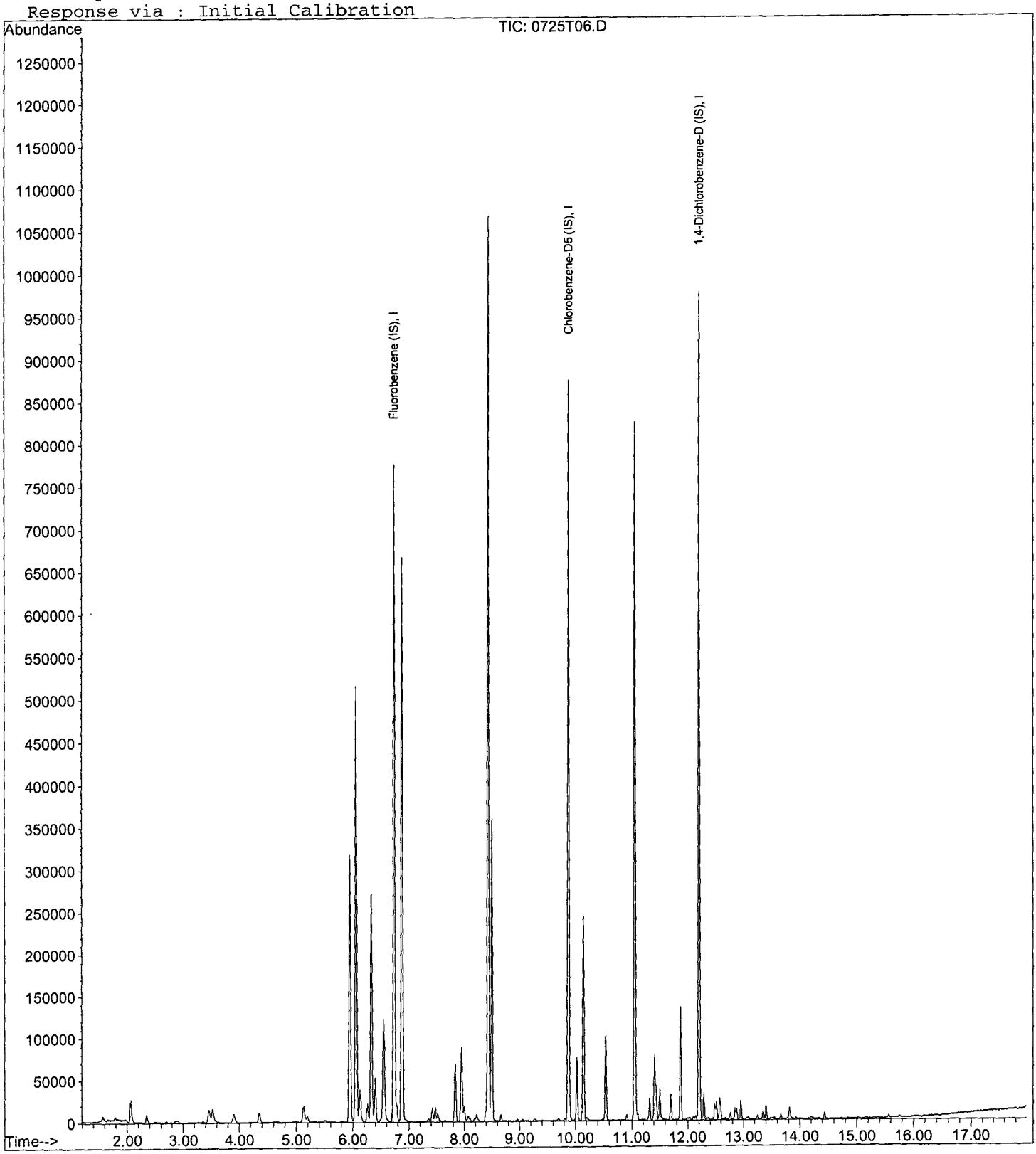
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D
Acq On : 25 Jul 12 11:45
Sample : 100ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 5
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

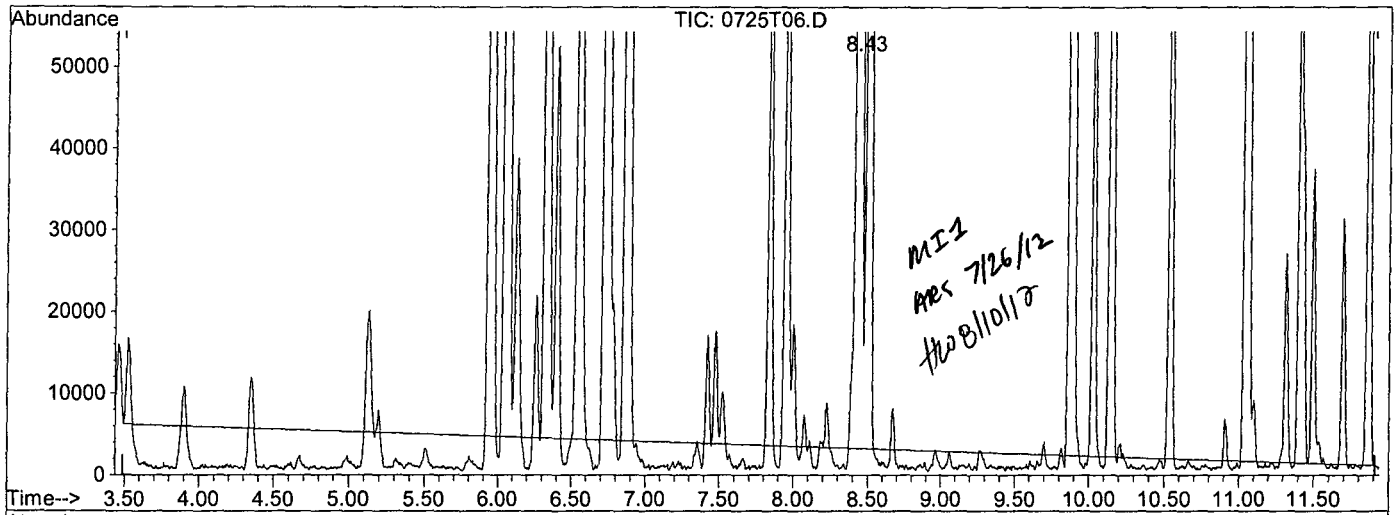
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

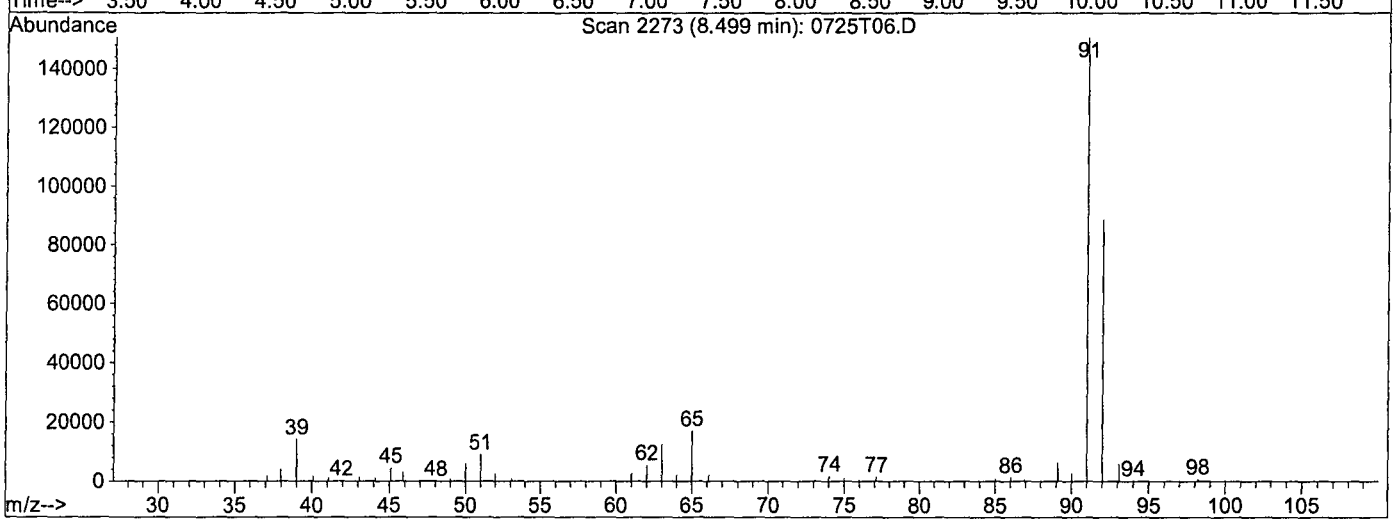


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T06.D

(2) Gasoline (TMHB)

8.50min -268.9292ppb m

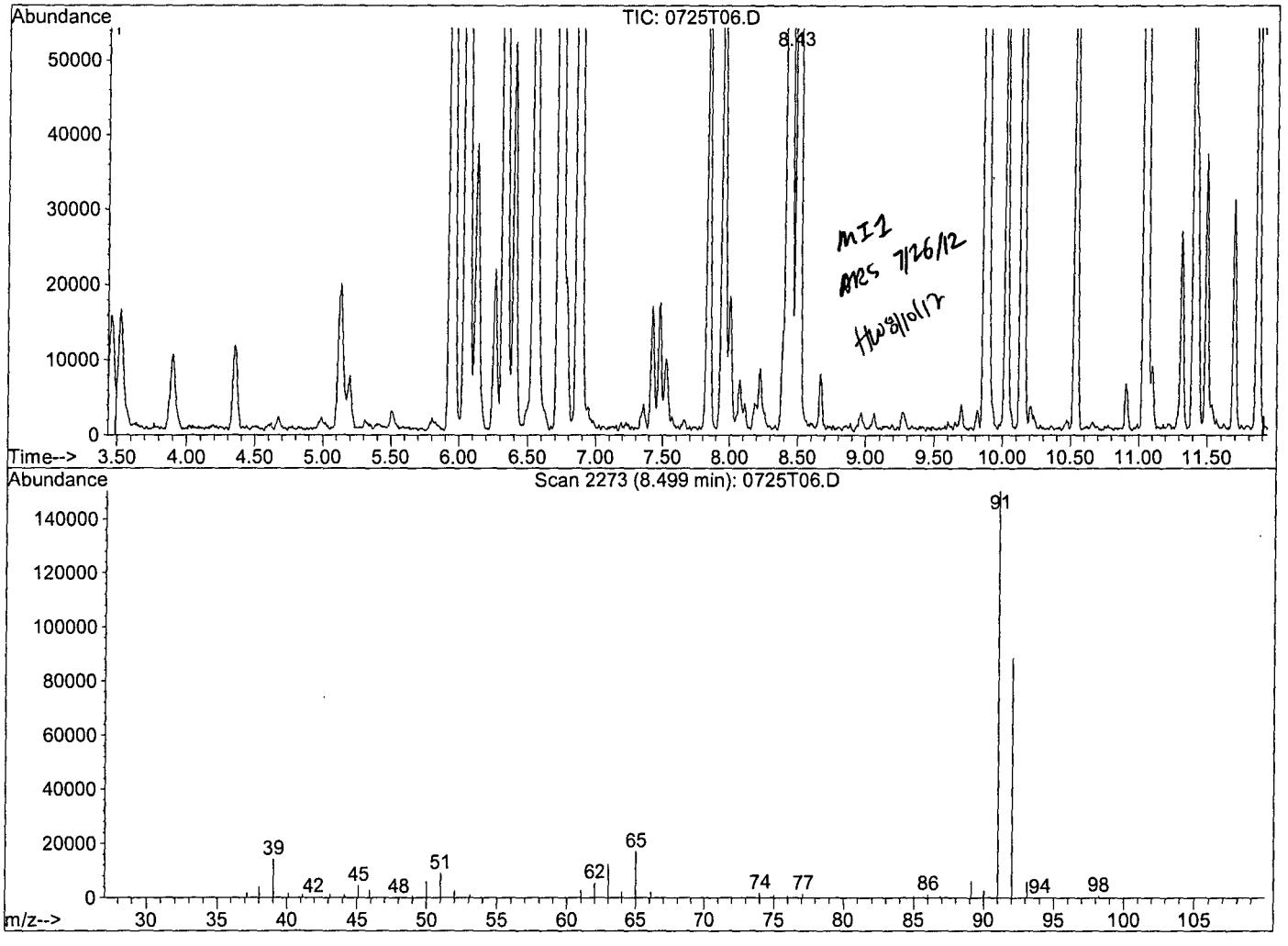
response 10233059

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.93#
0.00	1.40	2.66#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:58 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration



TIC: 0725T06.D

(2) Gasoline (TMHB)

8.43min -160.5605ppb m

response 12540540

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.76#
0.00	1.40	2.17#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:50 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	782981	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	897407	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	996199	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	19663639m	410.65057	ppb	100

(#) = qualifier out of range (m) = manual integration

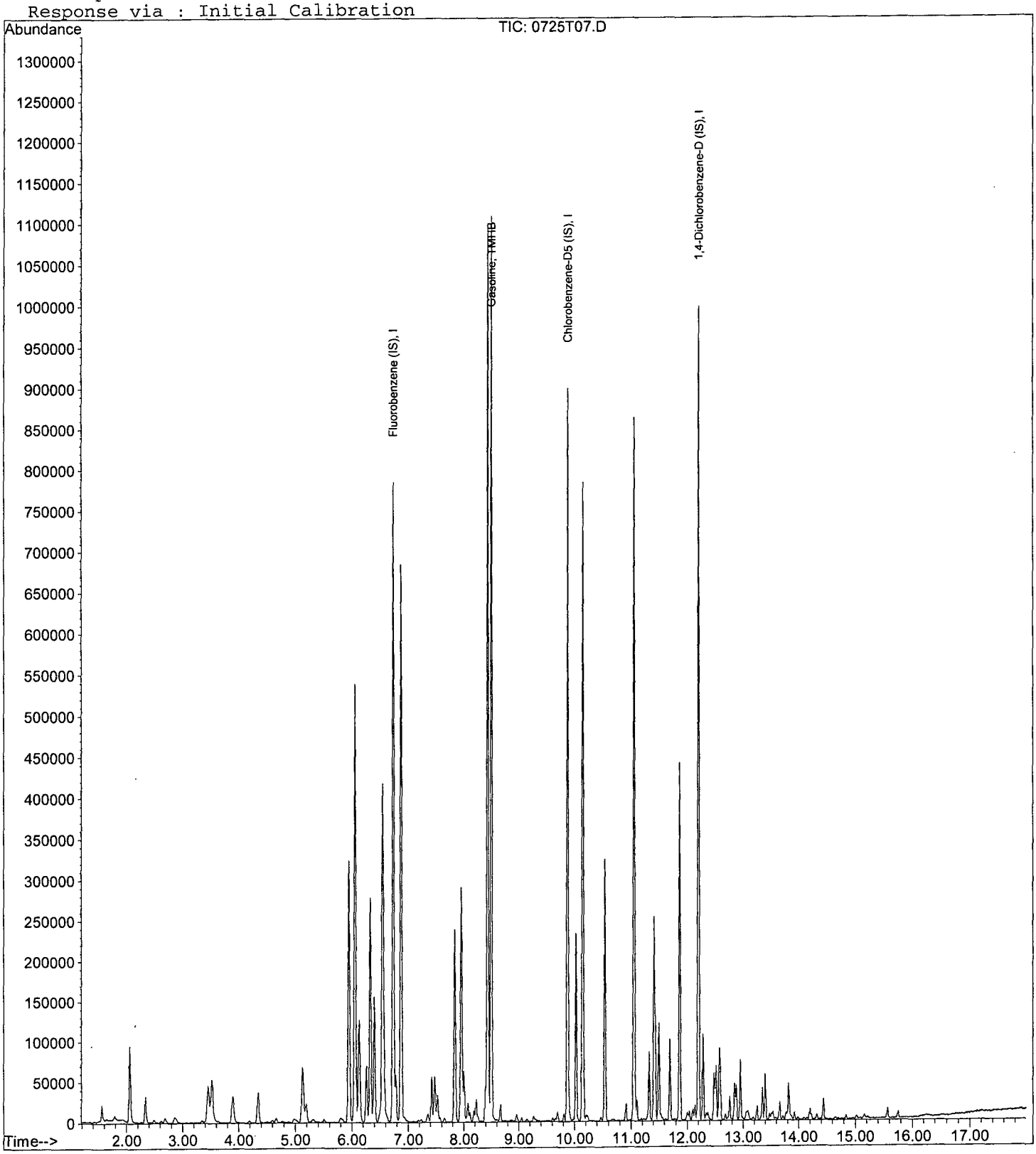
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D
Acq On : 25 Jul 12 12:13
Sample : 300ug/L Vol Std 07-25-13
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 6
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:50 2012 Quant Results File: TGAS.RES

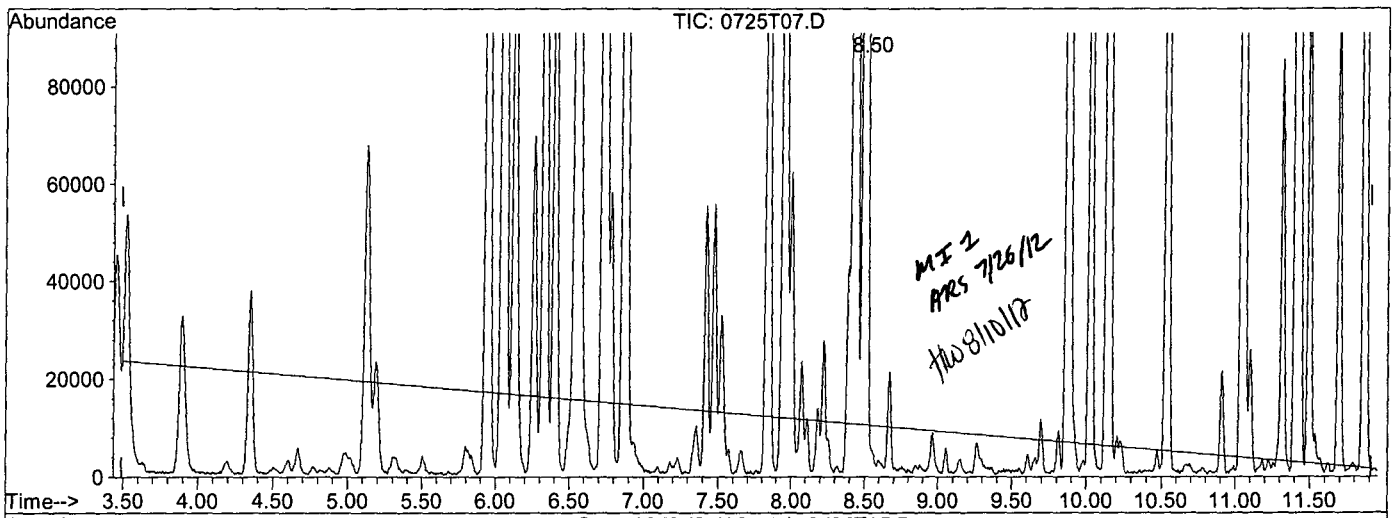
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

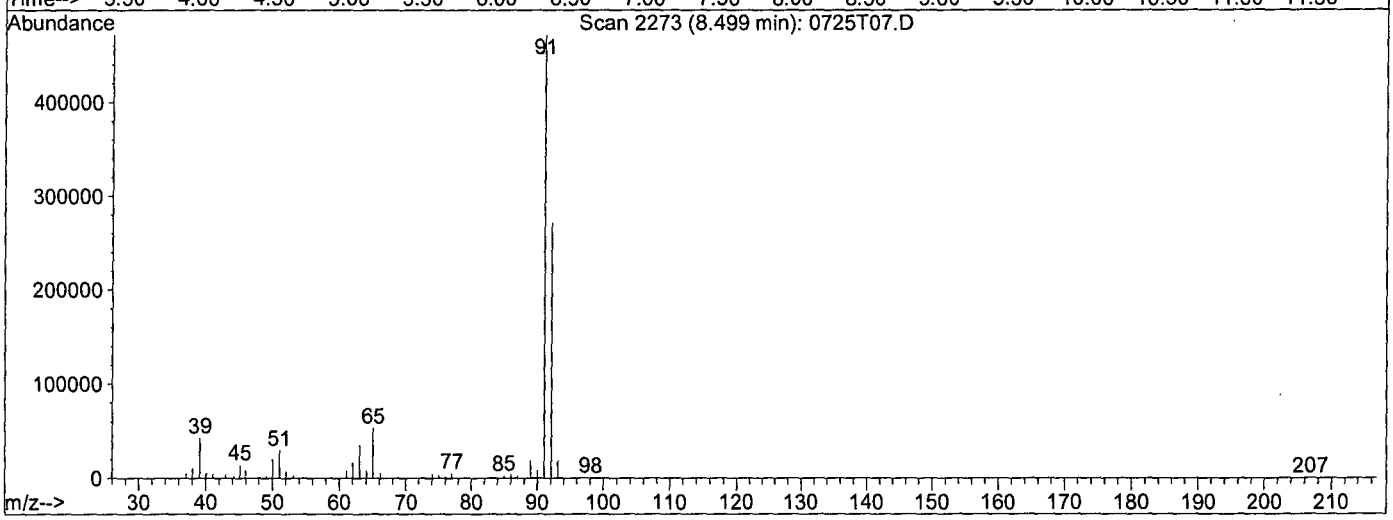


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:49 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Single Level Calibration





TIC: 0725T07.D

(2) Gasoline (TMHB)

8.50min 339.0063ppb m

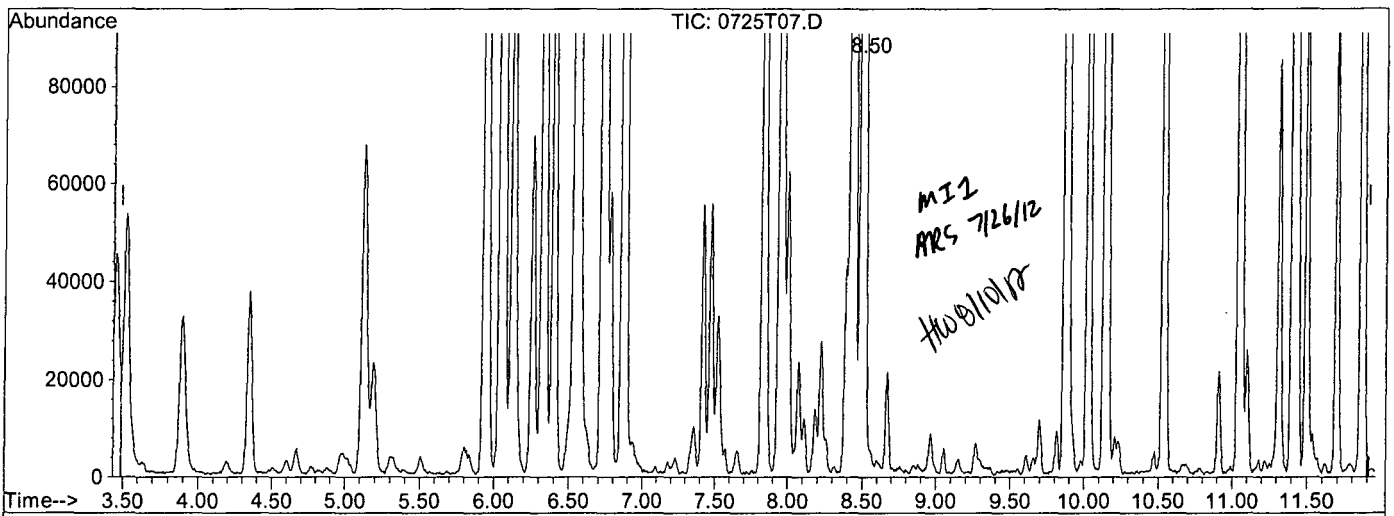
response 17146776

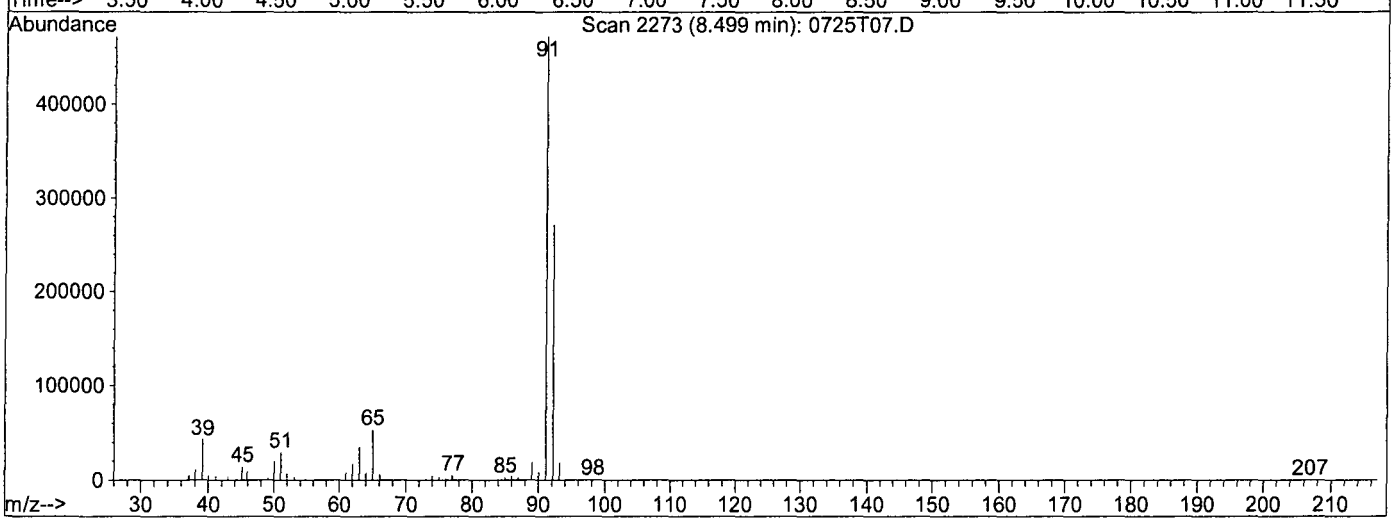
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.55#
0.00	0.00	1.63#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:50 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Single Level Calibration





TIC: 0725T07.D

(2) Gasoline (TMHB)

8.50min 410.6506ppb m

response 19663639

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.48#
0.00	0.00	1.42#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:56 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	782399	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	890063	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	996015	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	30141216m	652.19460	ppb	100

(#) = qualifier out of range (m) = manual integration

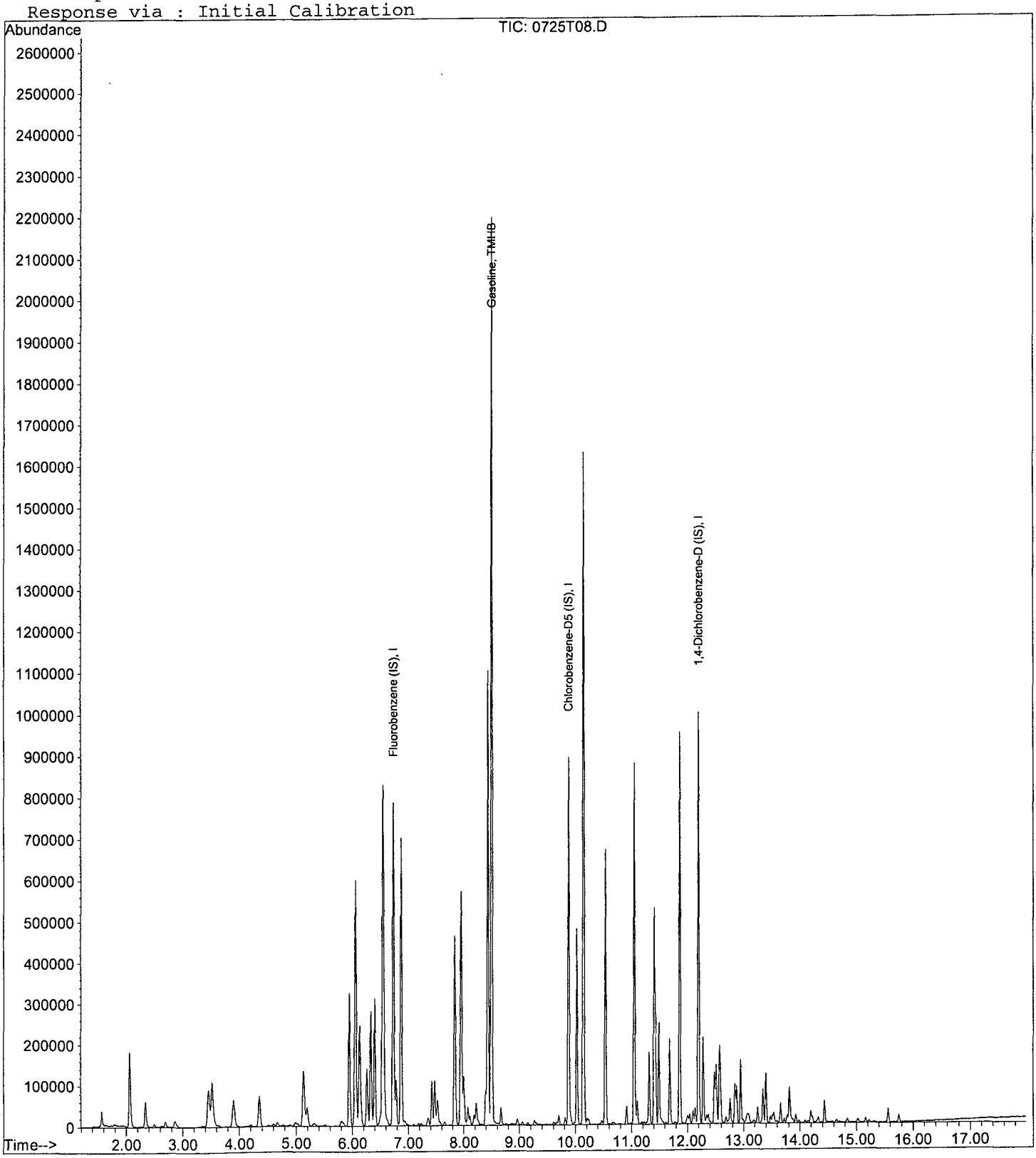
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D
Acq On : 25 Jul 12 12:41
Sample : 600ug/L Vol Std 07-25-14
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 7
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:56 2012 Quant Results File: TGAS.RES

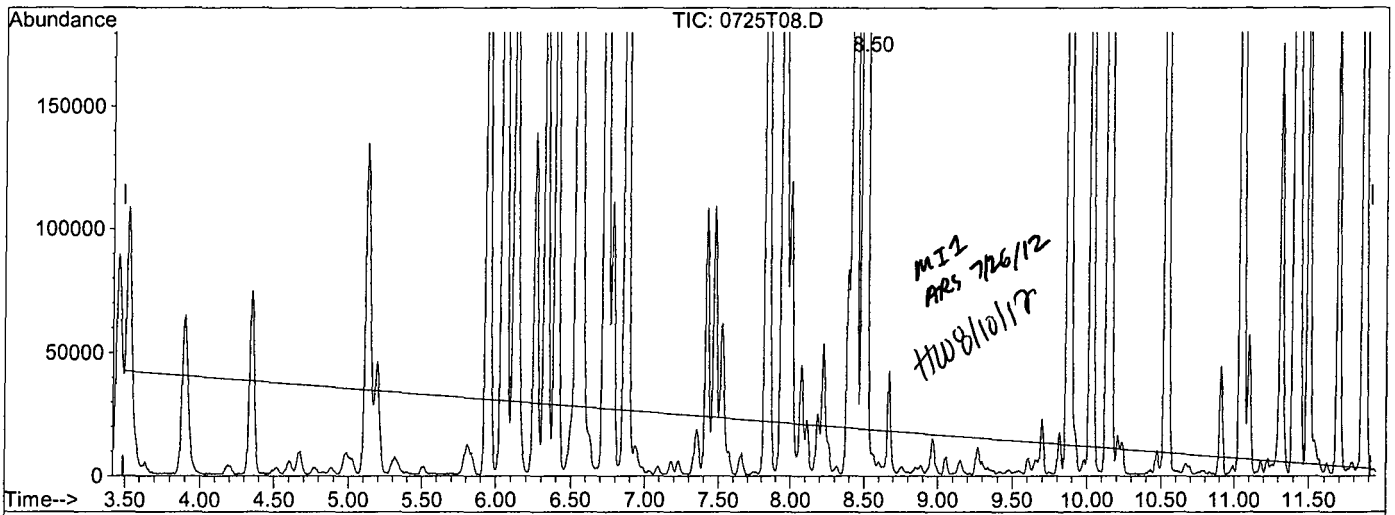
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

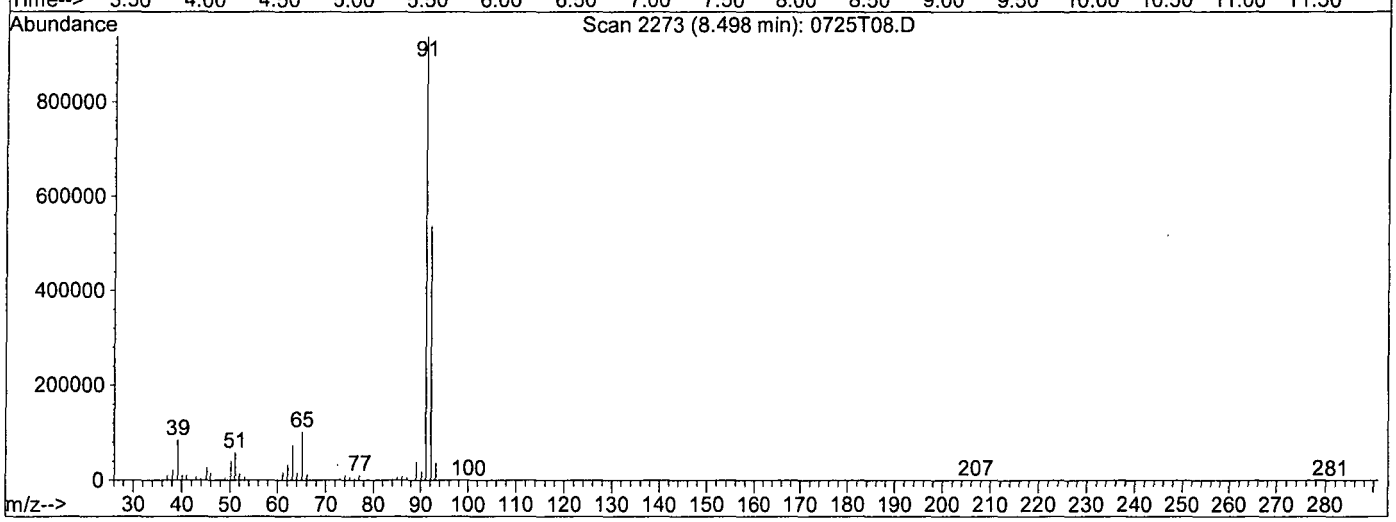


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T08.D

(2) Gasoline (TMHB)

8.50min 500.4974ppb m

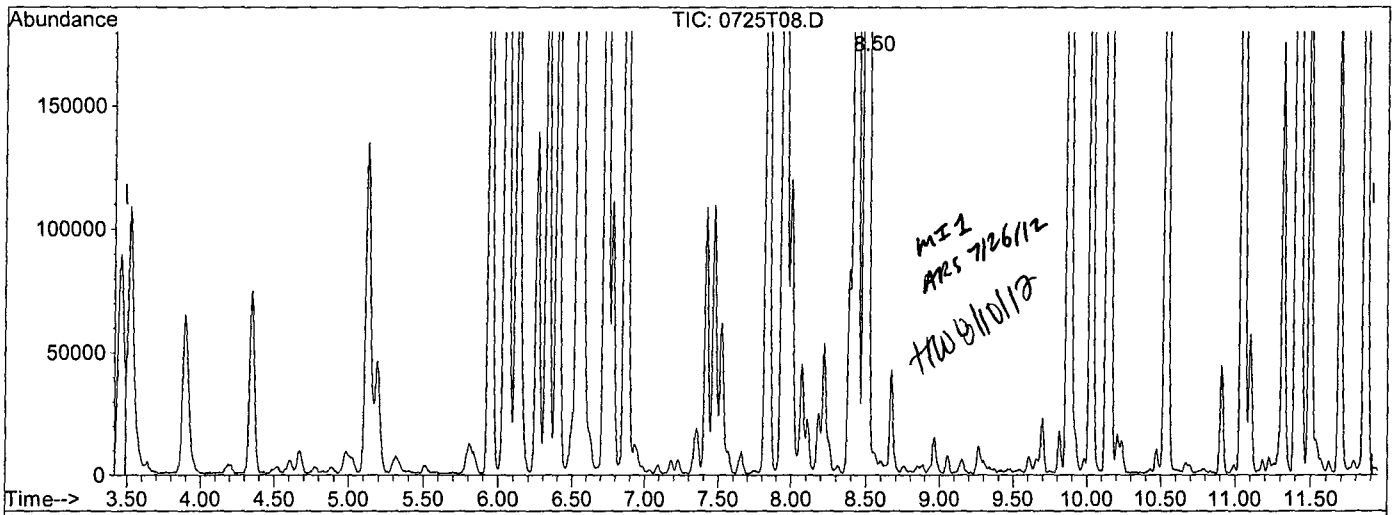
response 26879245

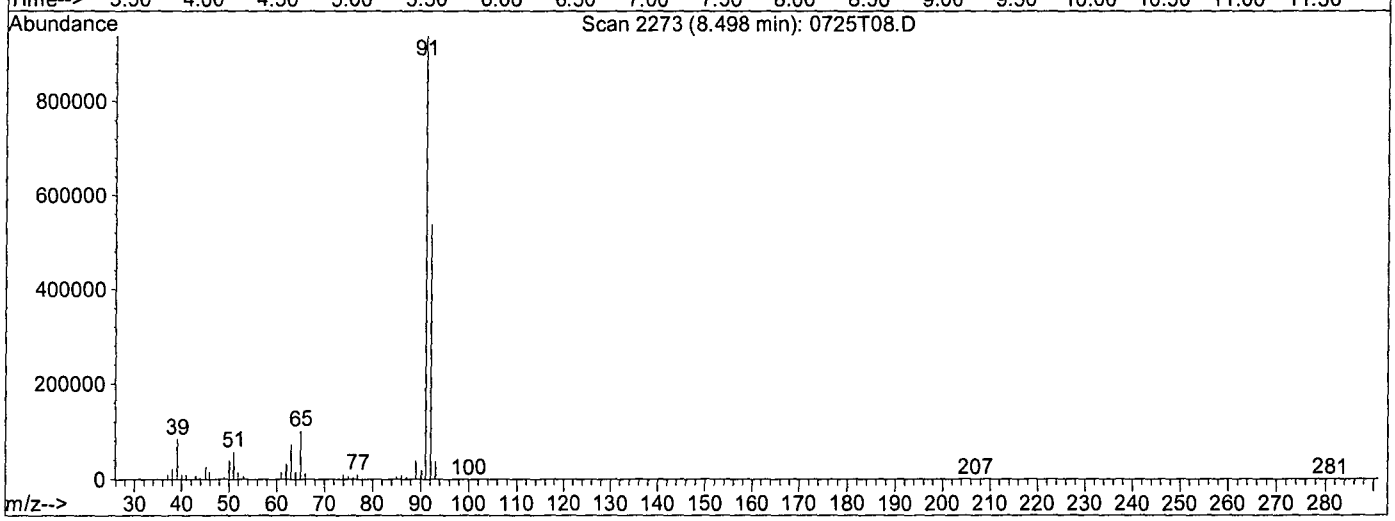
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.36#
0.00	1.40	1.04#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:56 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T08.D

(2) Gasoline (TMHB)

8.50min 652.1946ppb m

response 30141216

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.32#
0.00	1.40	0.93#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:55 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	788221	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	883861	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1013991	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	36946726m	955.99215	ppb	100

(#) = qualifier out of range (m) = manual integration

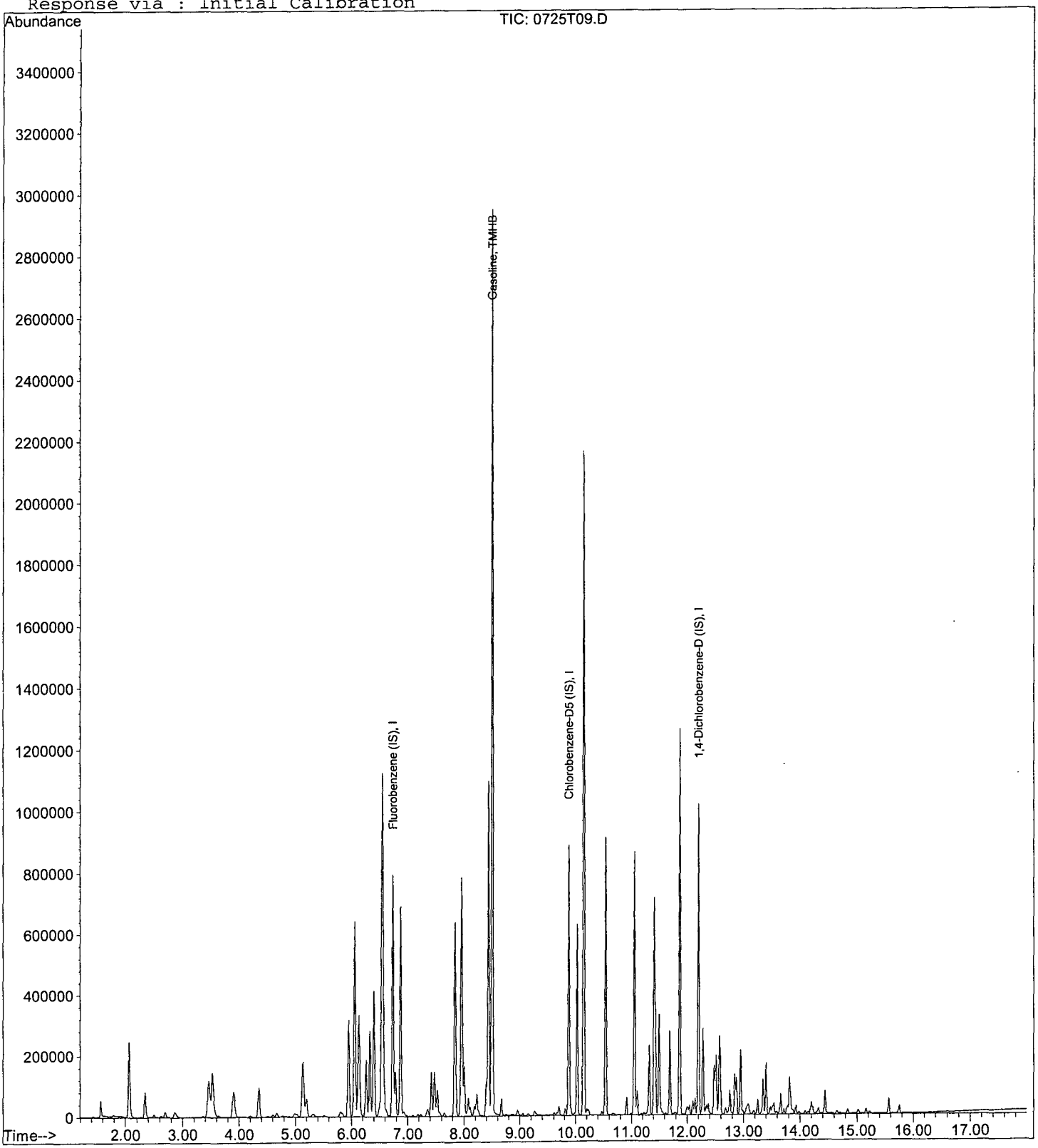
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D
Acq On : 25 Jul 12 13:08
Sample : 800ug/L Vol Std 07-25-15
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 8
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:55 2012 Quant Results File: TGAS.RES

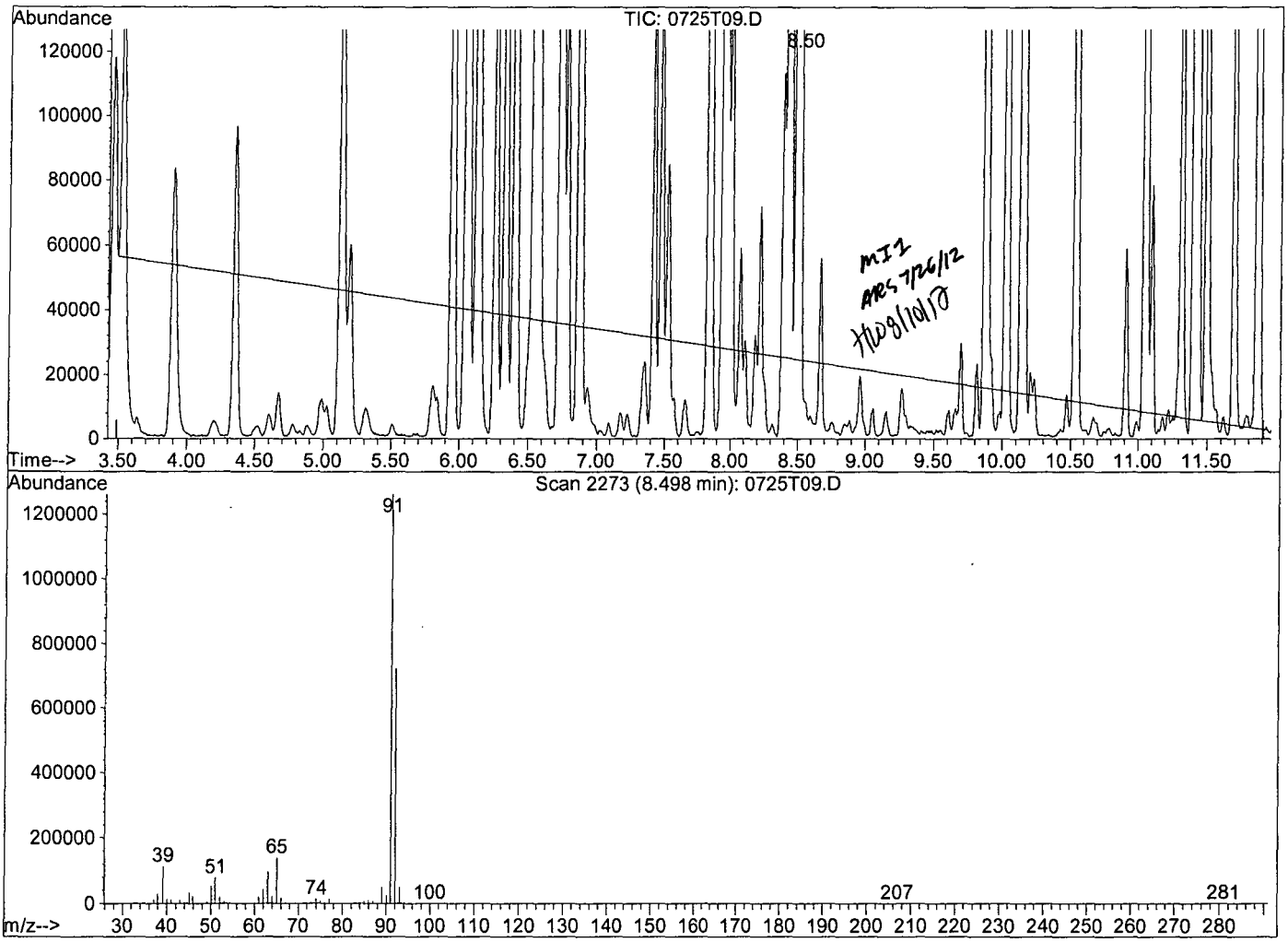
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration



TIC: 0725T09.D

(2) Gasoline (TMHB)

8.50min 790.6203ppb m

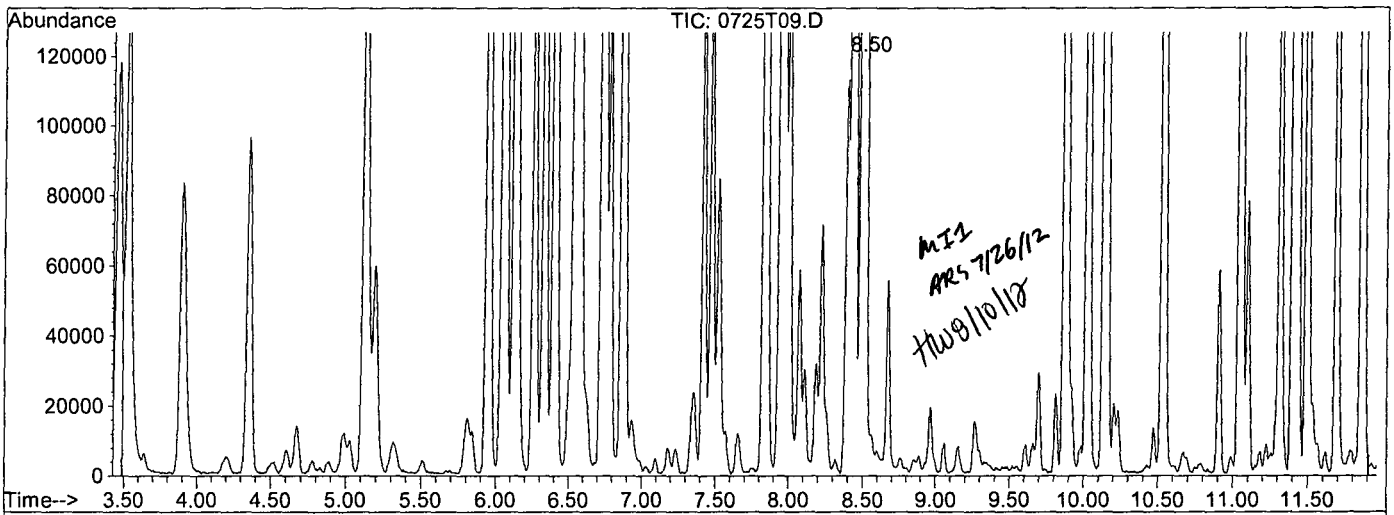
response 33364245

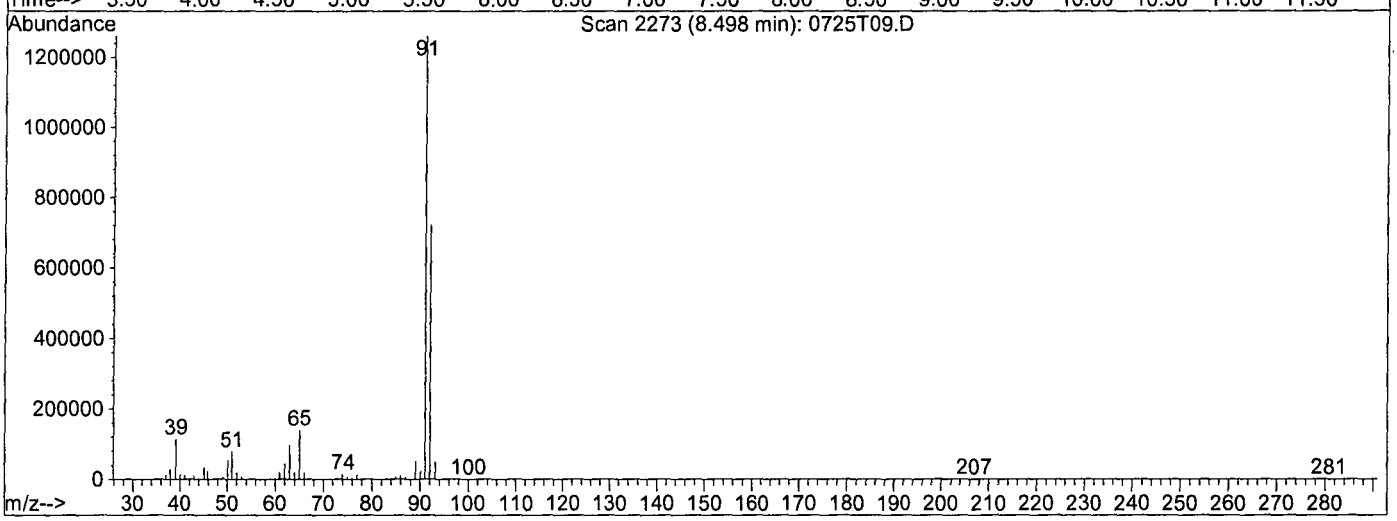
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.30#
0.00	1.40	0.86#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:55 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T09.D

(2) Gasoline (TMHB)

8.50min 955.9921ppb m

response 36946726

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.27#
0.00	1.40	0.77#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 16:00 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	808332	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	927489	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1069004	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	45050186m	1278.31907	ppb	100

(#) = qualifier out of range (m) = manual integration

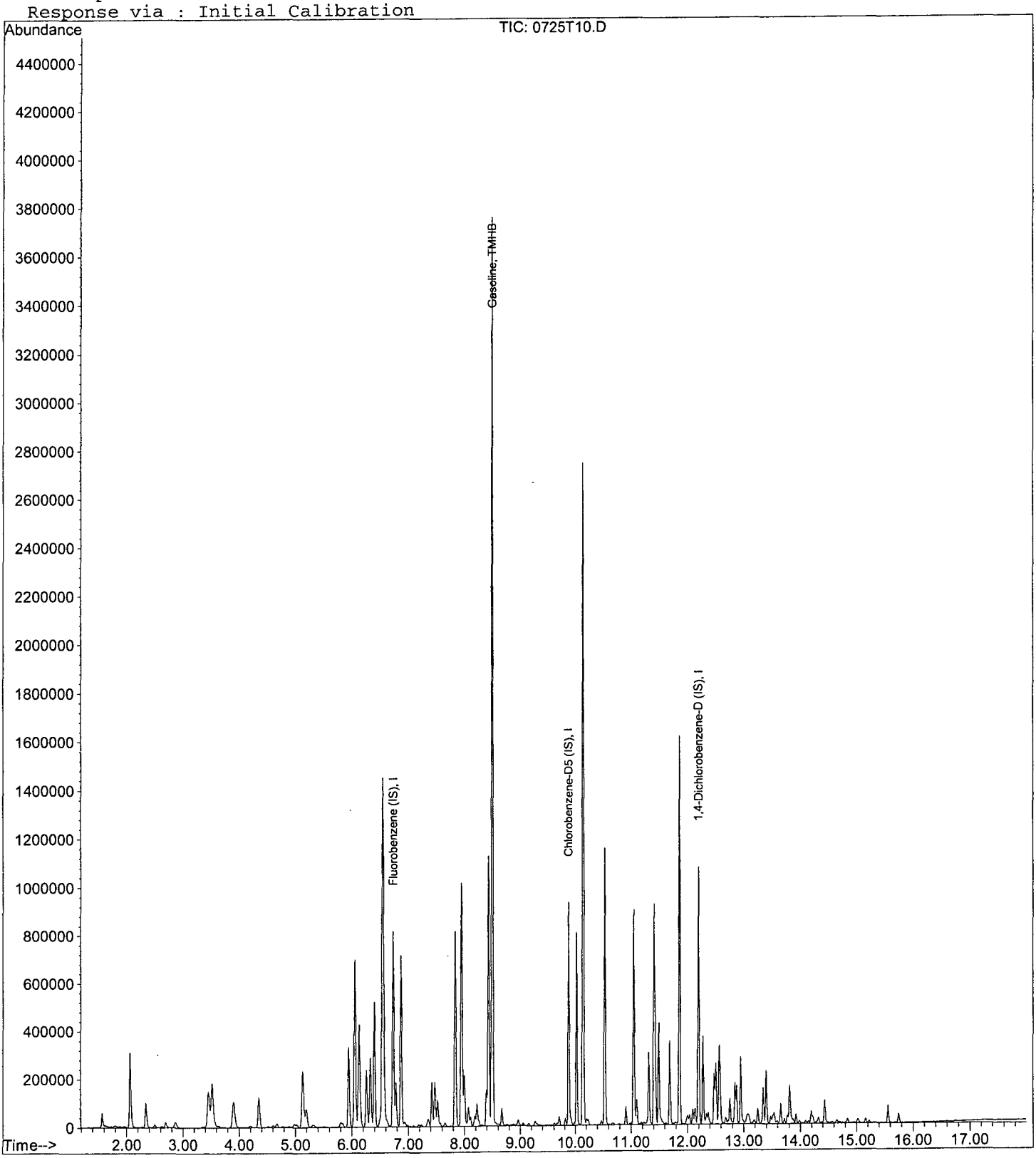
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D
Acq On : 25 Jul 12 13:36
Sample : 1000ug/L Vol Std 07-25-16
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 9
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 16:00 2012 Quant Results File: TGAS.RES

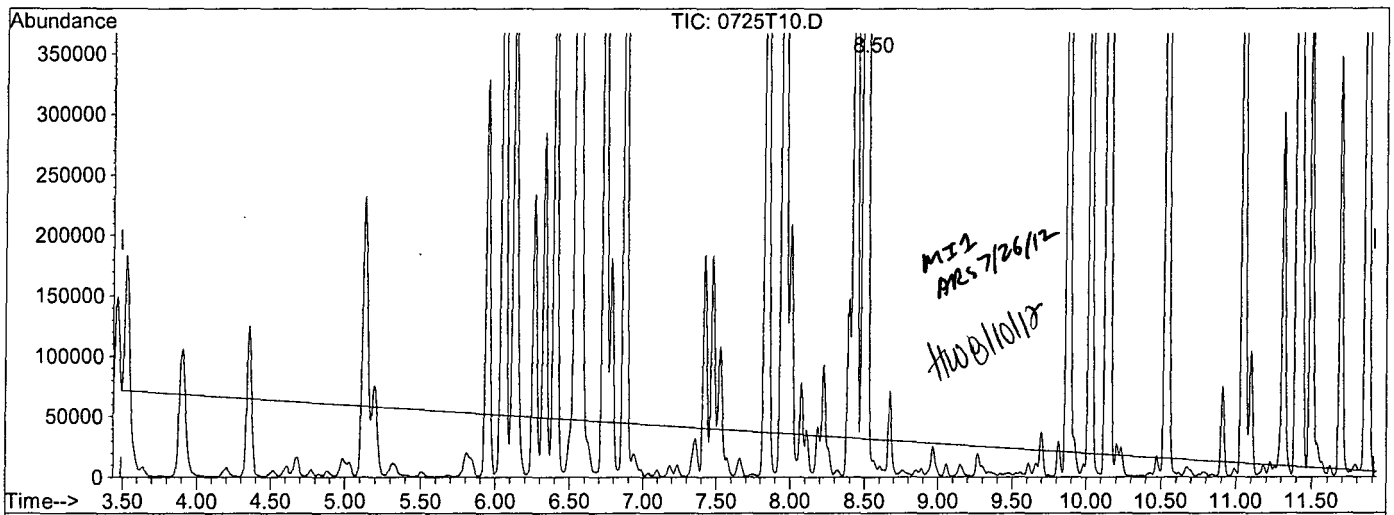
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

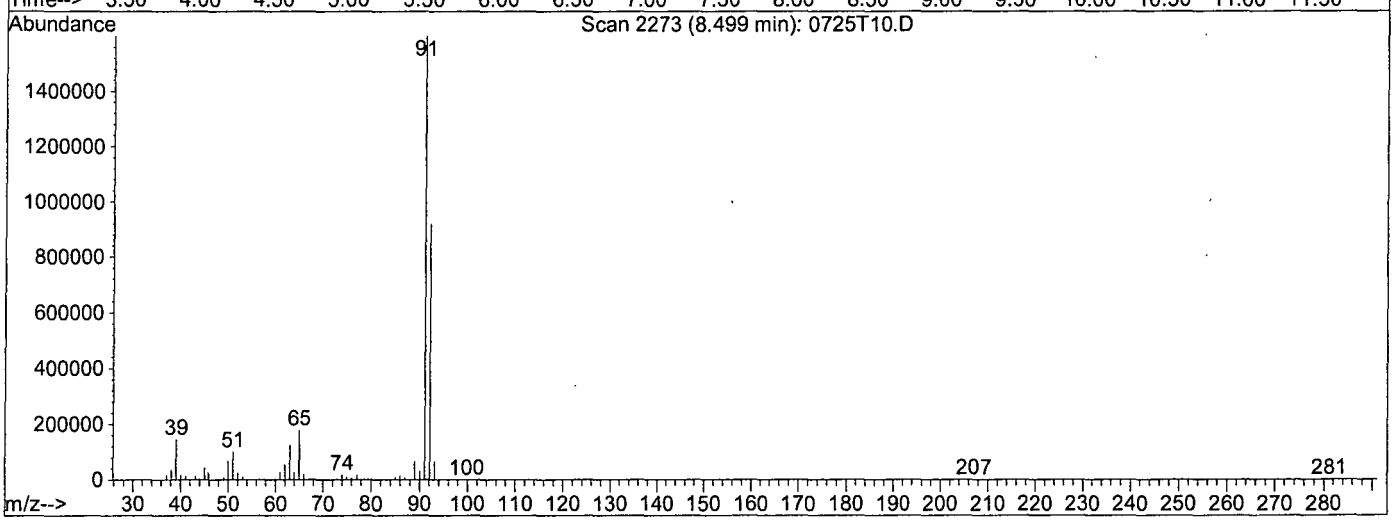


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T10.D

(2) Gasoline (TMHB)

8.50min 1108.4543ppb m

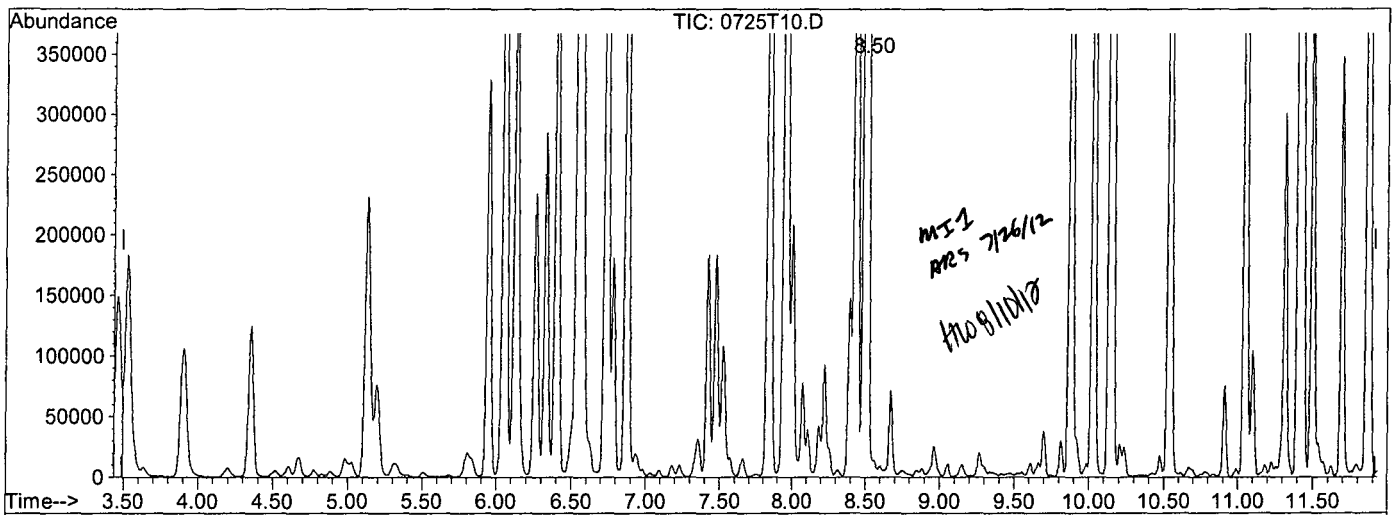
response 41276485

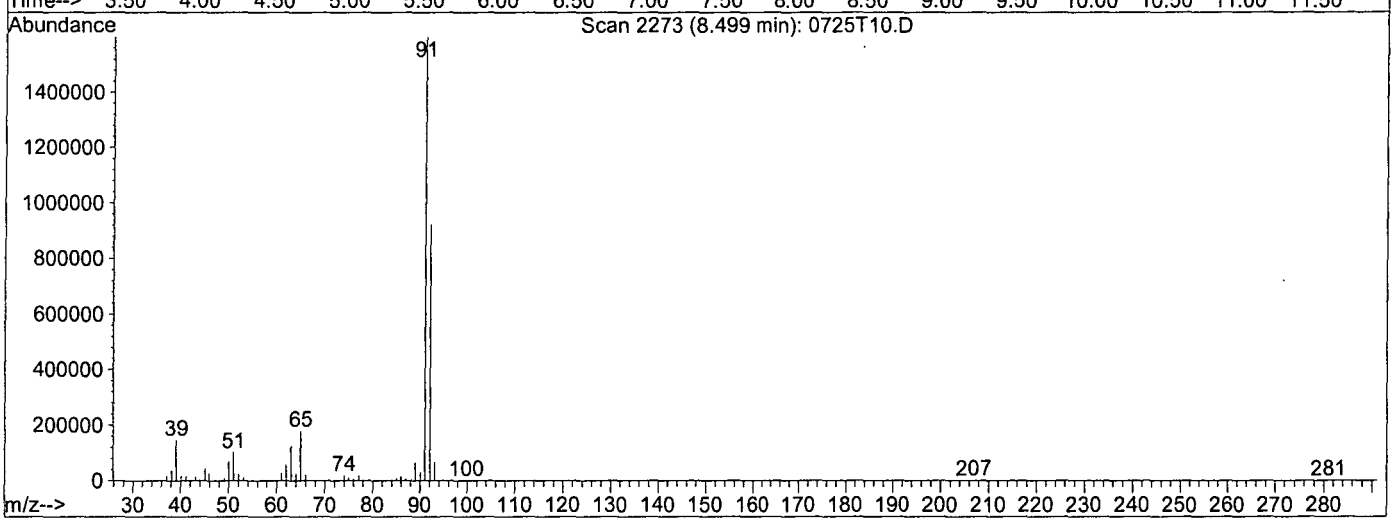
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.25#
0.00	1.40	0.73#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 16:00 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





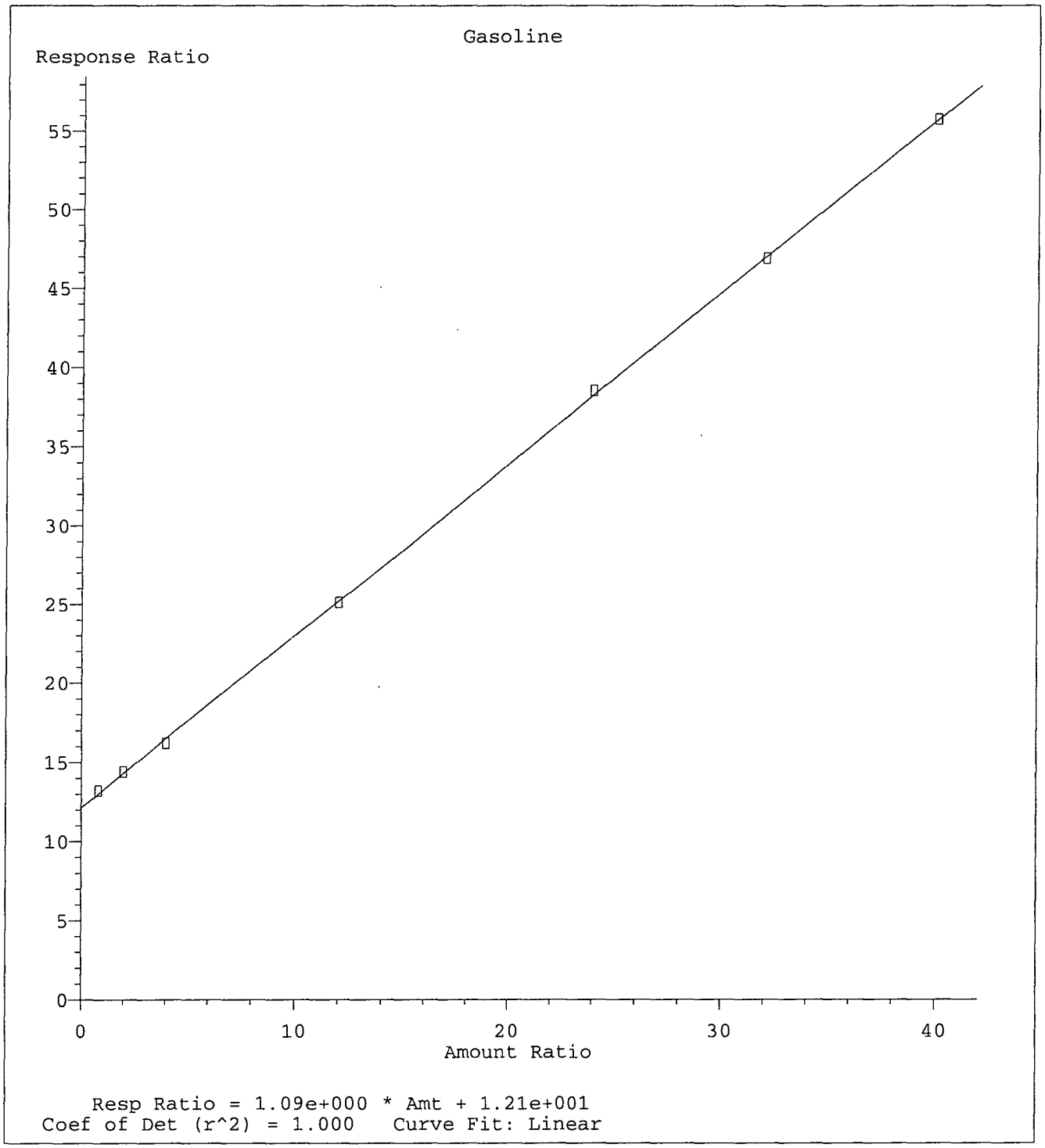
TIC: 0725T10.D

(2) Gasoline (TMHB)

8.50min 1278.3191ppb m

response 45050186

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.23#
0.00	1.40	0.67#
0.00	0.00	0.00



Method Name: M:\THOR\DATA\T120725\TGAS.M
Calibration Table Last Updated: Wed Jul 25 16:07:29 2012

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68268 ARS 8/3/12
Date Analyzed: 07/25/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0725T15.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline	4.903	2.065	58	TMHBL	3.3
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 8:23 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	788179	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	879850	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1024196	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	19535277m	290.16403	ppb	100

(#) = qualifier out of range (m) = manual integration

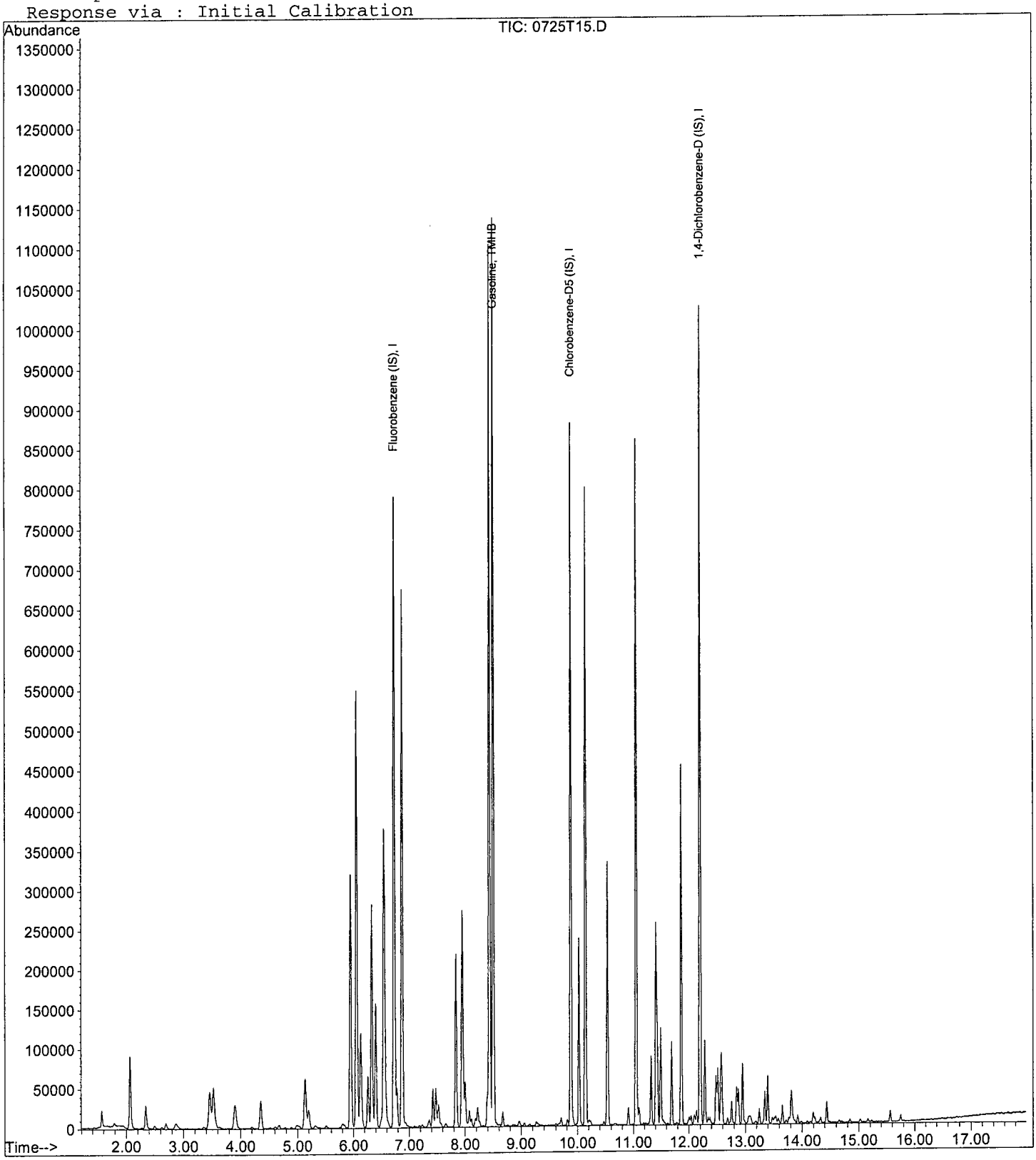
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D
Acq On : 25 Jul 12 15:55
Sample : LCS gas 300ug/L (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 14
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 8:23 2012 Quant Results File: TGAS.RES

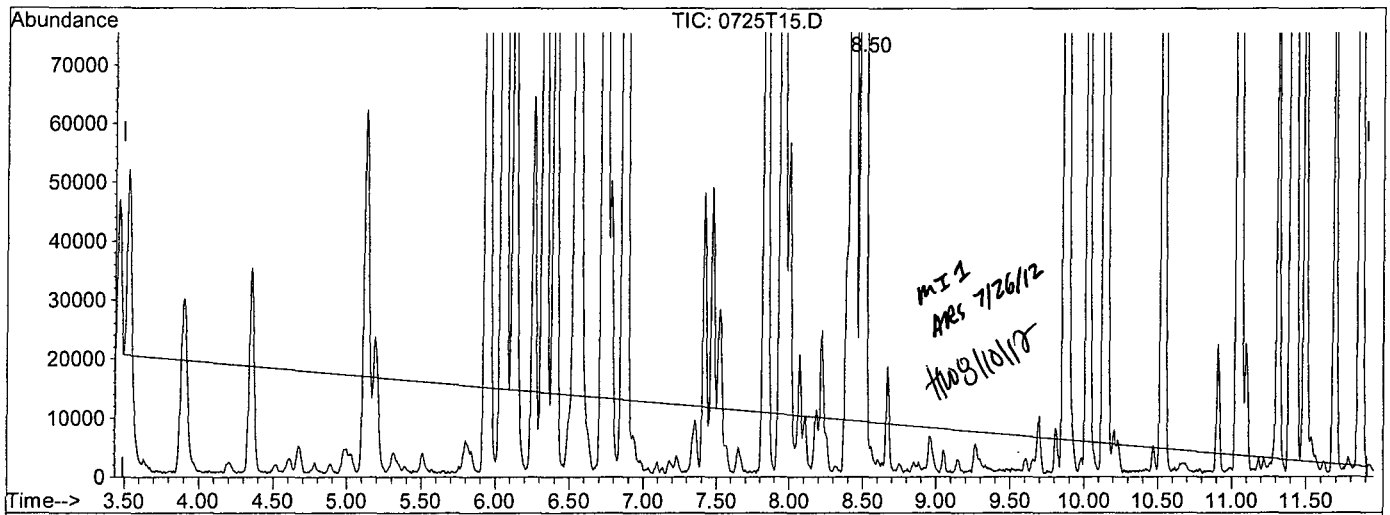
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

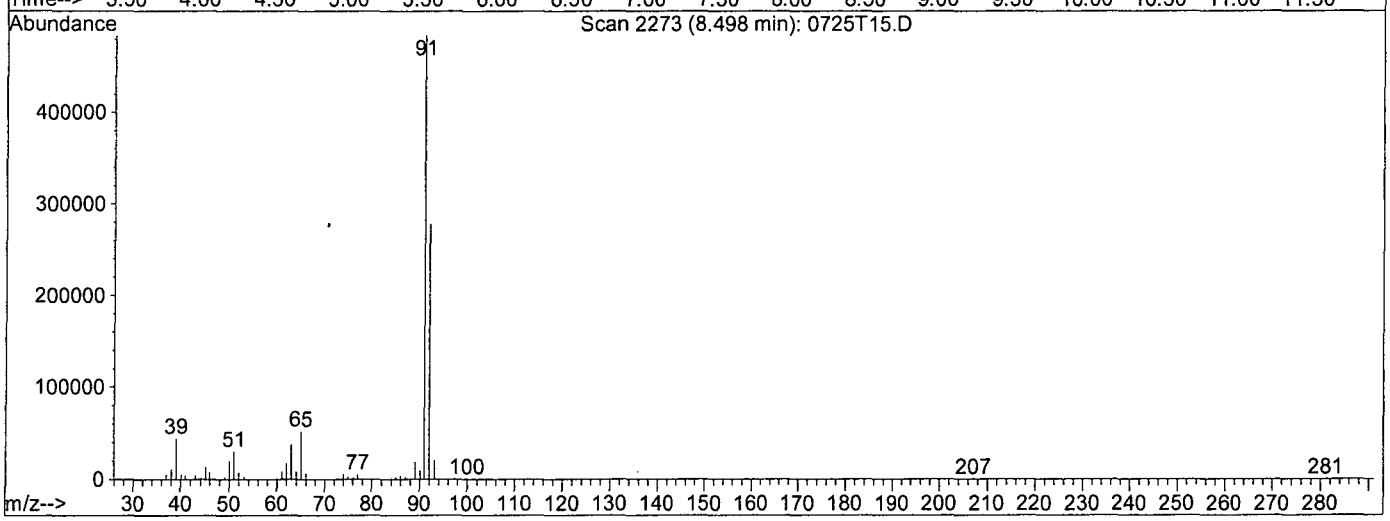


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0725T15.D

(2) Gasoline (TMHB)

8.50min 216.4348ppb m

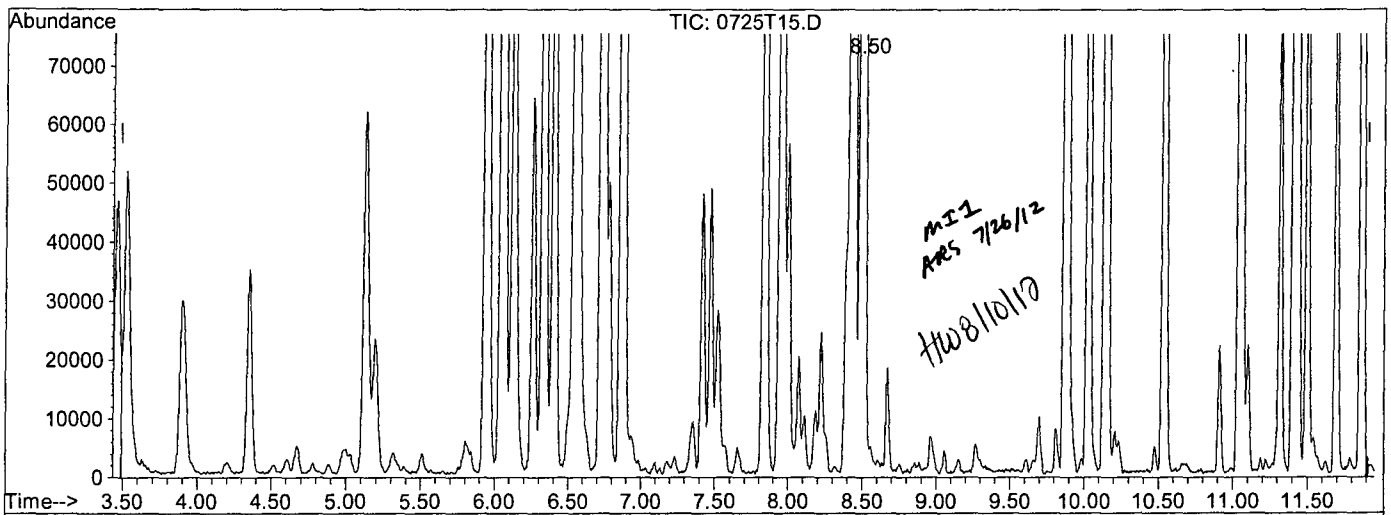
response 17002901

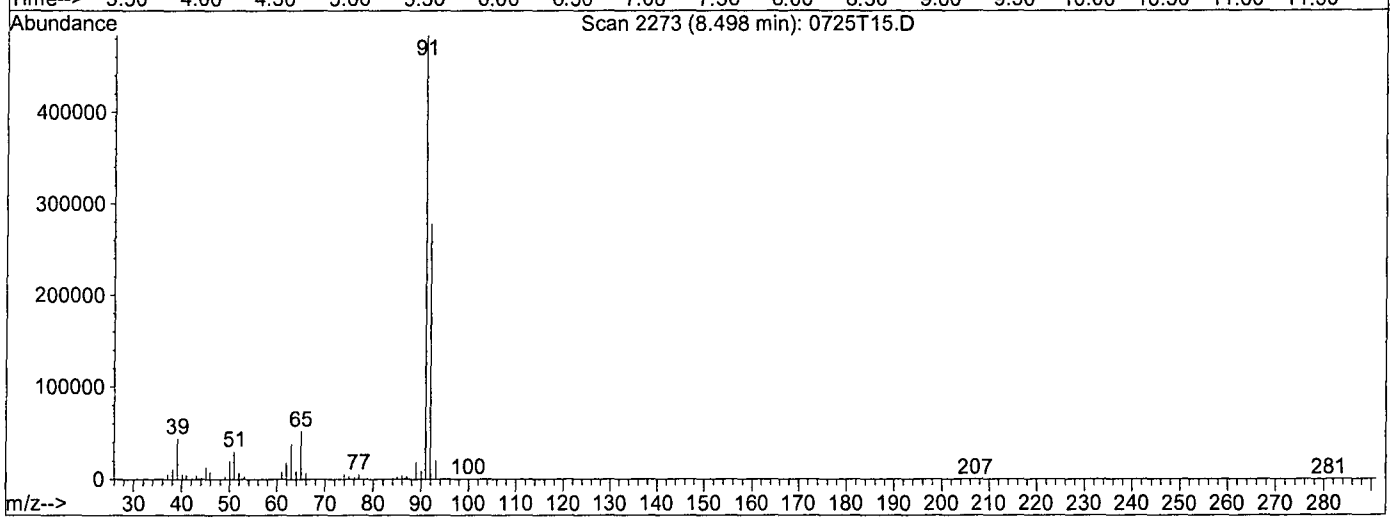
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0725T15.D

(2) Gasoline (TMHB)

8.50min 290.1640ppb m

response 19535277

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.51#
0.00	0.00	1.47#
0.00	0.00	0.00

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68268 AP 8/13/12
Date Analyzed: 07/26/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0726T06.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline	4.903	2.045	58	TMHBL	5.1
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
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35							
36							
37							
38							
39							
40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T06.D Vial: 31
Acq On : 26 Jul 12 11:41 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 12:26 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	818998	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	915509	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1060496	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	20100949m	284.61101	ppb	100

(#) = qualifier out of range (m) = manual integration

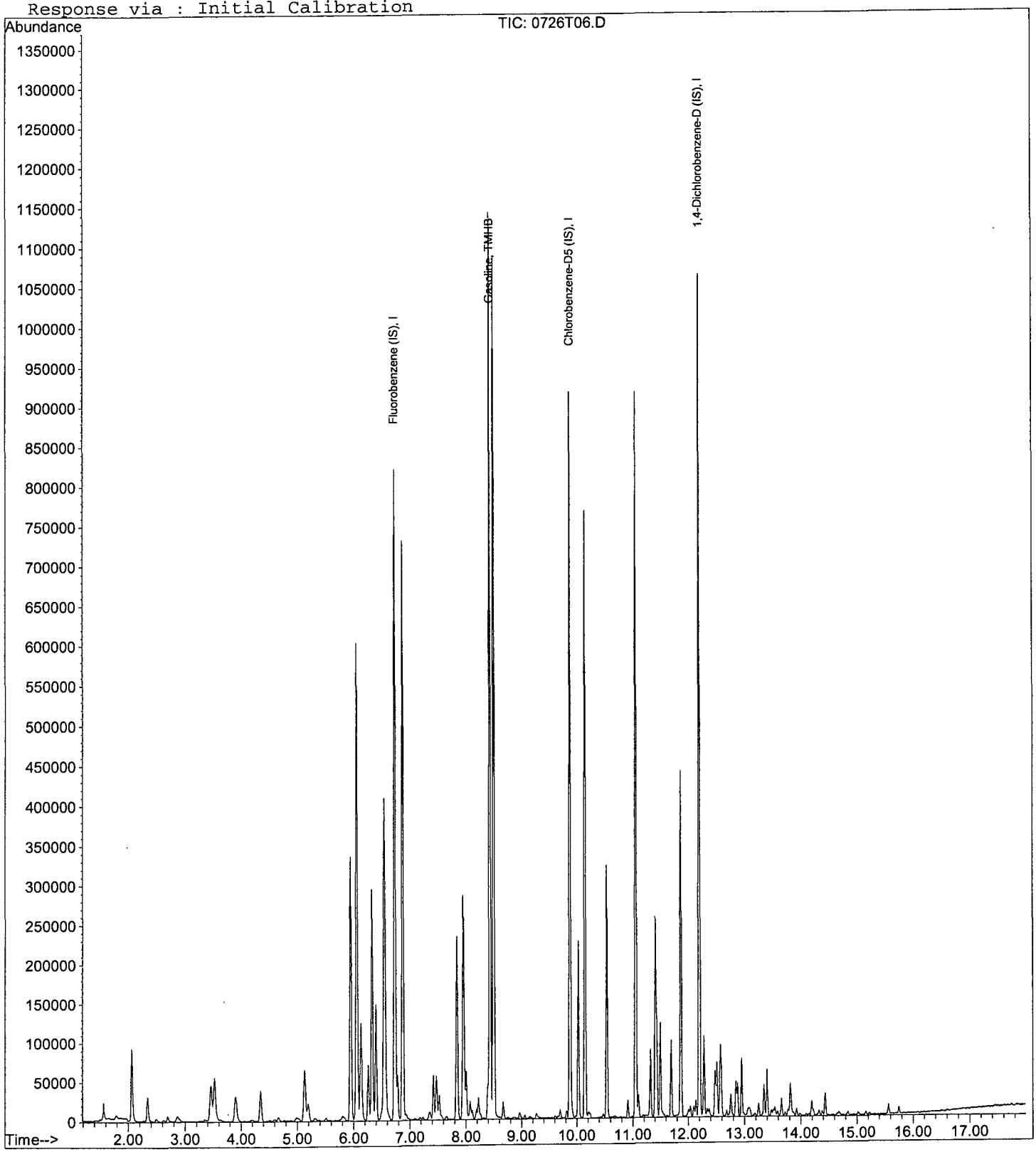
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T06.D
Acq On : 26 Jul 12 11:41
Sample : CCV gas 300ug/L
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 31
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 12:26 2012 Quant Results File: TGAS.RES

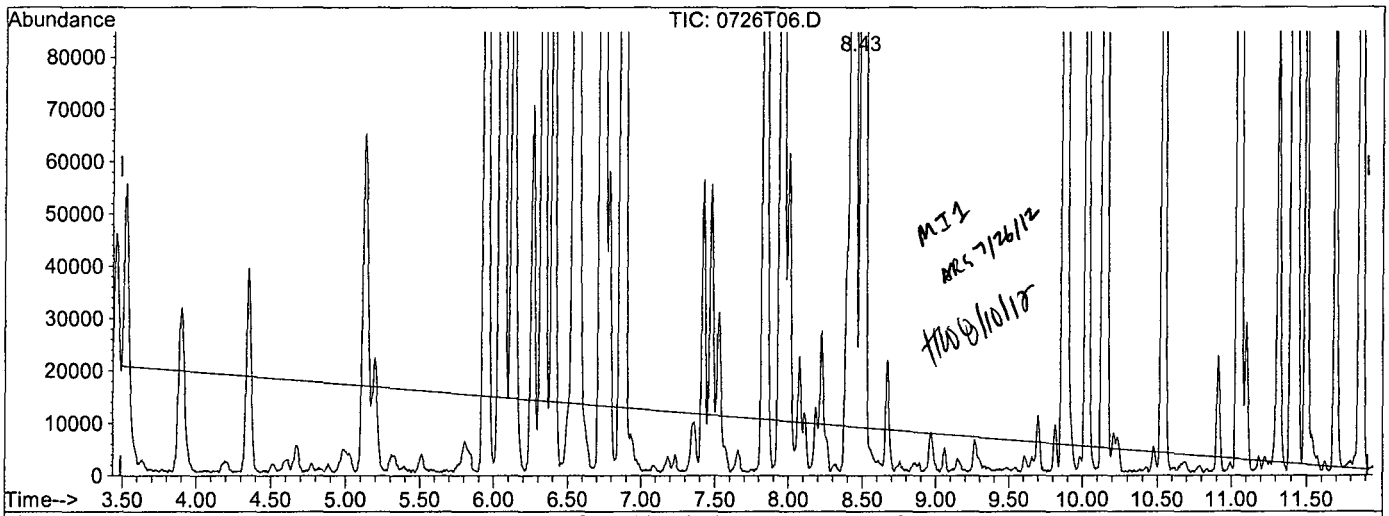
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

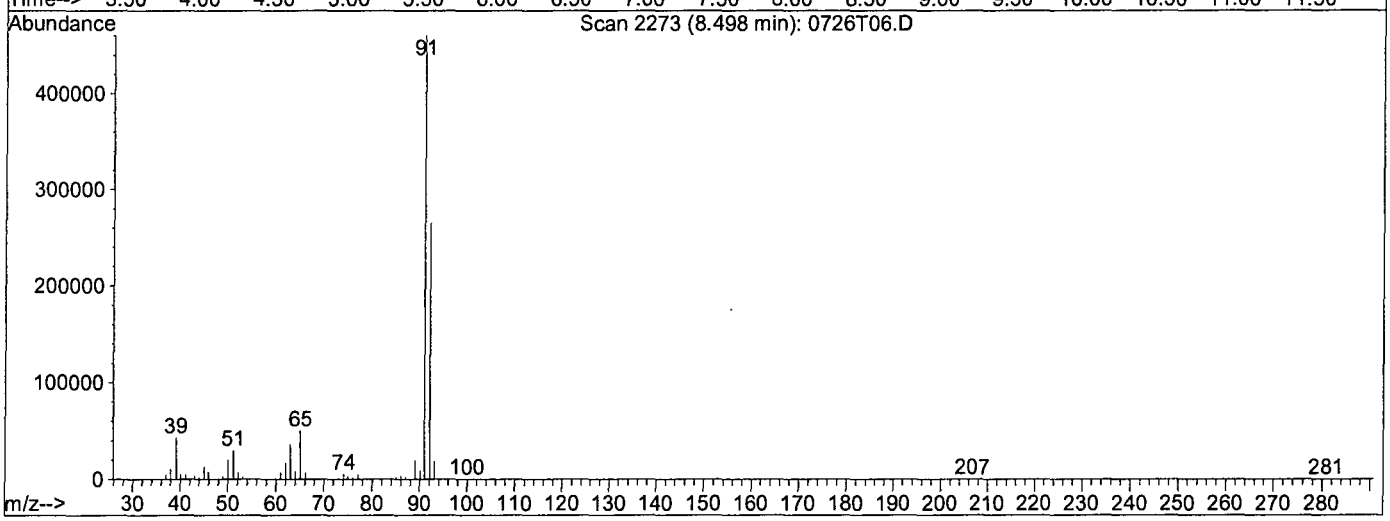


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T06.D Vial: 31
Acq On : 26 Jul 12 11:41 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 12:26 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T06.D

(2) Gasoline (TMHB)

8.50min 211.9534ppb m

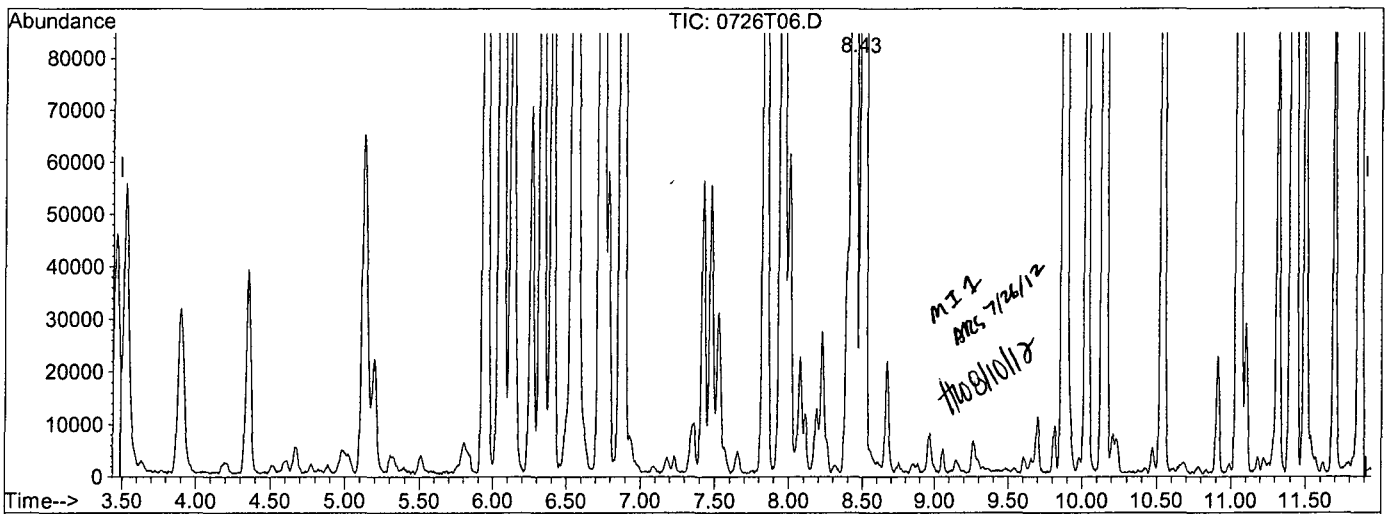
response 17507801

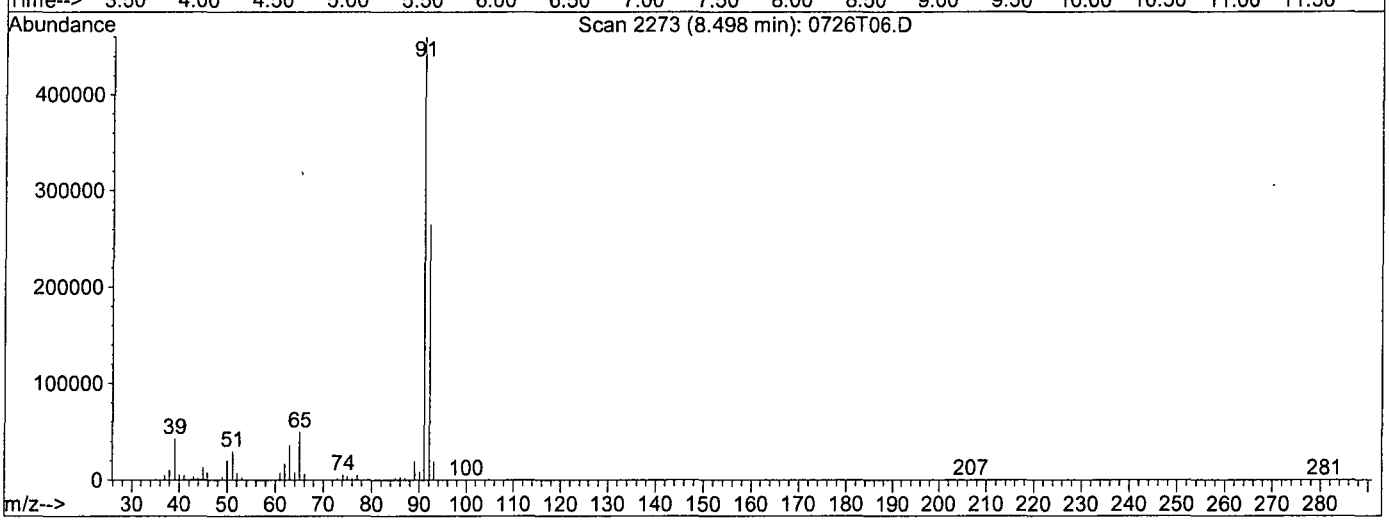
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.72#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T06.D Vial: 31
Acq On : 26 Jul 12 11:41 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 12:26 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T06.D

(2) Gasoline (TMHB)

8.43min 284.6110ppb m

response 20100949

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.50#
0.00	0.00	1.50#
0.00	0.00	0.00

EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank

EPA 8260B VOCs + Gas Water

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenu
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	07/26/12	07/26/12
BLANK	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
BLANK	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
BLANK	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMO-3-CHLOROPROPA	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
BLANK	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
BLANK	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
BLANK	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
BLANK	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
BLANK	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
BLANK	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
BLANK	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 9:57:49 AM
GC SC-Blank-REG MDLs

Method Blank

EPA 8260B VOCs + Gas Water

Blank Name/QCG: **120726W-65167 - 169444**

Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenu
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	07/26/12	07/26/12
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
BLANK	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	SURROGATE: 1,2-DICHLOROET	102	70-120			%	07/26/12	07/26/12
BLANK	SURROGATE: 4-BROMOFLUORO	101	75-120			%	07/26/12	07/26/12
BLANK	SURROGATE: DIBROMOFLUOR	102	85-115			%	07/26/12	07/26/12
BLANK	SURROGATE: TOLUENE-D8 (S)	101	85-120			%	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 9:57:49 AM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
Acq On : 26 Jul 12 14:00 Operator: DG,RS,HW,ARS,SV
Sample : 120726A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:30 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	96	393664	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	315392	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	183424	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	201268	32.67167 ppb	0.00
Spiked Amount 31.881			Recovery = 102.480%		
36) 1,2-DCA-D4(S)	6.33	65	195966	34.22939 ppb	0.00
Spiked Amount 33.647			Recovery = 101.731%		
56) Toluene-D8(S)	8.43	98	700663	37.57779 ppb	0.00
Spiked Amount 37.345			Recovery = 100.624%		
64) 4-Bromofluorobenzene(S)	11.05	95	263252	29.85450 ppb	0.00
Spiked Amount 29.515			Recovery = 101.148%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

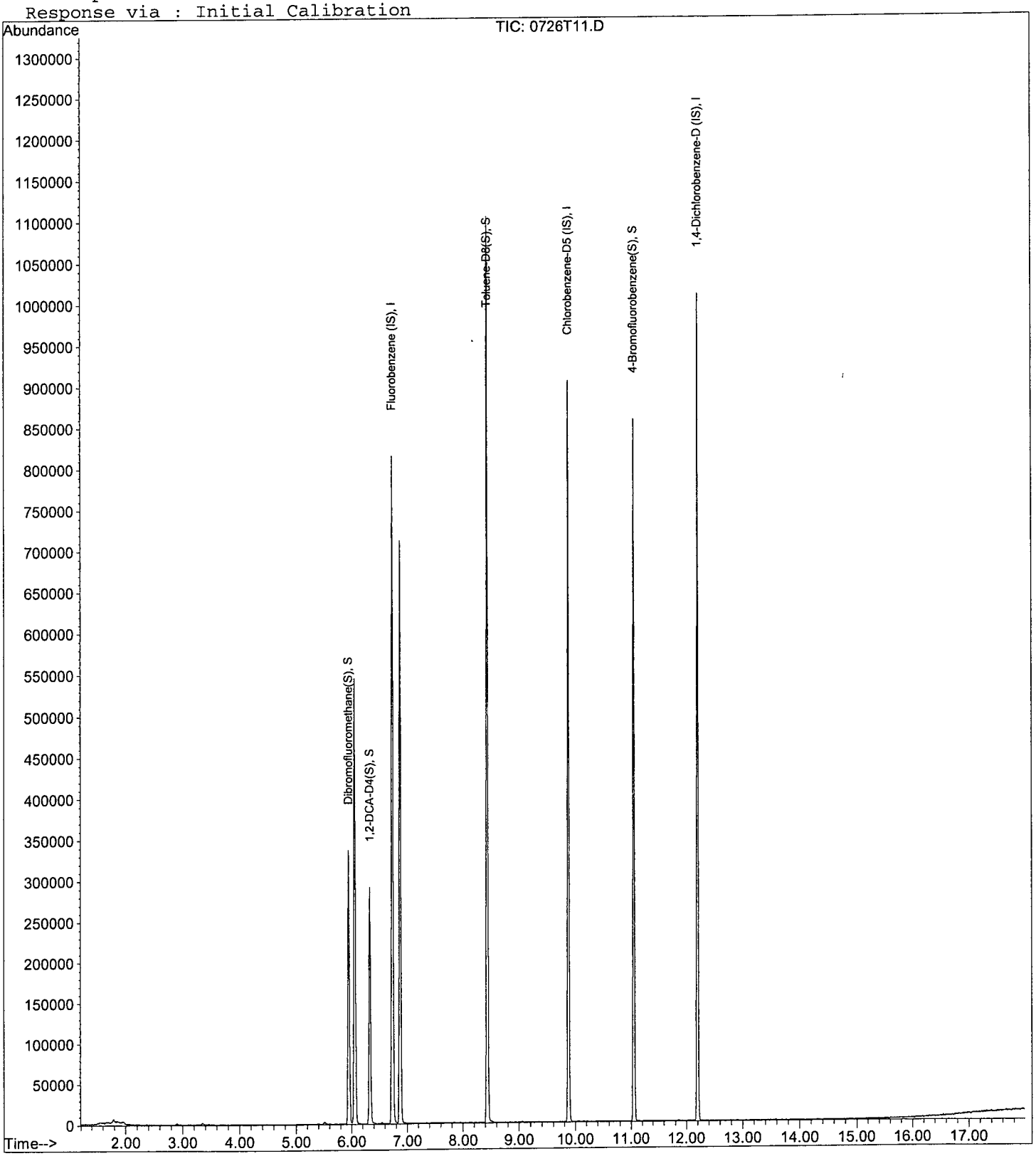
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D
Acq On : 26 Jul 12 14:00
Sample : 120726A BLK-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 36
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:30 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
Acq On : 26 Jul 12 14:00 Operator: DG,RS,HW,ARS,SV
Sample : 120726A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:19 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	814291	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	903930	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1008826	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	9968031m	2.31058	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

(#) = qualifier out of range (m) = manual integration

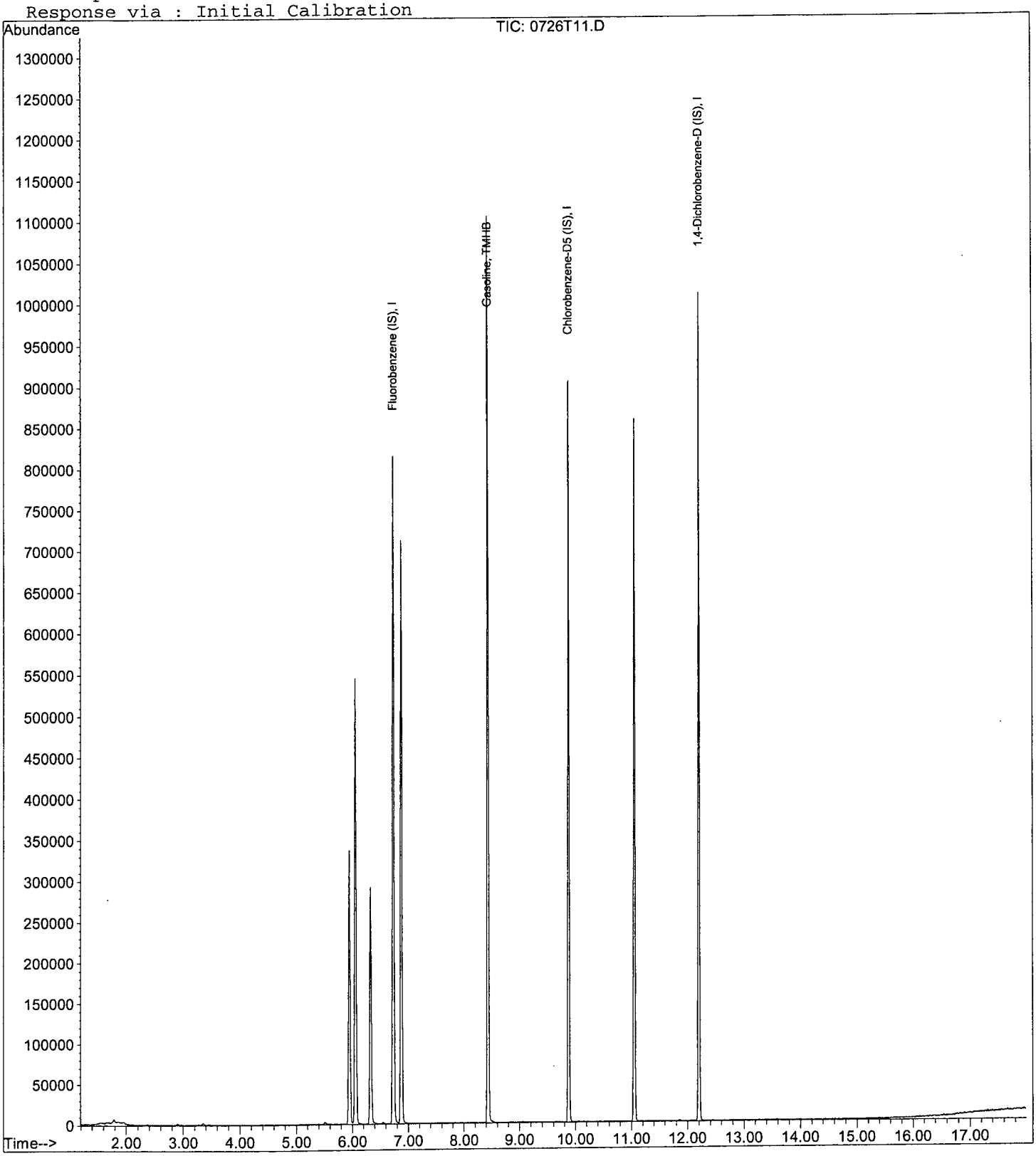
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D
Acq On : 26 Jul 12 14:00
Sample : 120726A BLK-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 36
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:19 2012 Quant Results File: TGAS.RES

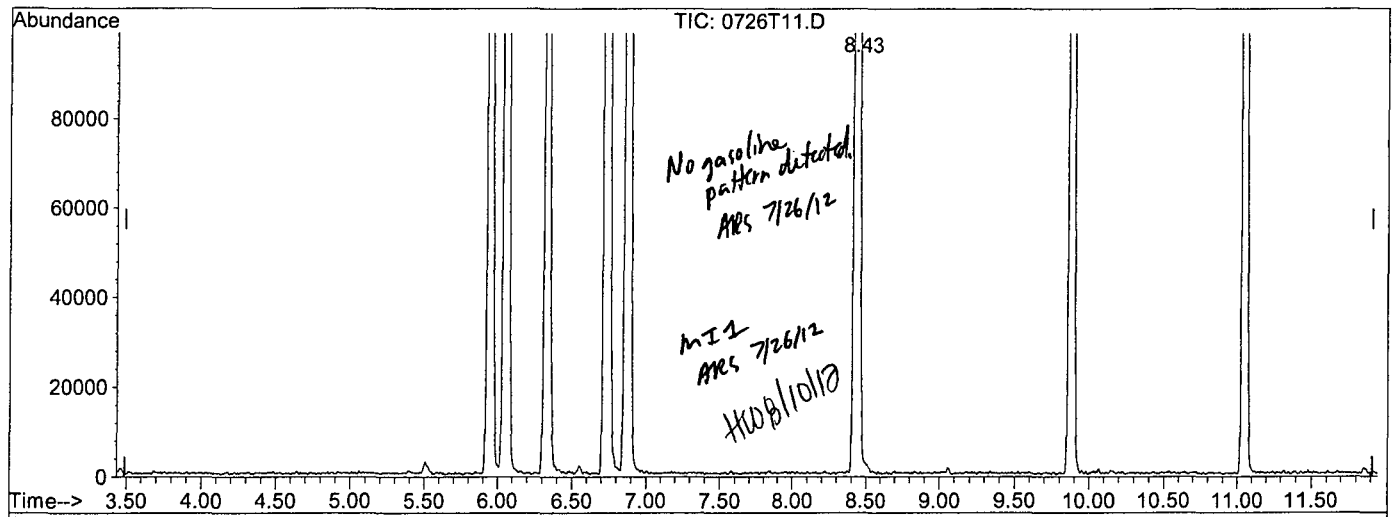
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

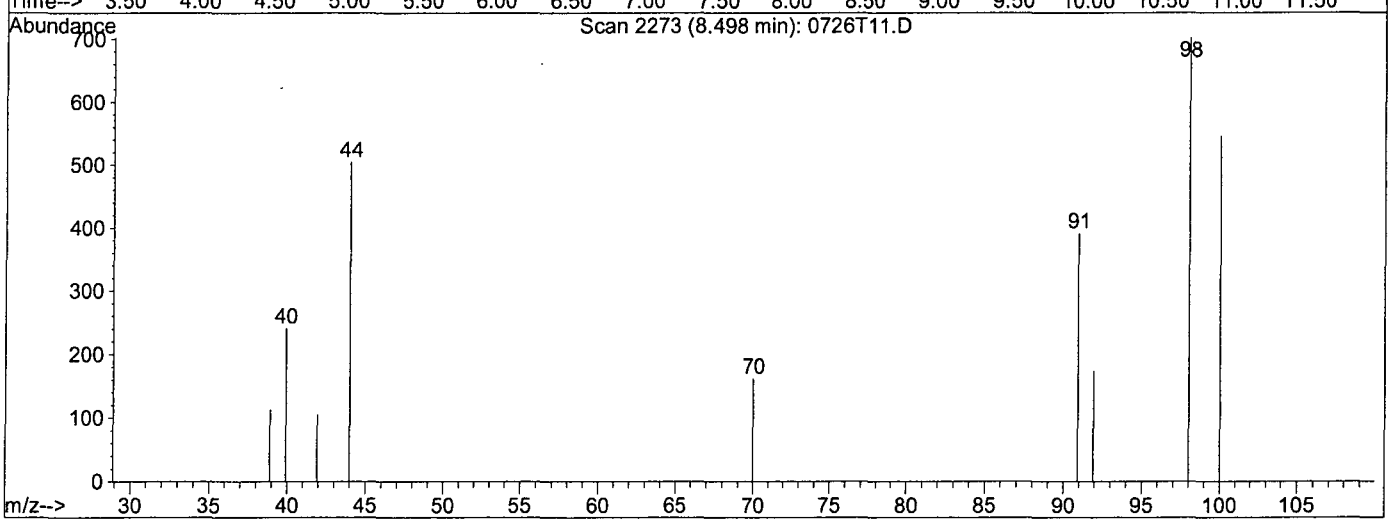


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
Acq On : 26 Jul 12 14:00 Operator: DG,RS,HW,ARS,SV
Sample : 120726A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 14:19 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T11.D

(2) Gasoline (TMHB)

8.43min 2.3106ppb m

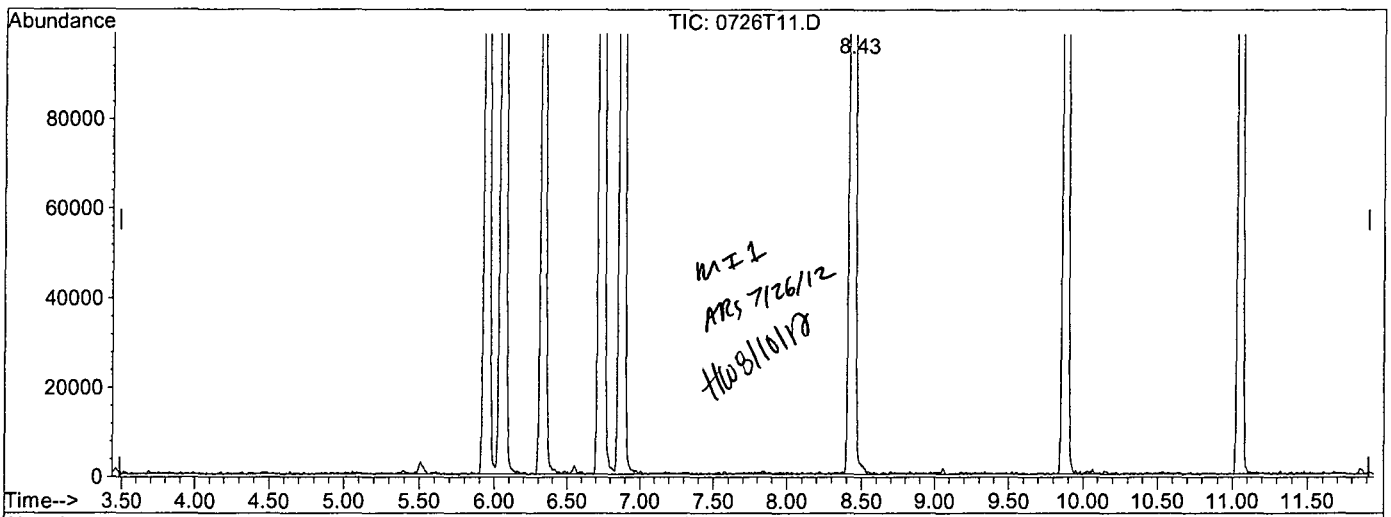
response 9968031

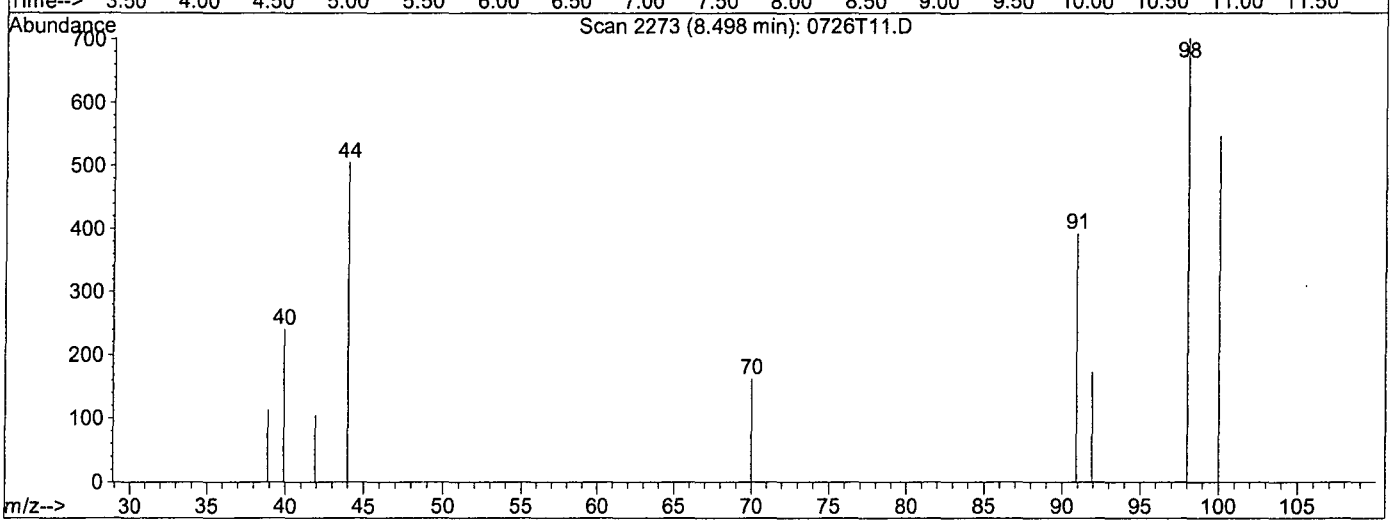
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.99#
0.00	0.00	2.83#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
Acq On : 26 Jul 12 14:00 Operator: DG,RS,HW,ARS,SV
Sample : 120726A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 14:19 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T11.D

(2) Gasoline (TMHB)

8.50min -59.4294ppb m

response 7777196

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.26#
0.00	0.00	3.63#
0.00	0.00	0.00

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 LCS - 169444**
Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,1,1,2-TETRACHLOROETHANE	10.00	10.3	103	80-130
1,1,1-TRICHLOROETHANE	10.00	9.87	98.7	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.84	98.4	65-130
1,1,2-TRICHLOROETHANE	10.00	9.86	98.6	75-125
1,1-DICHLOROETHANE	10.00	10.4	104	70-135
1,1-DICHLOROETHENE	10.00	9.96	99.6	70-130
1,2,3-TRICHLOROPROPANE	10.00	10.3	103	75-125
1,2,4-TRICHLOROBENZENE	10.00	10.4	104	65-135
1,2-DIBROMO-3-CHLOROPROPANE	10.00	10.8	108	50-130
1,2-DIBROMOETHANE	10.00	9.82	98.2	70-130
1,2-DICHLOROBENZENE	10.00	9.95	99.5	70-120
1,2-DICHLOROETHANE	10.00	9.83	98.3	70-130
1,2-DICHLOROPROPANE	10.00	10.0	100	75-125
1,3-DICHLOROBENZENE	10.00	10.2	102	75-125
1,3-DICHLOROPROPENE, TOTAL	20.0	20.3	102	70-130
1,4-DICHLOROBENZENE	10.00	9.71	97.1	75-125
2-BUTANONE	10.00	9.66	96.6	30-150
4-METHYL-2-PENTANONE	10.00	9.27	92.7	60-135
ACETONE	10.00	10.9	109	40-140
BENZENE	10.00	9.55	95.5	80-120
BROMODICHLOROMETHANE	10.00	10.1	101	75-120
BROMOFORM	10.00	10.2	102	70-130
BROMOMETHANE	10.00	9.13	91.3	30-145
CARBON TETRACHLORIDE	10.00	10.3	103	65-140
CHLOROBENZENE	10.00	10.1	101	80-120
CHLORODIBROMOMETHANE	10.00	10.2	102	60-135
CHLOROETHANE	10.00	9.65	96.5	60-135
CHLOROFORM	10.00	9.96	99.6	65-135
CHLOROMETHANE	10.00	8.45	84.5	40-125
CIS-1,2-DICHLOROETHENE	10.00	10.3	103	70-125
ETHYLBENZENE	10.00	10.3	103	75-125

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Comments: _____

Printed: 07/31/12 9:57:36 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 LCS - 169444**
Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE	300	285	95.0	75-125
HEXACHLOROBUTADIENE	10.00	10.4	104	50-140
METHYL TERT-BUTYL ETHER	10.00	9.83	98.3	65-125
METHYLENE CHLORIDE	10.00	9.48	94.8	55-140
STYRENE	10.00	10.6	106	65-135
TETRACHLOROETHENE	10.00	10.3	103	45-150
TOLUENE	10.00	10.2	102	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.17	91.7	60-140
TRICHLOROETHENE	10.00	9.73	97.3	70-125
VINYL CHLORIDE	10.00	9.58	95.8	50-145
XYLENES (TOTAL)	30.0	31.5	105	80-120
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	34.2	102	70-120
SURROGATE: 4-BROMOFLUOROBENZE	29.5	30.7	104	75-120
SURROGATE: DIBROMOFLUOROMETH	31.9	32.5	102	85-115
SURROGATE: TOLUENE-D8 (S)	37.3	37.2	99.6	85-120

Comments: _____

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Printed: 07/31/12 9:57:36 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T05.D Vial: 30
Acq On : 26 Jul 12 11:13 Operator: DG,RS,HW,ARS,SV
Sample : 120726A LCS-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:38 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	96	396608	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	324736	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	196096	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	201500	32.46653 ppb	0.00
Spiked Amount 31.881			Recovery = 101.837%		
36) 1,2-DCA-D4(S)	6.33	65	197251	34.19809 ppb	0.00
Spiked Amount 33.647			Recovery = 101.638%		
56) Toluene-D8(S)	8.43	98	713358	37.15779 ppb	0.00
Spiked Amount 37.345			Recovery = 99.500%		
64) 4-Bromofluorobenzene(S)	11.05	95	278834	30.71171 ppb	0.00
Spiked Amount 29.515			Recovery = 104.055%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.30	85	20992	10.44922 ppb	98
3) Freon 114	1.42	85	29813	10.74395 ppb	91
4) Chloromethane	1.45	50	42561	8.45484 ppb	94
5) Vinyl chloride	1.56	62	75106	9.58161 ppb	97
6) Bromomethane	1.87	94	45745	9.13053 ppb	99
7) Chloroethane	1.97	64	43557	9.64787 ppb	94
8) Dichlorofluoromethane	2.18	67	2861	9.58768 ppb	100
9) Trichlorofluoromethane	2.24	101	20255	12.50160 ppb	97
11) Acetone	2.89	43	15637	10.93946 ppb	97
12) Freon-113	2.85	101	35154	10.78714 ppb	98
13) 1,1-DCE	2.82	61	43546	9.95723 ppb	97
14) t-Butanol	3.69	59	16195	125.92197 ppb	99
15) Methyl Acetate	3.34	43	38826	10.17983 ppb	94
16) Iodomethane	2.98	142	38038	9.61617 ppb	96
17) Acrylonitrile	3.81	52	12741	10.17176 ppb	95
18) Methylene chloride	3.46	84	15078	9.47745 ppb	94
19) Carbon disulfide	3.06	76	3982	8.81686 ppb	92
20) Methyl t-butyl ether (MtBE	3.90	73	83011	9.83127 ppb	96
21) Trans-1,2-DCE	3.87	96	27662	9.16525 ppb	97
22) Diisopropyl Ether	4.70	59	19437	10.27894 ppb	96
23) 1,1-DCA	4.51	63	83500	10.43344 ppb	98
24) Vinyl Acetate	4.70	87	45054	9.96711 ppb	98
25) Ethyl tert Butyl Ether	5.21	59	106002	10.04146 ppb	100
26) MEK (2-Butanone)	5.38	43	18731	9.65961 ppb	99
27) Cis-1,2-DCE	5.32	96	52681	10.27571 ppb	93
28) 2,2-Dichloropropane	5.32	77	35907	11.13733 ppb	98
29) Chloroform	5.75	83	98981	9.95947 ppb	100
30) Bromochloromethane	5.62	128	25422	10.18441 ppb	99
32) 1,1,1-TCA	5.96	97	59014	9.86878 ppb	89
33) Cyclohexane	6.03	41	15888	9.79014 ppb	97
34) 1,1-Dichloropropene	6.17	75	43617	10.04365 ppb	97
35) 2,2,4-Trimethylpentane	6.55	57	64733	10.37139 ppb	98
37) Carbon Tetrachloride	6.16	117	57597	10.27670 ppb	88
38) Tert Amyl Methyl Ether	6.59	73	110559	9.83974 ppb	98
39) 1,2-DCA	6.42	62	64059	9.82891 ppb	100
40) Benzene	6.40	78	170080	9.55468 ppb	98
41) TCE	7.14	95	47064	9.72719 ppb	96
42) 2-Pentanone	7.36	43	461551	121.08490 ppb	99
43) 1,2-Dichloropropane	7.37	63	58310	10.03940 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T05.D Vial: 30
Acq On : 26 Jul 12 11:13 Operator: DG,RS,HW,ARS,SV
Sample : 120726A LCS-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:38 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44)	Bromodichloromethane	7.68	83	81334	10.12262	ppb	99
45)	Methyl Cyclohexane	7.36	83	33318	9.64466	ppb	91
46)	Dibromomethane	7.49	93	31381	9.93266	ppb	95
47)	2-Chloroethyl vinyl ether	7.99	106	1117	10.08733	ppb	100
48)	MIBK (methyl isobutyl ket	8.33	43	25400	9.26551	ppb	93
49)	1-Bromo-2-chloroethane	7.99	63	40824	10.10226	ppb	99
50)	Cis-1,3-Dichloropropene	8.15	75	81069	10.19591	ppb	99
51)	Toluene	8.50	91	213596	10.17008	ppb	99
52)	Trans-1,3-Dichloropropene	8.72	75	70666	10.07976	ppb	98
53)	1,1,2-TCA	8.90	83	46088	9.85586	ppb	98
54)	2-Hexanone	9.17	43	29609	9.41878	ppb	98
57)	1,2-EDB	9.40	107	47825	9.82265	ppb	96
58)	Tetrachloroethene	9.06	166	56570	10.27565	ppb	95
59)	1-Chlorohexane	9.90	91	66229	10.10676	ppb	97
60)	1,1,1,2-Tetrachloroethane	9.99	131	66238	10.29855	ppb	96
61)	m&p-Xylene	10.14	106	209855	20.91575	ppb	100
62)	o-Xylene	10.54	106	110351	10.63203	ppb	100
63)	Styrene	10.55	104	186966	10.60207	ppb	99
65)	1,3-Dichloropropane	9.07	76	85563	10.02307	ppb	99
66)	Dibromochloromethane	9.29	129	65520	10.19444	ppb	95
67)	Chlorobenzene	9.90	112	168953	10.06356	ppb	97
68)	Ethylbenzene	10.03	91	270842	10.25986	ppb	99
69)	Bromoform	10.71	173	44921	10.20780	ppb	100
71)	Isopropylbenzene	10.91	105	264298	10.30803	ppb	99
72)	1,1,2,2-Tetrachloroethane	11.19	83	70013	9.84064	ppb	98
73)	1,2,3-Trichloropropane	11.23	110	20752	10.27676	ppb	91
74)	t-1,4-Dichloro-2-Butene	11.25	53	15291	11.31489	ppb	100
75)	Bromobenzene	11.19	156	84258	9.96856	ppb	97
76)	n-Propylbenzene	11.32	91	341856	10.35542	ppb	98
77)	4-Ethyltoluene	11.43	105	298803	10.53985	ppb	100
78)	2-Chlorotoluene	11.39	91	238556	10.13378	ppb	99
79)	1,3,5-Trimethylbenzene	11.50	105	244626	10.40926	ppb	97
80)	4-Chlorotoluene	11.50	91	242452	10.40511	ppb	100
81)	Tert-Butylbenzene	11.82	119	218794	10.16271	ppb	100
82)	1,2,4-Trimethylbenzene	11.86	105	249589	10.26353	ppb	100
83)	Sec-Butylbenzene	12.04	105	304284	10.58641	ppb	100
84)	p-Isopropyltoluene	12.19	119	253641	10.44390	ppb	99
85)	Benzyl Chloride	12.35	91	74989	10.33282	ppb	97
86)	1,3-DCB	12.13	146	162751	10.18158	ppb	98
87)	1,4-DCB	12.22	146	162560	9.71046	ppb	98
88)	n-Butylbenzene	12.59	91	228772	10.50941	ppb	99
89)	1,2-DCB	12.59	146	154217	9.95402	ppb	99
90)	Hexachloroethane	12.86	117	43289	9.72856	ppb	98
91)	1,2-Dibromo-3-chloropropan	13.35	157	14451	10.84174	ppb	85
92)	1,2,4-Trichlorobenzene	14.19	180	73672	10.37388	ppb	97
93)	Hexachlorobutadiene	14.38	223	30881	10.40937	ppb	97
94)	Naphthalene	14.43	128	203098	10.24211	ppb	100
95)	1,2,3-Trichlorobenzene	14.68	180	103520	10.23079	ppb	98

1,3-dichloropropene, total: 20.27567 ppb

ARS 7/27/12

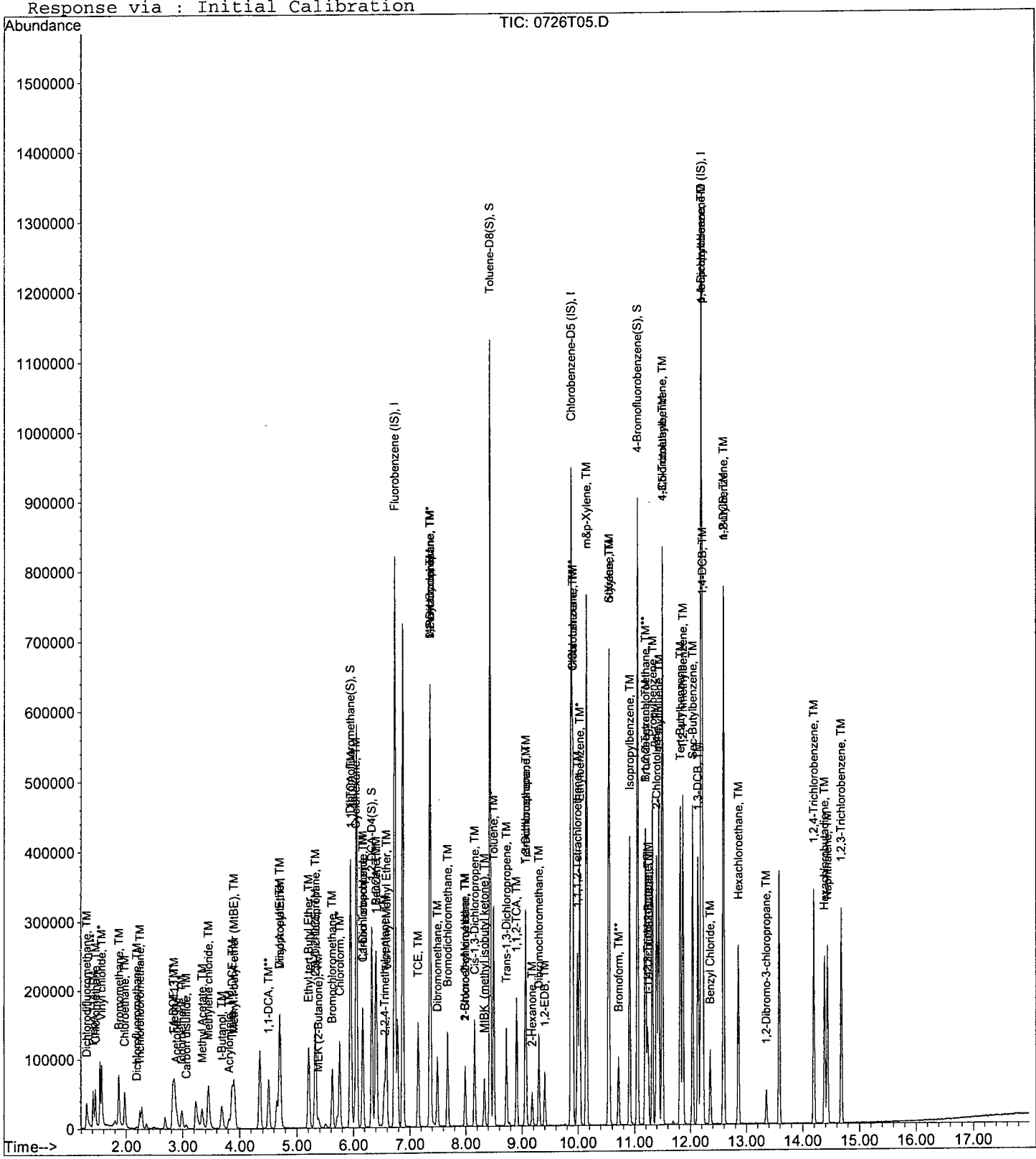
(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120725\0726T05.D
Acq On : 26 Jul 12 11:13
Sample : 120726A LCS-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 30
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 11:38 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T07.D Vial: 32
Acq On : 26 Jul 12 12:09 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 13:09 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.72	TIC	811874	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	928441	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1044824	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	19927273m	284.64410	ppb	100

(#) = qualifier out of range (m) = manual integration
0726T07.D TGAS.M Thu Jul 26 13:10:11 2012 Page 1

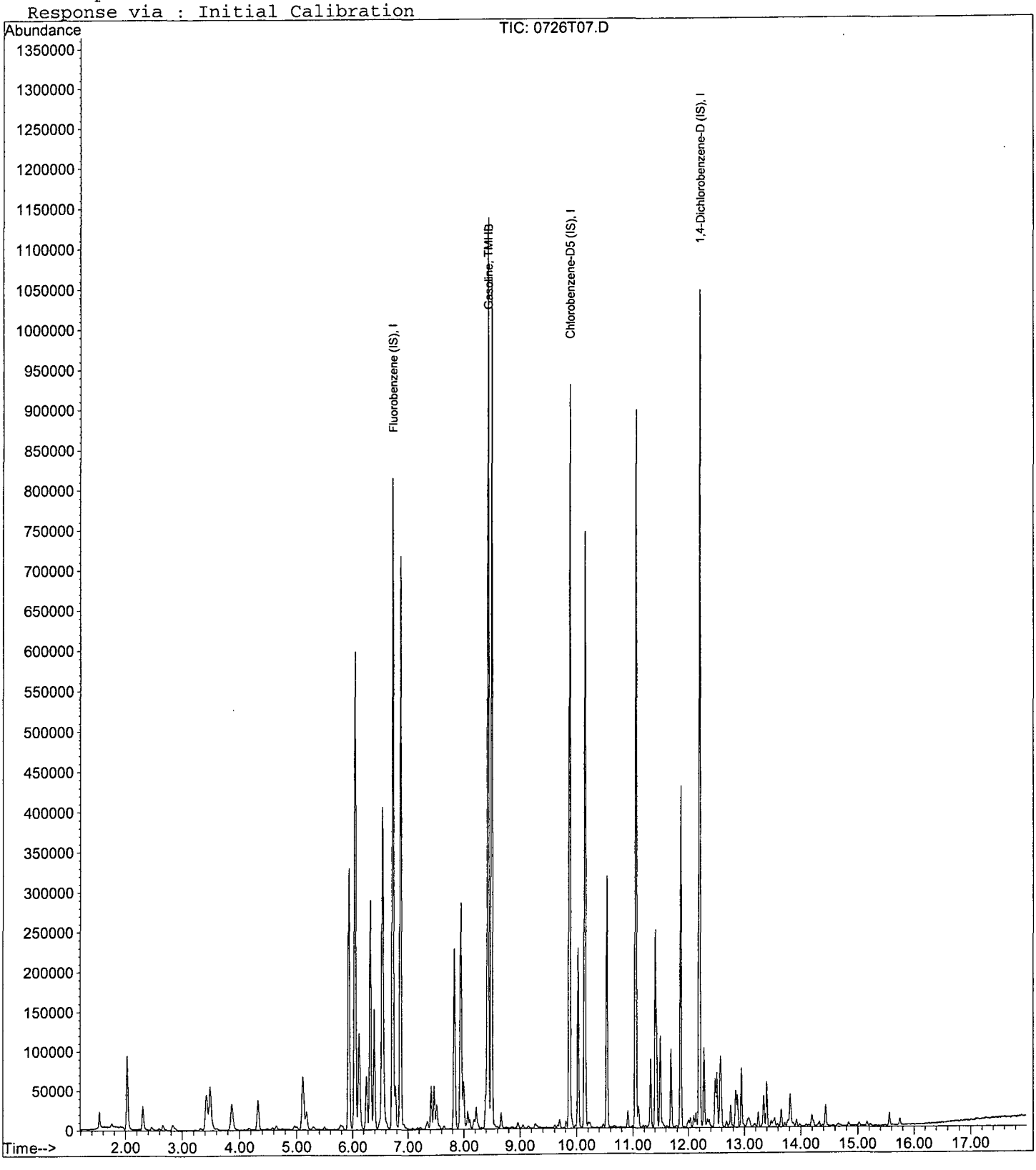
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T07.D
Acq On : 26 Jul 12 12:09
Sample : LCS gas 300ug/L
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 32
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 13:09 2012 Quant Results File: TGAS.RES

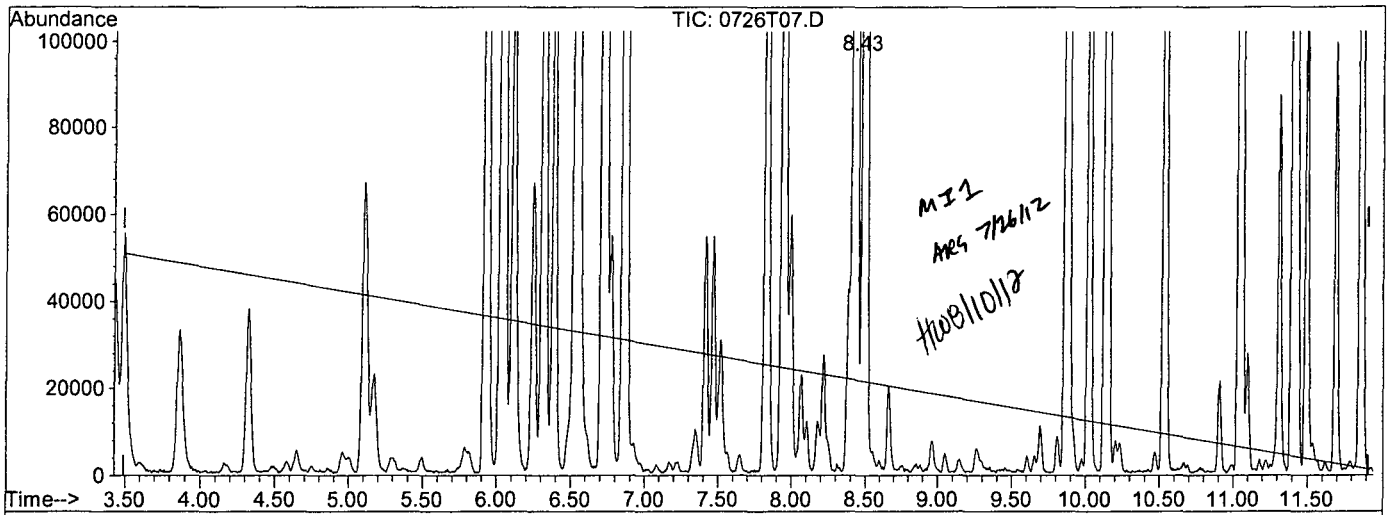
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

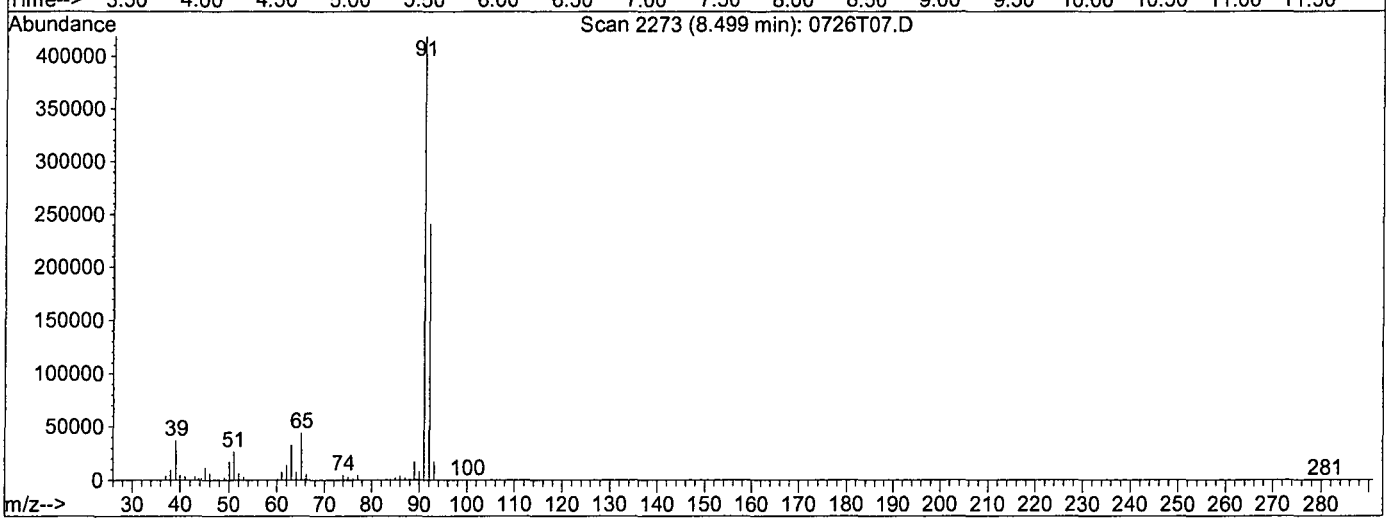


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T07.D Vial: 32
Acq On : 26 Jul 12 12:09 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 13:09 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T07.D

(2) Gasoline (TMHB)

8.50min 210.7660ppb m

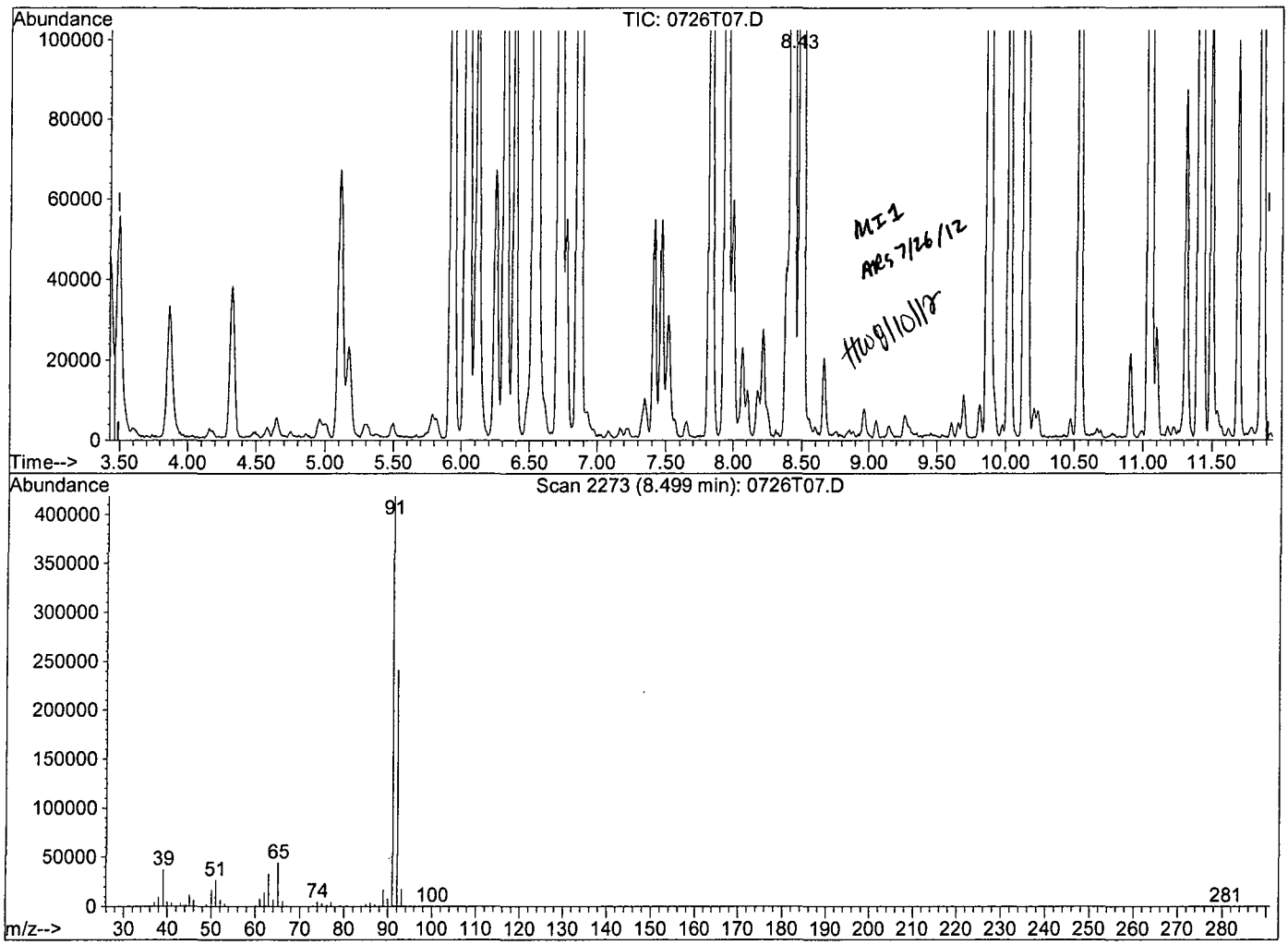
response 17313500

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.68#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T07.D Vial: 32
Acq On : 26 Jul 12 12:09 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 13:09 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration



TIC: 0726T07.D

(2) Gasoline (TMHB)

8.43min 284.6441ppb m

response 19927273

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.51#
0.00	0.00	1.46#
0.00	0.00	0.00

Matrix Spike Recoveries

EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 MS - 169444**
Batch ID: #86RHB-120726AT
Sample ID: AY65167
Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
1,1,1,2-TETRACHLOROETHANE	10.00	ND	8.86	8.94	88.6	89.4	80-130	0.90	30
1,1,1-TRICHLOROETHANE	10.00	ND	9.23	9.27	92.3	92.7	65-130	0.43	30
1,1,2,2-TETRACHLOROETHANE	10.00	ND	0.166	0.187	1.7 #	1.9 #	65-130	11.9	30
1,1,2-TRICHLOROETHANE	10.00	ND	8.01	7.73	80.1	77.3	75-125	3.6	30
1,1-DICHLOROETHANE	10.00	ND	9.08	9.10	90.8	91.0	70-135	0.22	30
1,1-DICHLOROETHENE	10.00	ND	10.2	10.9	102	109	70-130	6.6	30
1,2,3-TRICHLOROPROPANE	10.00	ND	9.19	9.10	91.9	91.0	75-125	0.98	30
1,2,4-TRICHLOROBENZENE	10.00	ND	8.39	8.99	83.9	89.9	65-135	6.9	30
1,2-DIBROMO-3-CHLOROPROPANE	10.00	ND	8.85	8.68	88.5	86.8	50-130	1.9	30
1,2-DIBROMOETHANE	10.00	ND	8.76	8.86	87.6	88.6	70-130	1.1	30
1,2-DICHLOROBENZENE	10.00	ND	8.93	8.73	89.3	87.3	70-120	2.3	30
1,2-DICHLOROETHANE	10.00	ND	9.08	8.87	90.8	88.7	70-130	2.3	30
1,2-DICHLOROPROPANE	10.00	ND	8.93	8.87	89.3	88.7	75-125	0.67	30
1,3-DICHLOROBENZENE	10.00	ND	9.16	9.08	91.6	90.8	75-125	0.88	30
1,3-DICHLOROPROPENE, TOTAL	20.0	ND	17.0	17.5	85.0	87.5	70-130	2.9	30
1,4-DICHLOROBENZENE	10.00	ND	8.83	8.79	88.3	87.9	75-125	0.45	30
2-BUTANONE	10.00	1.0	10.4	9.60	94.0	86.0	30-150	8.0	30
4-METHYL-2-PENTANONE	10.00	ND	9.17	8.73	91.7	87.3	60-135	4.9	30
ACETONE	10.00	2.3	13.0	12.4	107	101	40-140	4.7	30
BENZENE	10.00	1.3	9.60	9.78	83.0	84.8	80-120	1.9	30
BROMODICHLOROMETHANE	10.00	ND	8.67	8.77	86.7	87.7	75-120	1.1	30
BROMOFORM	10.00	ND	8.94	9.04	89.4	90.4	70-130	1.1	30
BROMOMETHANE	10.00	ND	7.72	7.73	77.2	77.3	30-145	0.13	30
CARBON TETRACHLORIDE	10.00	ND	9.21	9.49	92.1	94.9	65-140	3.0	30
CHLOROBENZENE	10.00	ND	8.74	9.06	87.4	90.6	80-120	3.6	30
CHLORODIBROMOMETHANE	10.00	ND	8.76	8.74	87.6	87.4	60-135	0.23	30
CHLOROETHANE	10.00	ND	7.80	7.99	78.0	79.9	60-135	2.4	30
CHLOROFORM	10.00	ND	9.01	8.83	90.1	88.3	65-135	2.0	30
CHLOROMETHANE	10.00	ND	6.87	7.14	68.7	71.4	40-125	3.9	30
CIS-1,2-DICHLOROETHENE	10.00	ND	9.00	8.94	90.0	89.4	70-125	0.67	30

= Recovery is outside QC limits.

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	07/26/12	07/26/12
Instrument :	Thor	Thor
Run :	0726T21	0726T22
Initials :	ARS	

Comments:

Printed: 07/31/12 9:57:22 AM
APPL MSD SCII

Matrix Spike Recoveries

EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 MS - 169444**
Batch ID: #86RHB-120726AT
Sample ID: AY65167
Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Lvl ug/L	Matrix Result ug/L	SPK Result ug/L	DUP Result ug/L	SPK % Recovery	DUP % Recovery	Recovery Limits	RPD %	RPD Limits
ETHYLBENZENE	10.00	ND	8.96	8.99	89.6	89.9	75-125	0.33	30
GASOLINE	300	ND	218	232	72.7 #	77.3	75-125	6.2	30
HEXACHLOROBUTADIENE	10.00	ND	8.83	8.95	88.3	89.5	50-140	1.3	30
METHYL TERT-BUTYL ETHER	10.00	ND	8.73	8.72	87.3	87.2	65-125	0.11	30
METHYLENE CHLORIDE	10.00	ND	16.9	16.6	169 #	166 #	55-140	1.8	30
STYRENE	10.00	ND	9.10	9.30	91.0	93.0	65-135	2.2	30
TETRACHLOROETHENE	10.00	ND	8.89	9.25	88.9	92.5	45-150	4.0	30
TOLUENE	10.00	ND	9.09	9.15	90.9	91.5	75-120	0.66	30
TRANS-1,2-DICHLOROETHENE	10.00	ND	8.18	8.46	81.8	84.6	60-140	3.4	30
TRICHLOROETHENE	10.00	ND	19.9	20.4	199 #	204 #	70-125	2.5	30
VINYL CHLORIDE	10.00	ND	8.27	8.25	82.7	82.5	50-145	0.24	30
XYLENES (TOTAL)	30.0	ND	27.1	28.0	90.3	93.3	80-120	3.3	30
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	NA	33.3	34.2	99.0	102	70-120		
SURROGATE: 4-BROMOFLUOROBENZE	29.5	NA	30.0	31.2	102	106	75-120		
SURROGATE: DIBROMOFLUOROMETH	31.9	NA	29.3	30.2	91.9	94.7	85-115		
SURROGATE: TOLUENE-D8 (S)	37.3	NA	36.6	38.0	98.0	102	85-120		

= Recovery is outside QC limits.

Comments:

Primary	SPK	DUP
Quant Method :	TALLW.M	TALLW.M
Extraction Date :	07/26/12	07/26/12
Analysis Date :	07/26/12	07/26/12
Instrument :	Thor	Thor
Run :	0726T21	0726T22
Initials :	ARS	

Printed: 07/31/12 9:57:22 AM
APPL MSD SCII

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T21.D Vial: 46
Acq On : 26 Jul 12 18:37 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W234 MS-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	398656	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	326336	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	192128	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	182918	29.32111 ppb		0.00
Spiked Amount 31.881			Recovery = 91.970%			
36) 1,2-DCA-D4(S)	6.33	65	192921	33.27556 ppb		0.00
Spiked Amount 33.647			Recovery = 98.898%			
56) Toluene-D8(S)	8.43	98	705319	36.55892 ppb		0.00
Spiked Amount 37.345			Recovery = 97.896%			
64) 4-Bromofluorobenzene(S)	11.05	95	273381	29.96347 ppb		0.00
Spiked Amount 29.515			Recovery = 101.517%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	17536	8.68408 ppb		97
3) Freon 114	1.41	85	25480	9.07744 ppb		96
4) Chloromethane	1.45	50	35129	6.86637 ppb		95
5) Vinyl chloride	1.56	62	65125	8.26561 ppb		99
6) Bromomethane	1.87	94	38861	7.71666 ppb		95
7) Chloroethane	1.97	64	35403	7.80147 ppb		93
8) Dichlorofluoromethane	2.18	67	2143	7.52700 ppb		84
9) Trichlorofluoromethane	2.24	101	15974	9.80867 ppb		99
11) Acetone	2.89	43	18411	13.03028 ppb		95
12) Freon-113	2.85	101	33134	10.11506 ppb		96
13) 1,1-DCE	2.82	61	45050	10.24822 ppb		95
14) t-Butanol	3.69	59	21048	162.81505 ppb	#	91
16) Iodomethane	2.98	142	34440	8.66185 ppb		95
17) Acrylonitrile	3.80	52	11400	9.05442 ppb		100
18) Methylene chloride	3.45	84	25968	16.91193 ppb		95
19) Carbon disulfide	3.06	76	4266	9.45532 ppb	#	79
20) Methyl t-butyl ether (MtBE	3.90	73	74082	8.72871 ppb		98
21) Trans-1,2-DCE	3.86	96	24817	8.18037 ppb		97
22) Diisopropyl Ether	4.70	59	17110	9.00186 ppb		97
23) 1,1-DCA	4.51	63	73029	9.07819 ppb		98
24) Vinyl Acetate	4.70	87	40310	8.87181 ppb		96
25) Ethyl tert Butyl Ether	5.21	59	92244	8.69329 ppb		99
26) MEK (2-Butanone)	5.38	43	20373	10.42451 ppb		97
27) Cis-1,2-DCE	5.33	96	46374	8.99903 ppb		99
28) 2,2-Dichloropropane	5.32	77	29884	9.22155 ppb		90
29) Chloroform	5.76	83	90023	9.01158 ppb		100
30) Bromochloromethane	5.62	128	22585	9.00139 ppb		99
32) 1,1,1-TCA	5.96	97	55482	9.23047 ppb		92
33) Cyclohexane	6.03	41	14978	9.18198 ppb		97
34) 1,1-Dichloropropene	6.17	75	39674	9.08877 ppb		97
35) 2,2,4-Trimethylpentane	6.55	57	55203	8.79908 ppb		96
37) Carbon Tetrachloride	6.16	117	51904	9.21336 ppb		96
38) Tert Amyl Methyl Ether	6.59	73	99278	8.79034 ppb		99
39) 1,2-DCA	6.42	62	59468	9.07761 ppb		97
40) Benzene	6.40	78	171830	9.60340 ppb		97
41) TCE	7.15	95	96816	19.90714 ppb		97
42) 2-Pentanone	7.36	43	464853	121.32466 ppb		99
43) 1,2-Dichloropropane	7.37	63	52133	8.92977 ppb		99
44) Bromodichloromethane	7.68	83	70010	8.66851 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T21.D Vial: 46
Acq On : 26 Jul 12 18:37 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W234 MS-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
45)	Methyl Cyclohexane	7.36	83	31060	8.94484	ppb		98
46)	Dibromomethane	7.49	93	28328	8.92027	ppb		98
47)	2-Chloroethyl vinyl ether	7.98	106	701	5.83998	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	25256	9.16566	ppb		96
49)	1-Bromo-2-chloroethane	7.99	63	34448	8.48067	ppb		96
50)	Cis-1,3-Dichloropropene	8.15	75	68330	8.54960	ppb		99
51)	Toluene	8.50	91	191937	9.09187	ppb		99
52)	Trans-1,3-Dichloropropene	8.72	75	59665	8.46686	ppb		99
53)	1,1,2-TCA	8.90	83	37639	8.00770	ppb		97
54)	2-Hexanone	9.18	43	29561	9.35521	ppb	#	95
57)	1,2-EDB	9.40	107	42862	8.76015	ppb		97
58)	Tetrachloroethene	9.06	166	49194	8.89203	ppb		95
59)	1-Chlorohexane	9.90	91	60378	9.16870	ppb		96
60)	1,1,1,2-Tetrachloroethane	9.99	131	57245	8.85670	ppb		98
61)	m&p-Xylene	10.14	106	180959	17.94733	ppb		96
62)	o-Xylene	10.54	106	95951	9.19930	ppb		98
63)	Styrene	10.55	104	161355	9.10492	ppb		98
65)	1,3-Dichloropropane	9.07	76	76783	8.95046	ppb		99
66)	Dibromochloromethane	9.29	129	56595	8.76260	ppb		100
67)	Chlorobenzene	9.90	112	147388	8.73601	ppb		99
68)	Ethylbenzene	10.03	91	237757	8.96239	ppb		99
69)	Bromoform	10.71	173	39528	8.93826	ppb		94
71)	Isopropylbenzene	10.91	105	232129	9.24037	ppb		99
72)	1,1,2,2-Tetrachloroethane	11.23	83	1157	0.16598	ppb	#	93
73)	1,2,3-Trichloropropane	11.23	110	18186	9.19203	ppb		90
74)	t-1,4-Dichloro-2-Butene	11.25	53	13285	10.03354	ppb		97
75)	Bromobenzene	11.19	156	74947	9.05011	ppb		99
76)	n-Propylbenzene	11.32	91	299258	9.25227	ppb		98
77)	4-Ethyltoluene	11.43	105	260680	9.38502	ppb		99
78)	2-Chlorotoluene	11.39	91	209194	9.07002	ppb		99
79)	1,3,5-Trimethylbenzene	11.50	105	216102	9.38542	ppb		97
80)	4-Chlorotoluene	11.50	91	208790	9.14553	ppb		96
81)	Tert-Butylbenzene	11.82	119	195274	9.25756	ppb		98
82)	1,2,4-Trimethylbenzene	11.86	105	224608	9.42702	ppb		99
83)	Sec-Butylbenzene	12.04	105	266434	9.46101	ppb		100
84)	p-Isopropyltoluene	12.19	119	223269	9.38317	ppb		99
85)	Benzyl Chloride	12.35	91	54043	7.60044	ppb		96
86)	1,3-DCB	12.14	146	143448	9.15934	ppb		98
87)	1,4-DCB	12.22	146	144863	8.83205	ppb		99
88)	n-Butylbenzene	12.59	91	195128	9.14899	ppb		98
89)	1,2-DCB	12.59	146	135507	8.92701	ppb		99
90)	Hexachloroethane	12.86	117	35328	8.10342	ppb		98
91)	1,2-Dibromo-3-chloropropan	13.35	157	11551	8.84502	ppb		92
92)	1,2,4-Trichlorobenzene	14.20	180	58360	8.38749	ppb		96
93)	Hexachlorobutadiene	14.38	223	25671	8.83190	ppb		94
94)	Naphthalene	14.43	128	173088	8.90900	ppb		99
95)	1,2,3-Trichlorobenzene	14.68	180	86721	8.74757	ppb		98

1,3-dichloropropene, total 17.01646 ppb
ARS 7/27/12

(#) = qualifier out of range (m) = manual integration

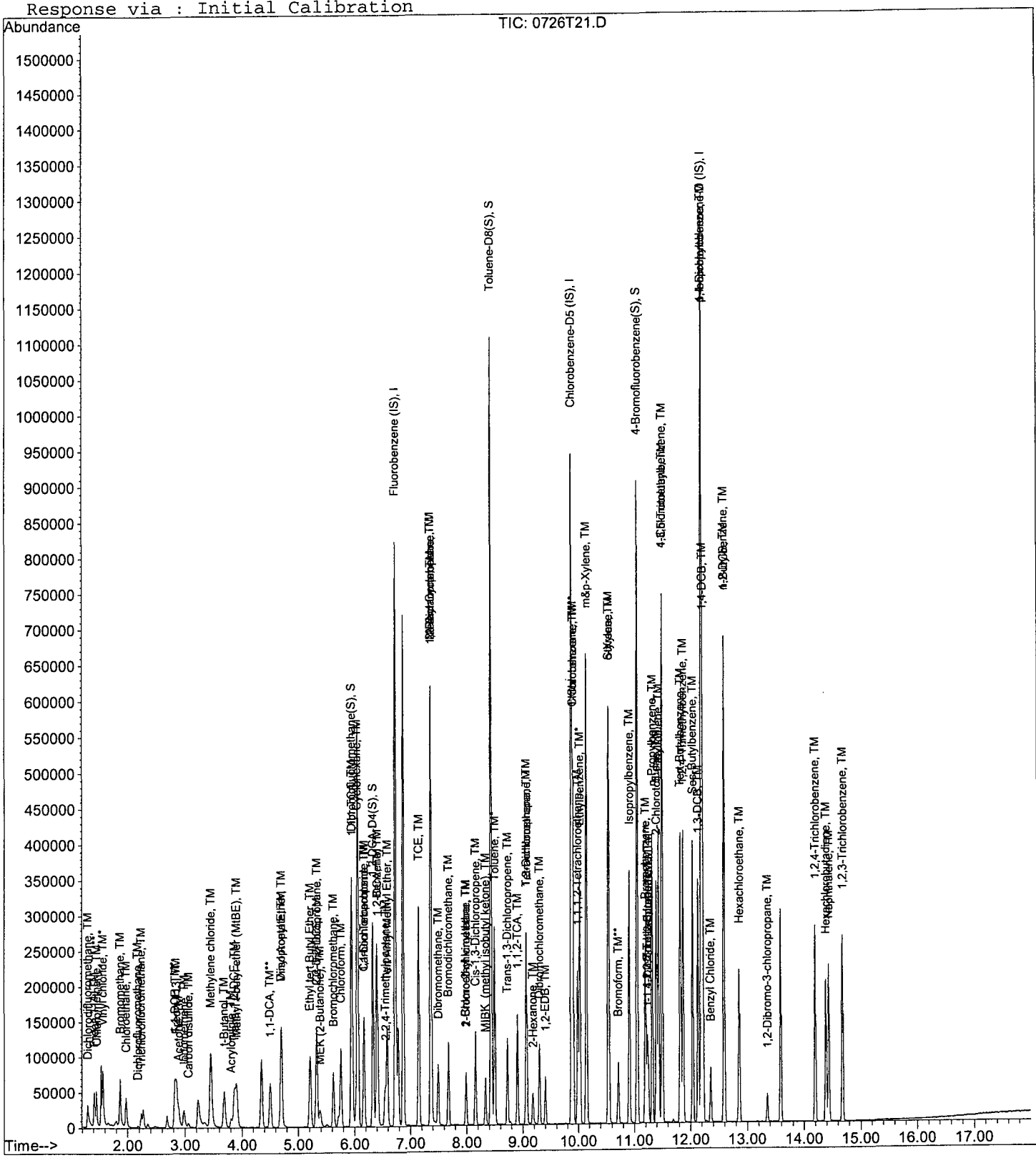
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T21.D
Acq On : 26 Jul 12 18:37
Sample : AY65167W234 MS-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 46
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 8:29 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



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Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T22.D Vial: 47
Acq On : 26 Jul 12 19:04 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W234 MSD-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	396608	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	320064	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	192576	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.94	111	187193	30.16132 ppb		0.00
Spiked Amount 31.881			Recovery = 94.604%			
36) 1,2-DCA-D4(S)	6.33	65	197456	34.23363 ppb		0.00
Spiked Amount 33.647			Recovery = 101.745%			
56) Toluene-D8(S)	8.43	98	718385	37.96586 ppb		0.00
Spiked Amount 37.345			Recovery = 101.663%			
64) 4-Bromofluorobenzene(S)	11.05	95	279160	31.19645 ppb		0.00
Spiked Amount 29.515			Recovery = 105.694%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	19064	9.48952 ppb		95
3) Freon 114	1.41	85	27000	9.69377 ppb		97
4) Chloromethane	1.45	50	36274	7.14295 ppb		98
5) Vinyl chloride	1.56	62	64676	8.25101 ppb		100
6) Bromomethane	1.87	94	38734	7.73116 ppb		96
7) Chloroethane	1.97	64	36068	7.98906 ppb		96
8) Dichlorofluoromethane	2.18	67	2523	8.65639 ppb		96
9) Trichlorofluoromethane	2.24	101	15564	9.60627 ppb		98
11) Acetone	2.89	43	17549	12.43144 ppb		98
12) Freon-113	2.85	101	33440	10.26119 ppb		96
13) 1,1-DCE	2.82	61	47484	10.85769 ppb		98
14) t-Butanol	3.69	59	22496	174.91452 ppb		94
15) Methyl Acetate	3.35	43	5526	0.20308 ppb		91
16) Iodomethane	2.98	142	35121	8.87874 ppb		98
17) Acrylonitrile	3.81	52	11469	9.15626 ppb		98
18) Methylene chloride	3.45	84	25336	16.56732 ppb		95
19) Carbon disulfide	3.06	76	3846	8.48554 ppb	#	81
20) Methyl t-butyl ether (MtBE	3.90	73	73609	8.71776 ppb		97
21) Trans-1,2-DCE	3.86	96	25524	8.45687 ppb		98
22) Diisopropyl Ether	4.70	59	16959	8.96849 ppb		98
23) 1,1-DCA	4.50	63	72794	9.09571 ppb		98
24) Vinyl Acetate	4.70	87	41152	9.10389 ppb		98
25) Ethyl tert Butyl Ether	5.20	59	93379	8.84569 ppb		97
26) MEK (2-Butanone)	5.38	43	18618	9.60339 ppb		99
27) Cis-1,2-DCE	5.32	96	45840	8.94134 ppb		99
28) 2,2-Dichloropropane	5.32	77	30790	9.55018 ppb		99
29) Chloroform	5.75	83	87720	8.82639 ppb		98
30) Bromochloromethane	5.62	128	23036	9.22855 ppb		96
32) 1,1,1-TCA	5.96	97	55433	9.26994 ppb		92
33) Cyclohexane	6.03	41	14895	9.17825 ppb		94
34) 1,1-Dichloropropene	6.17	75	38784	8.93076 ppb		99
35) 2,2,4-Trimethylpentane	6.55	57	56911	9.11817 ppb		96
37) Carbon Tetrachloride	6.16	117	53160	9.48503 ppb		94
38) Tert Amyl Methyl Ether	6.59	73	102062	9.08351 ppb		100
39) 1,2-DCA	6.42	62	57808	8.86979 ppb		99
40) Benzene	6.40	78	174046	9.77748 ppb		97
41) TCE	7.14	95	98523	20.36274 ppb		96
42) 2-Pentanone	7.36	43	465382	122.08994 ppb		99
43) 1,2-Dichloropropane	7.37	63	51522	8.87069 ppb		98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T22.D Vial: 47
Acq On : 26 Jul 12 19:04 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W234 MSD-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 8:29 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	Bromodichloromethane	7.68	83	70446	8.76753	ppb		98
45)	Methyl Cyclohexane	7.36	83	31626	9.15487	ppb		96
46)	Dibromomethane	7.49	93	28593	9.05021	ppb		94
47)	2-Chloroethyl vinyl ether	7.99	106	842	7.30368	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	23928	8.72855	ppb		97
49)	1-Bromo-2-chloroethane	7.99	63	35368	8.75213	ppb		97
50)	Cis-1,3-Dichloropropene	8.15	75	69560	8.74844	ppb		98
51)	Toluene	8.50	91	192260	9.15420	ppb		97
52)	Trans-1,3-Dichloropropene	8.72	75	61410	8.75949	ppb		98
53)	1,1,2-TCA	8.90	83	36157	7.73213	ppb		98
54)	2-Hexanone	9.17	43	28749	9.14521	ppb		96
57)	1,2-EDB	9.40	107	42537	8.86409	ppb		95
58)	Tetrachloroethene	9.06	166	50207	9.25297	ppb		97
59)	1-Chlorohexane	9.90	91	59569	9.22311	ppb		99
60)	1,1,1,2-Tetrachloroethane	9.99	131	56655	8.93718	ppb		92
61)	m&p-Xylene	10.14	106	184918	18.69937	ppb		99
62)	o-Xylene	10.54	106	95435	9.32913	ppb		98
63)	Styrene	10.55	104	161642	9.29985	ppb		99
65)	1,3-Dichloropropane	9.07	76	75282	8.94746	ppb		100
66)	Dibromochloromethane	9.29	129	55368	8.74061	ppb		96
67)	Chlorobenzene	9.90	112	149854	9.05623	ppb		99
68)	Ethylbenzene	10.03	91	233843	8.98759	ppb		99
69)	Bromoform	10.71	173	39220	9.04241	ppb		100
71)	Isopropylbenzene	10.91	105	233391	9.26899	ppb		98
72)	1,1,2,2-Tetrachloroethane	11.23	83	1307	0.18706	ppb	#	88
73)	1,2,3-Trichloropropane	11.23	110	18053	9.10358	ppb		89
74)	t-1,4-Dichloro-2-Butene	11.25	53	13395	10.09308	ppb		95
75)	Bromobenzene	11.19	156	73314	8.83232	ppb		100
76)	n-Propylbenzene	11.32	91	300301	9.26292	ppb		99
77)	4-Ethyltoluene	11.43	105	261025	9.37558	ppb		99
78)	2-Chlorotoluene	11.39	91	210780	9.11753	ppb		99
79)	1,3,5-Trimethylbenzene	11.49	105	217547	9.42620	ppb		97
80)	4-Chlorotoluene	11.50	91	206692	9.03257	ppb		99
81)	Tert-Butylbenzene	11.82	119	193301	9.14271	ppb		96
82)	1,2,4-Trimethylbenzene	11.86	105	220243	9.22231	ppb		99
83)	Sec-Butylbenzene	12.04	105	274101	9.71062	ppb		99
84)	p-Isopropyltoluene	12.19	119	226046	9.47778	ppb		98
85)	Benzyl Chloride	12.35	91	54122	7.59384	ppb		97
86)	1,3-DCB	12.13	146	142506	9.07803	ppb		98
87)	1,4-DCB	12.22	146	144567	8.79350	ppb		99
88)	n-Butylbenzene	12.59	91	195543	9.14712	ppb		98
89)	1,2-DCB	12.59	146	132851	8.73168	ppb		97
90)	Hexachloroethane	12.86	117	36074	8.25528	ppb		97
91)	1,2-Dibromo-3-chloropropan	13.35	157	11362	8.68006	ppb		89
92)	1,2,4-Trichlorobenzene	14.20	180	62712	8.99199	ppb		99
93)	Hexachlorobutadiene	14.38	223	26069	8.94796	ppb		96
94)	Naphthalene	14.43	128	174325	8.95179	ppb		100
95)	1,2,3-Trichlorobenzene	14.68	180	88935	8.95003	ppb		97

1,3-dichloropropene, total: 17.50793 ppb ARS 7/27/12

(#) = qualifier out of range (m) = manual integration

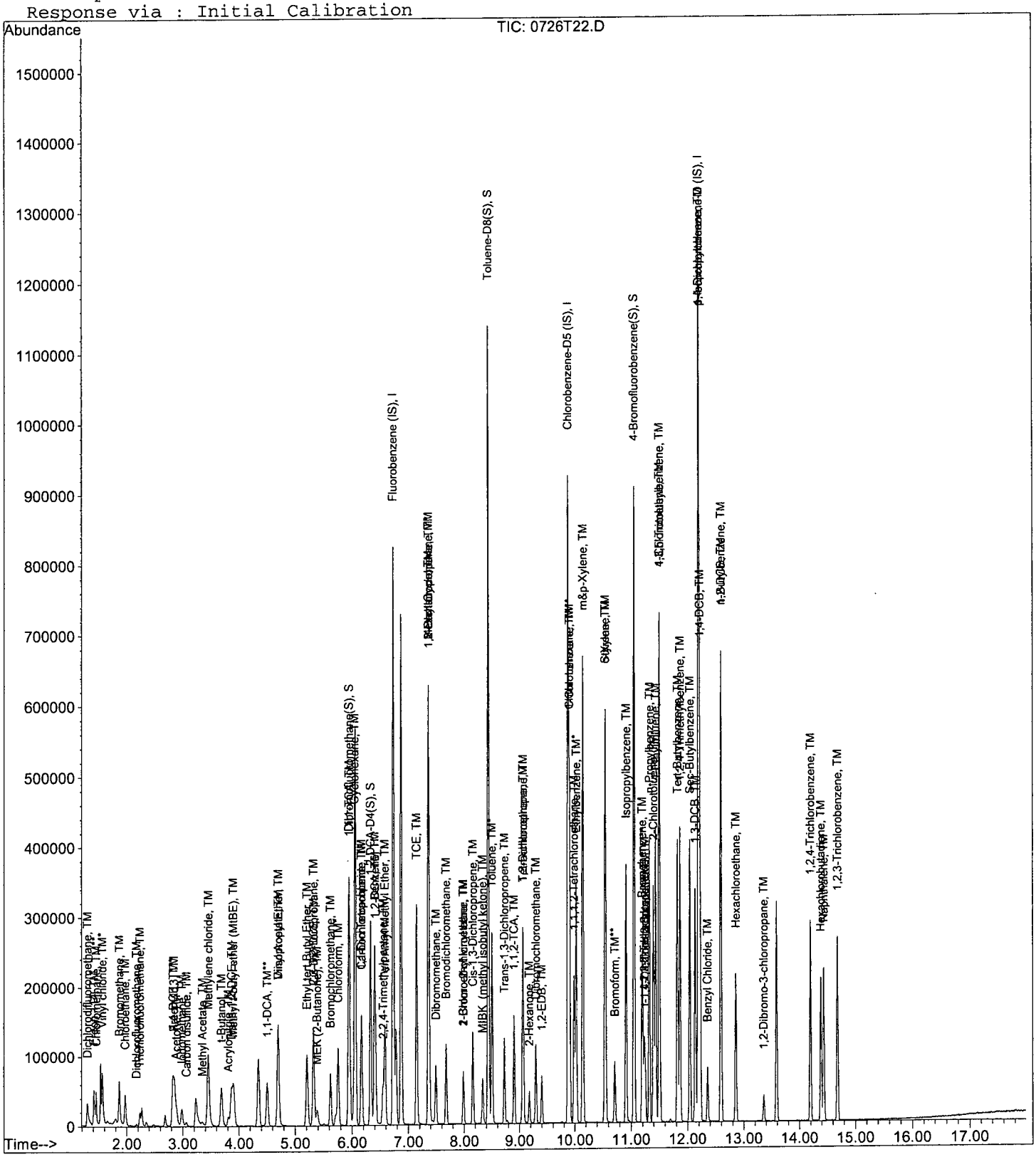
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T22.D
Acq On : 26 Jul 12 19:04
Sample : AY65167W234 MSD-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 47
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 8:29 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T23.D Vial: 48
Acq On : 26 Jul 12 19:32 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W456 MS-1SS GAS Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 7:42 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	842116	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	935797	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1070499	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	18232203m	218.22652	ppb	100

(#) = qualifier out of range (m) = manual integration
0726T23.D TGAS.M Fri Jul 27 07:42:44 2012 Page 1

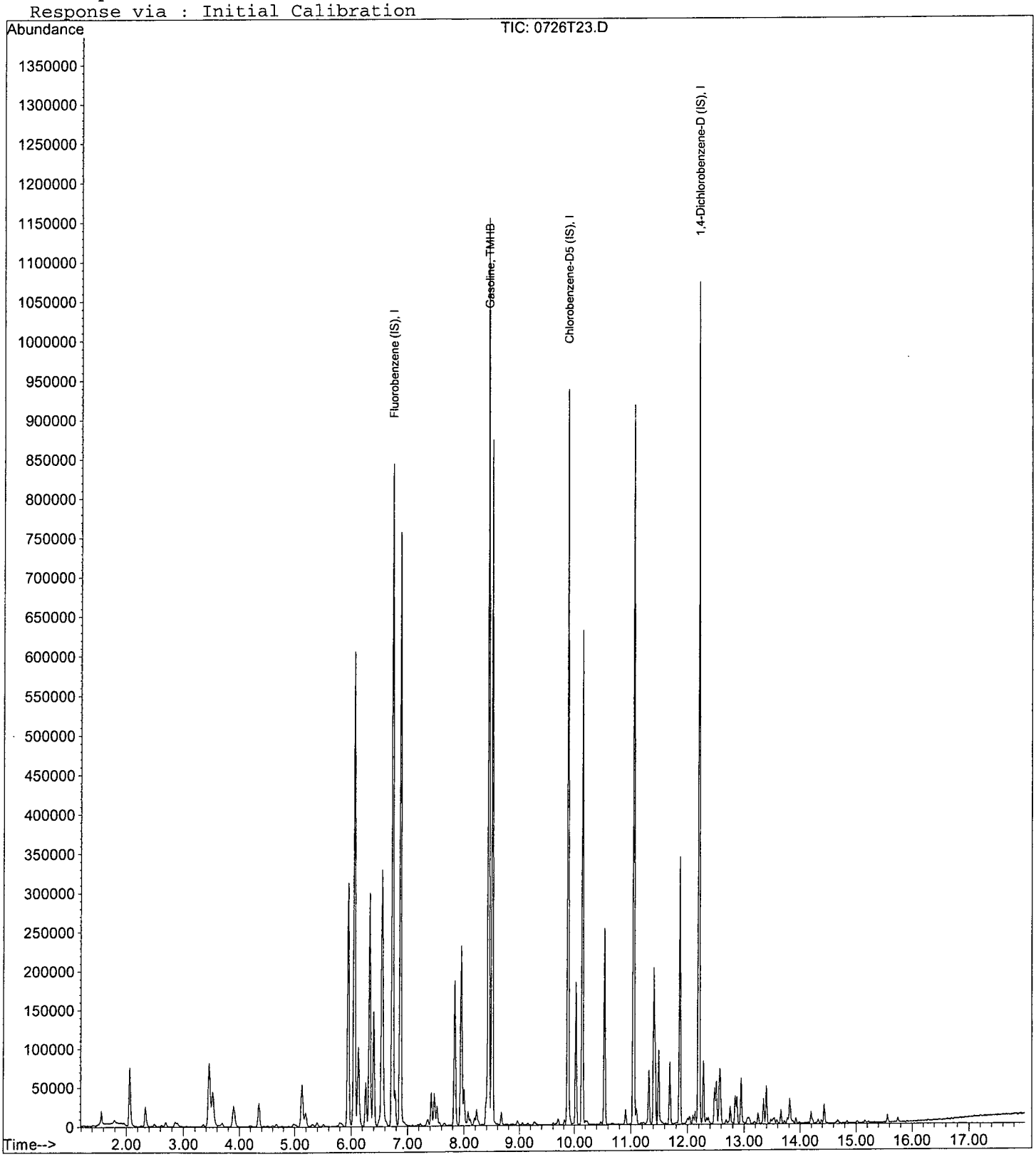
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T23.D
Acq On : 26 Jul 12 19:32
Sample : AY65167W456 MS-1SS GAS
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 48
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 7:42 2012 Quant Results File: TGAS.RES

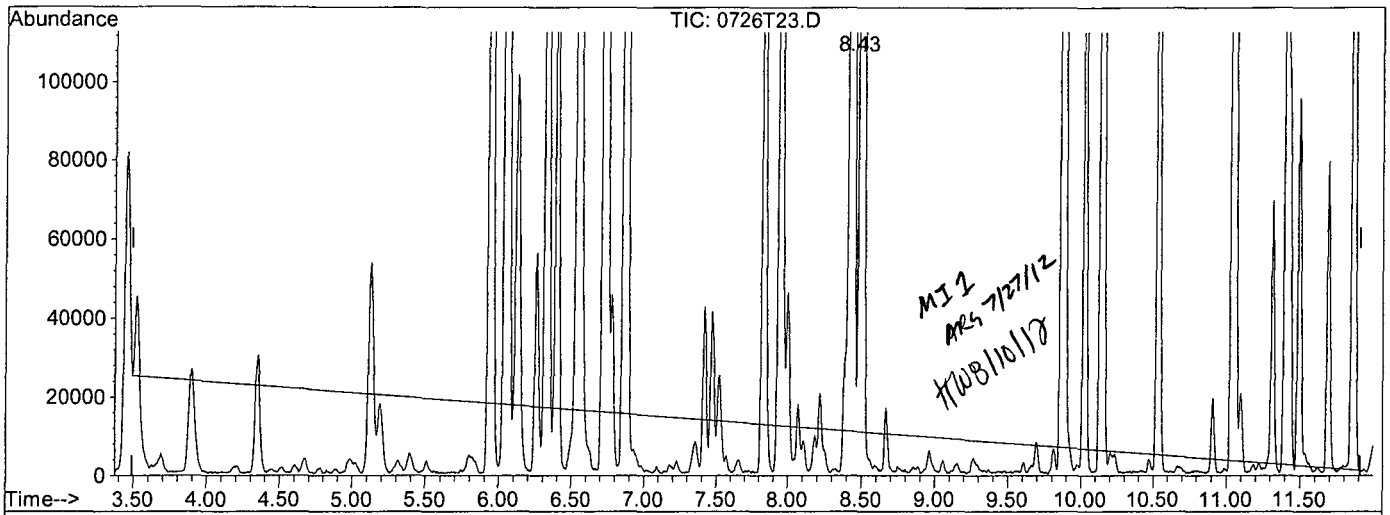
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

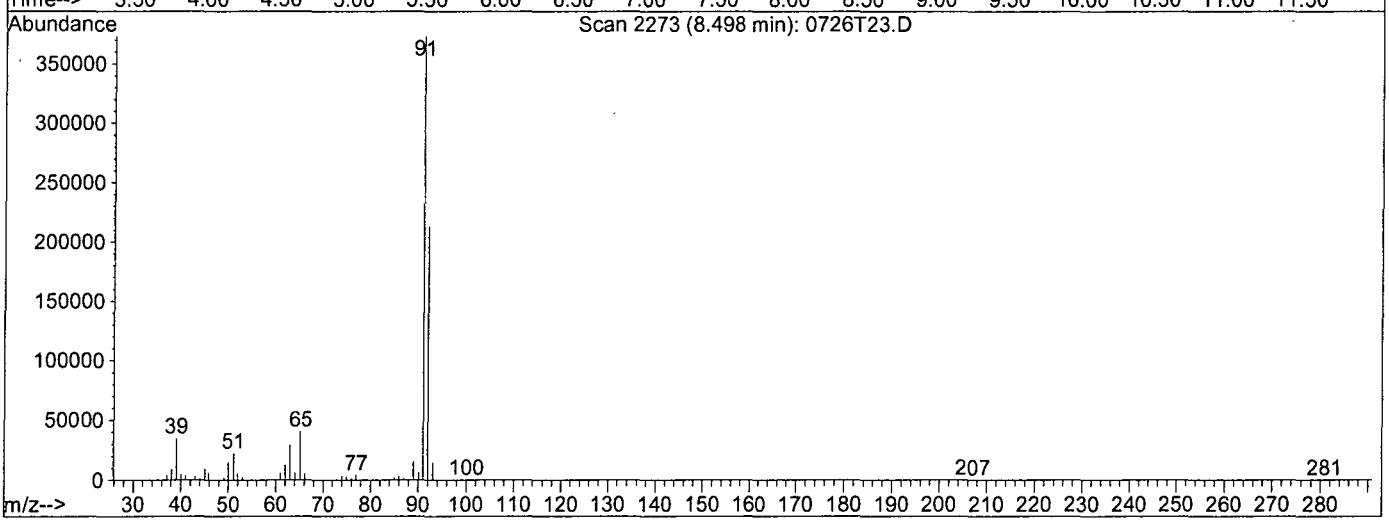


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T23.D Vial: 48
Acq On : 26 Jul 12 19:32 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W456 MS-1SS GAS Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:41 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T23.D

(2) Gasoline (TMHB)

8.50min 143.2742ppb m

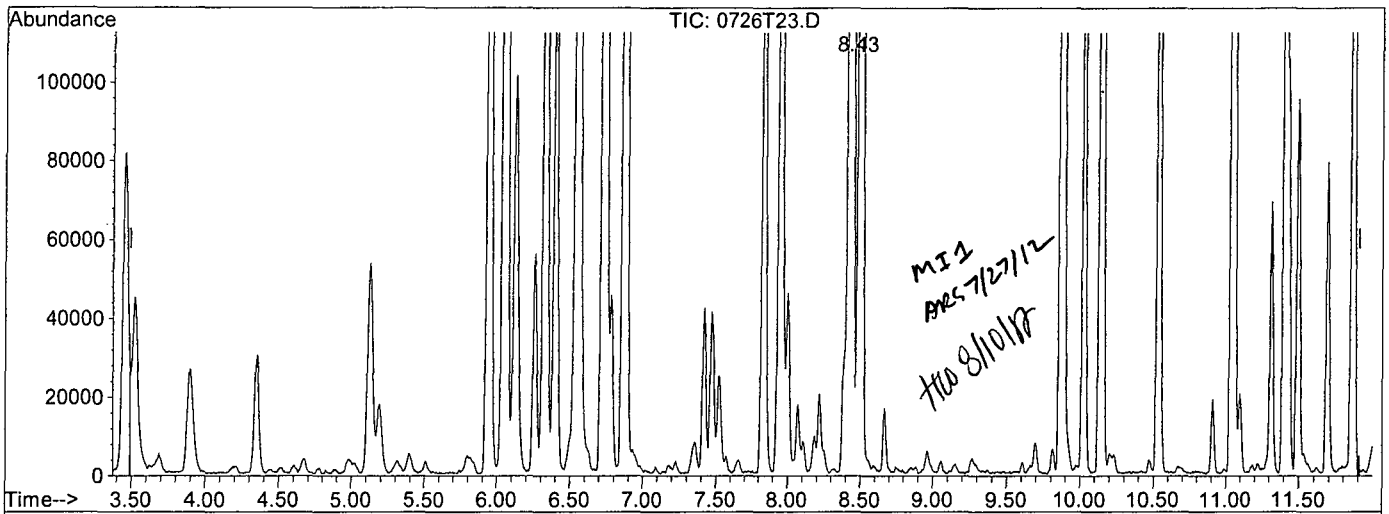
response 15481648

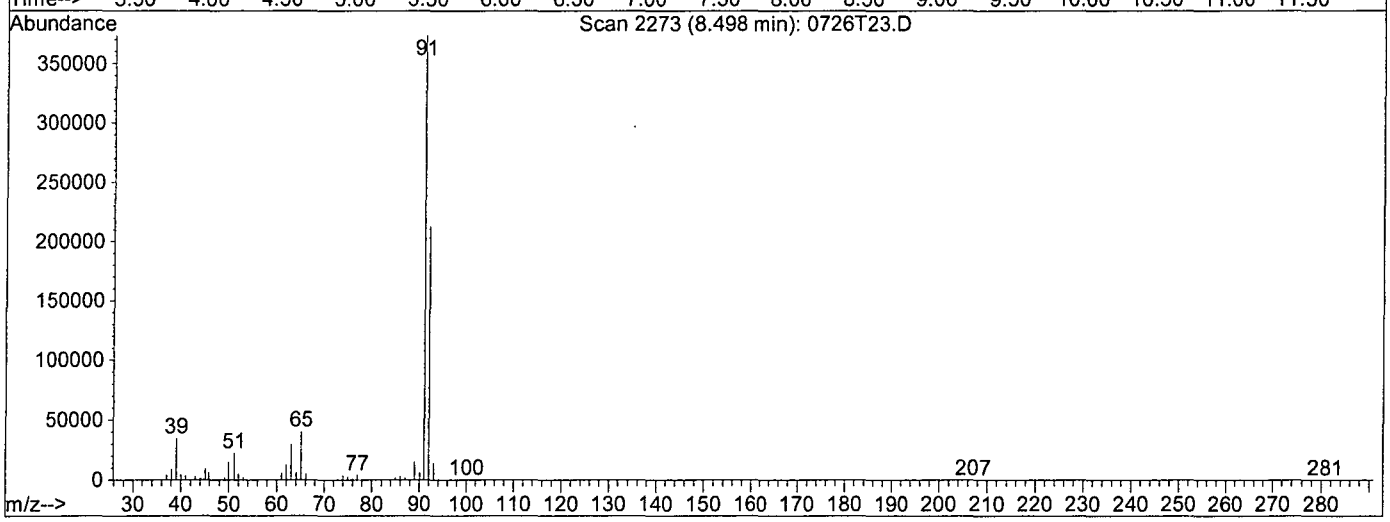
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.68#
0.00	0.00	1.93#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T23.D Vial: 48
Acq On : 26 Jul 12 19:32 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W456 MS-1SS GAS Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:42 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T23.D

(2) Gasoline (TMHB)

8.43min 218.2265ppb m

response 18232203

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.64#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T24.D Vial: 49
Acq On : 26 Jul 12 20:00 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W456 MSD-1WT GAS Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 7:43 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	794771	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	901502	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	995139	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	17667021m	231.50411	ppb	100

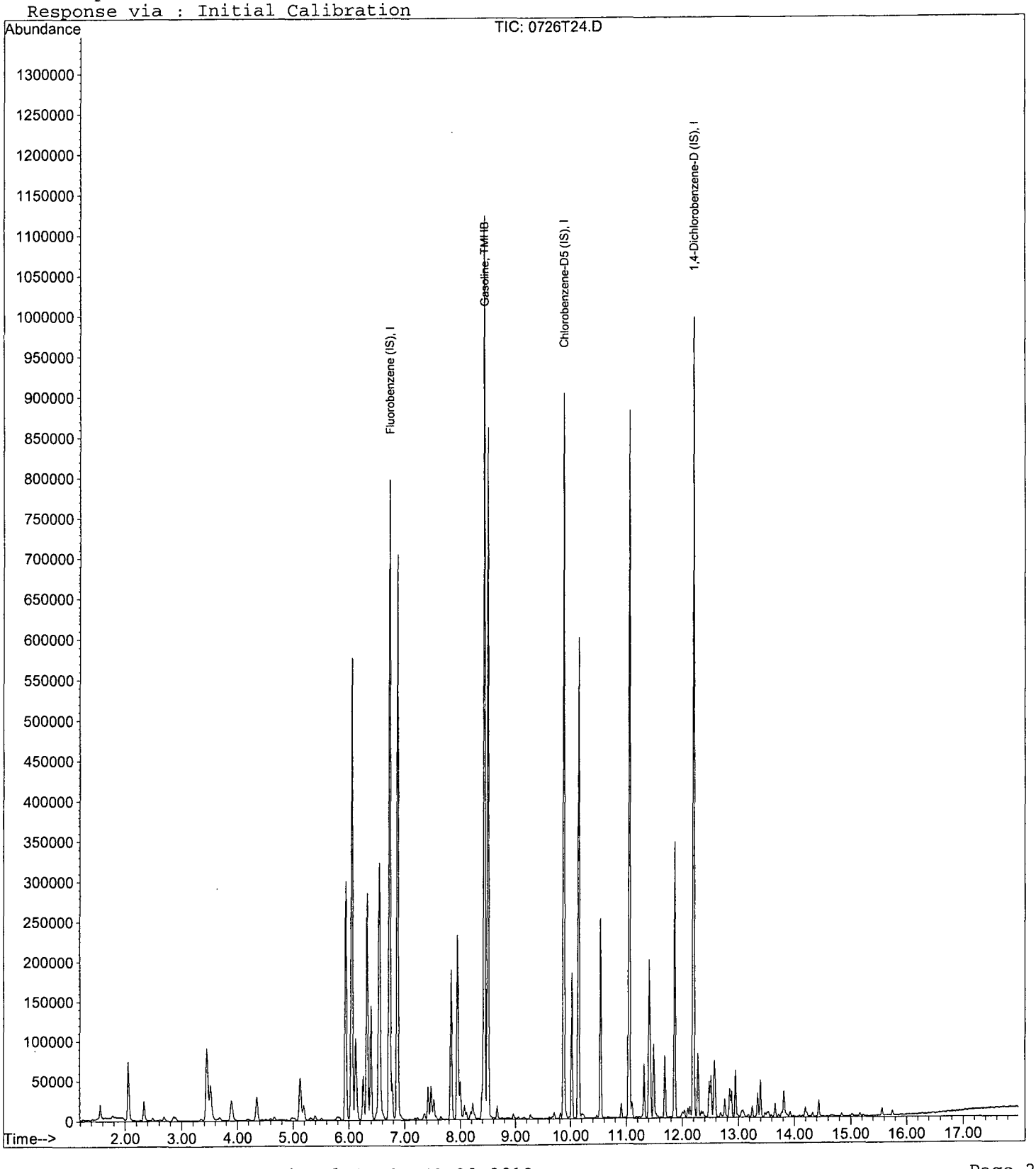
(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120725\0726T24.D
Acq On : 26 Jul 12 20:00
Sample : AY65167W456 MSD-1WT GAS
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 49
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 7:43 2012 Quant Results File: TGAS.RES

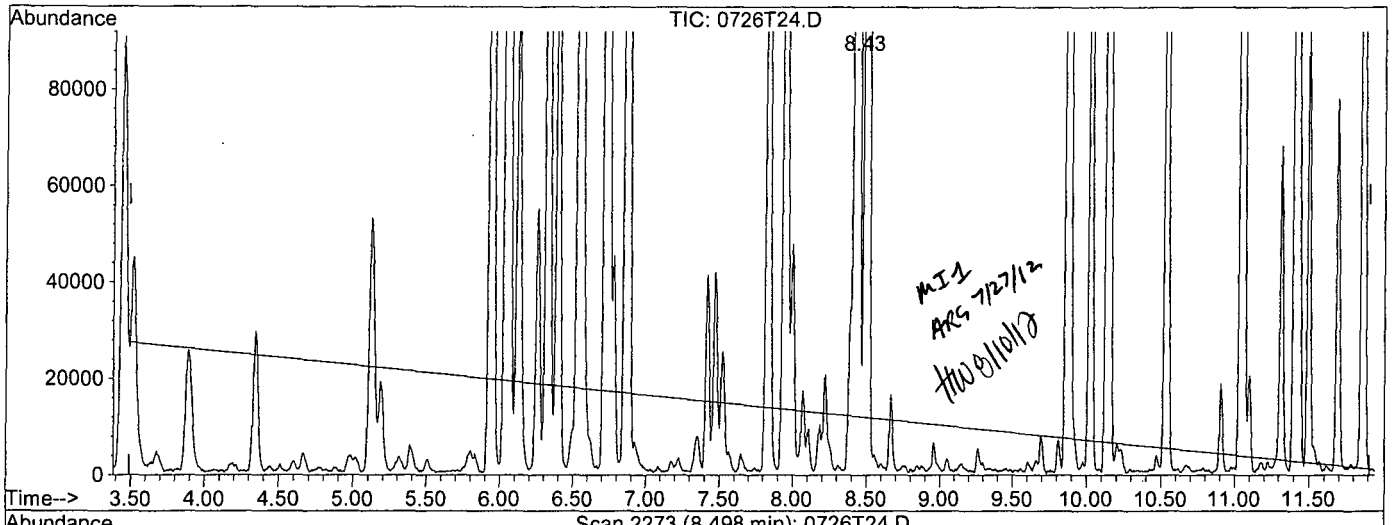
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

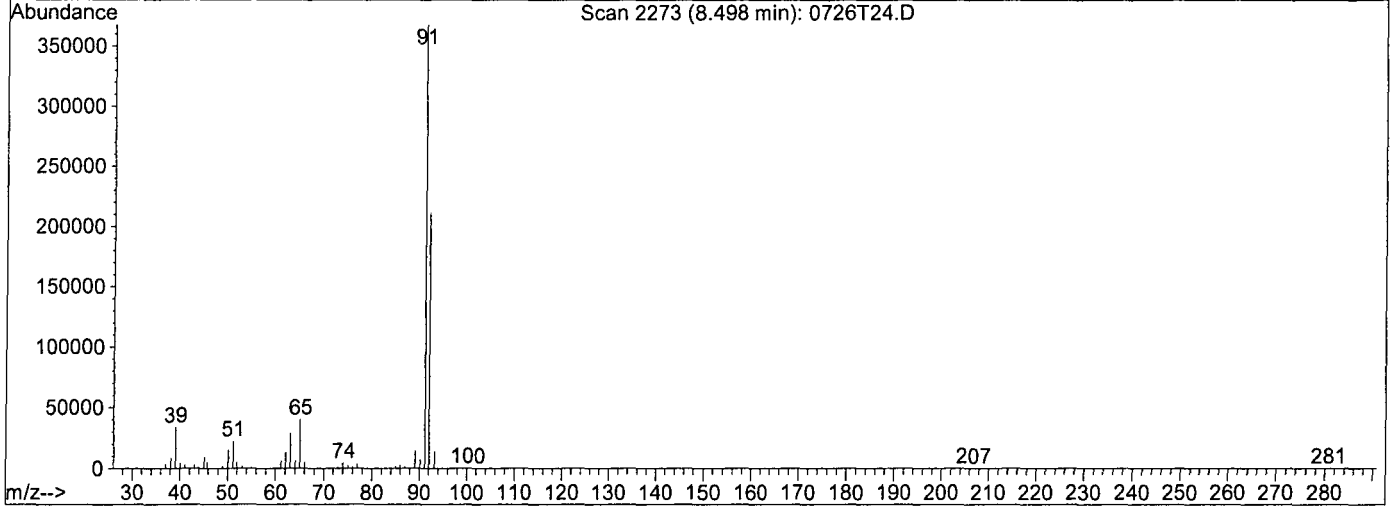


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T24.D Vial: 49
Acq On : 26 Jul 12 20:00 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W456 MSD-1WT GAS Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:42 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T24.D

(2) Gasoline (TMHB)

8.50min 158.3586ppb m

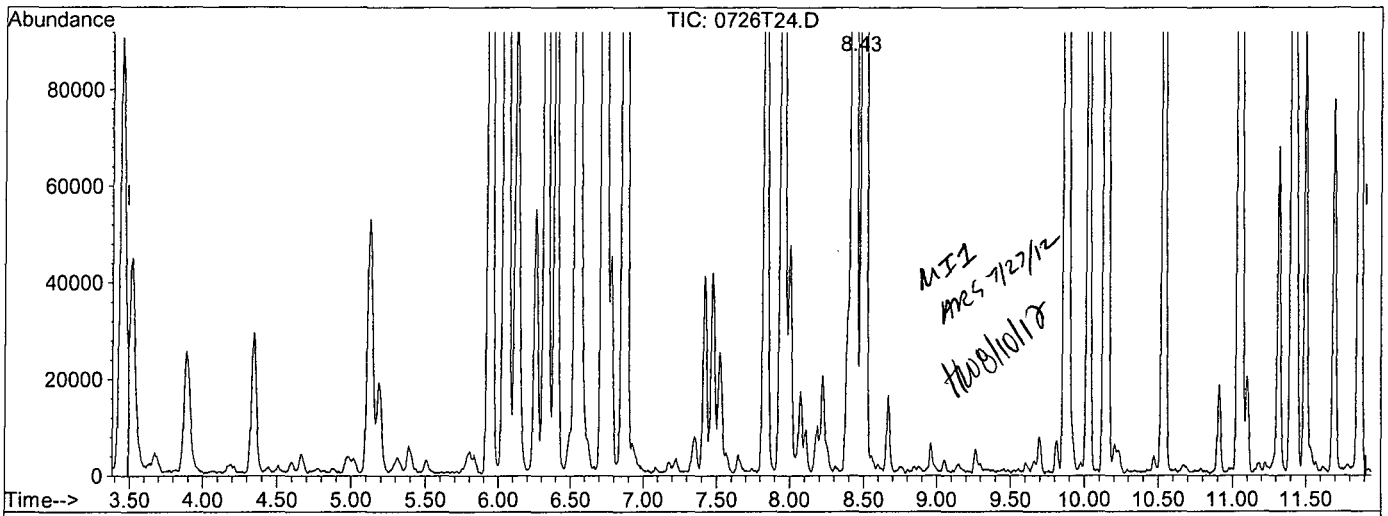
response 15133682

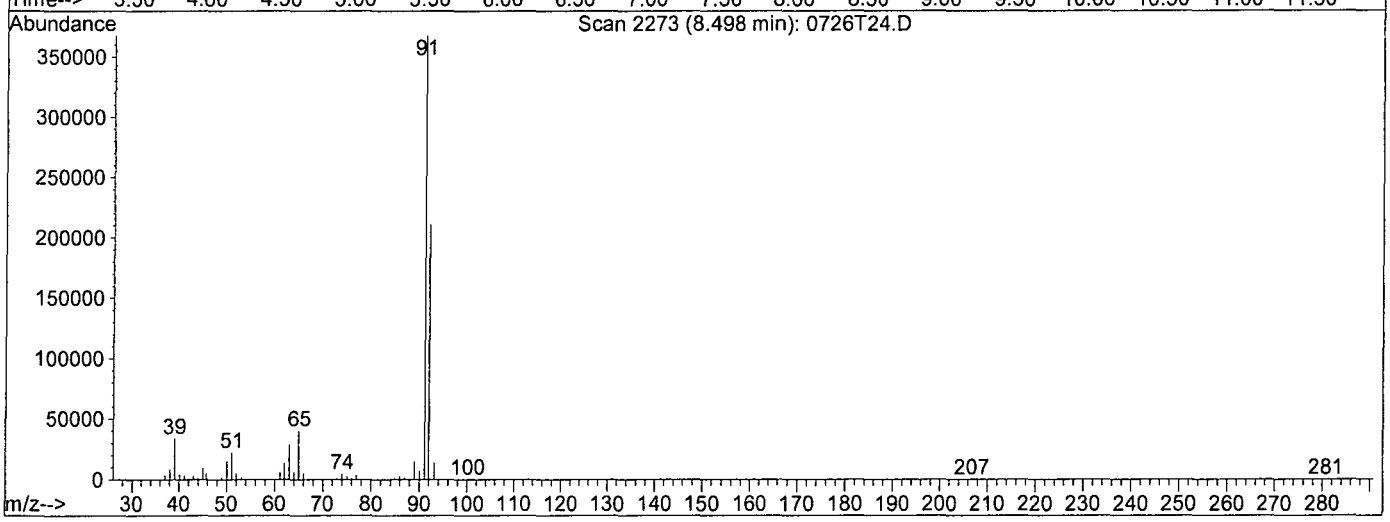
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.63#
0.00	0.00	1.86#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T24.D Vial: 49
Acq On : 26 Jul 12 20:00 Operator: DG,RS,HW,ARS,SV
Sample : AY65167W456 MSD-1WT GAS Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:43 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T24.D

(2) Gasoline (TMHB)

8.43min 231.5041ppb m

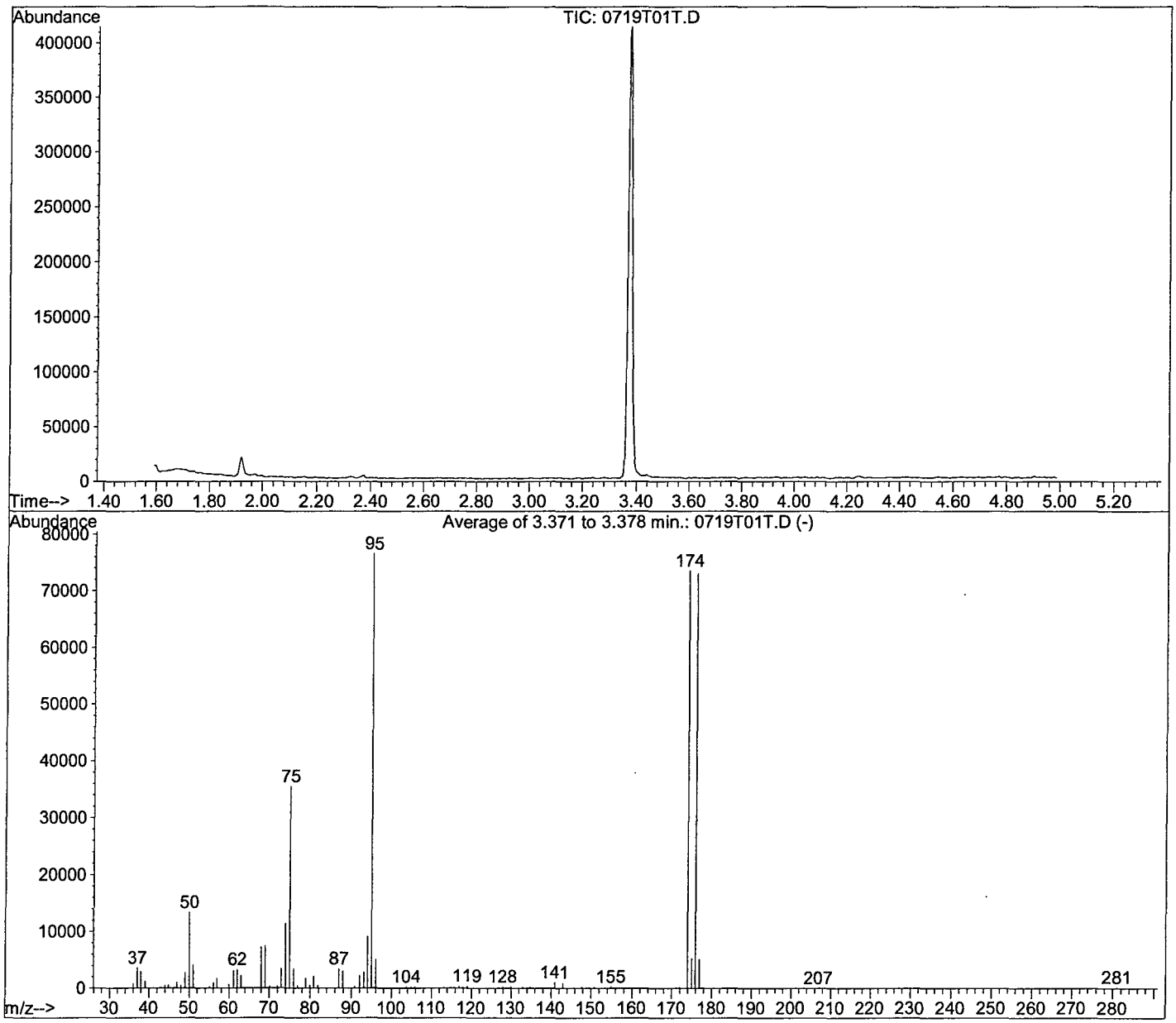
response 17667021

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.54#
0.00	0.00	1.60#
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



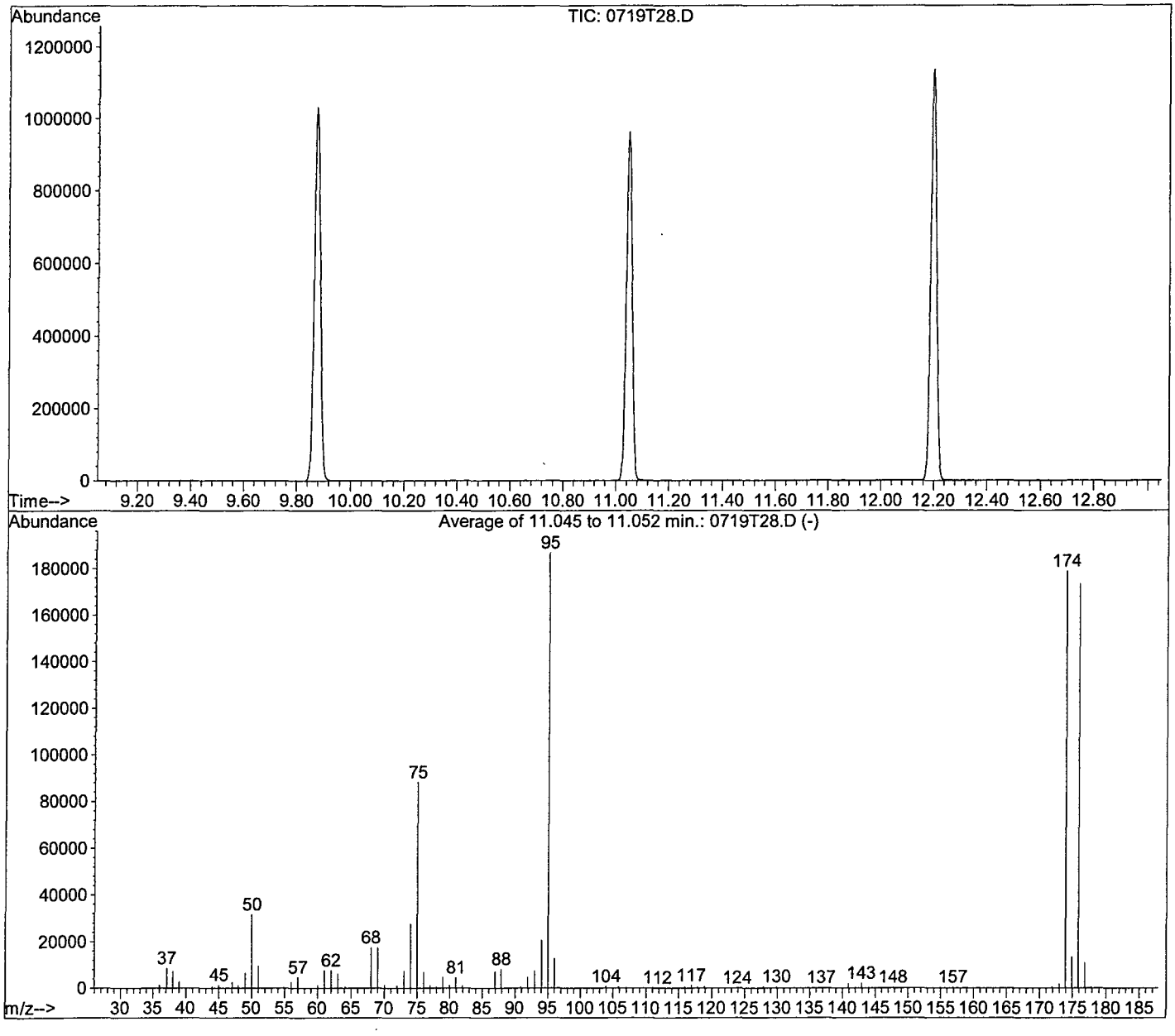
AutoFind: Scans 554, 555, 556; Background Corrected with Scan 544

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



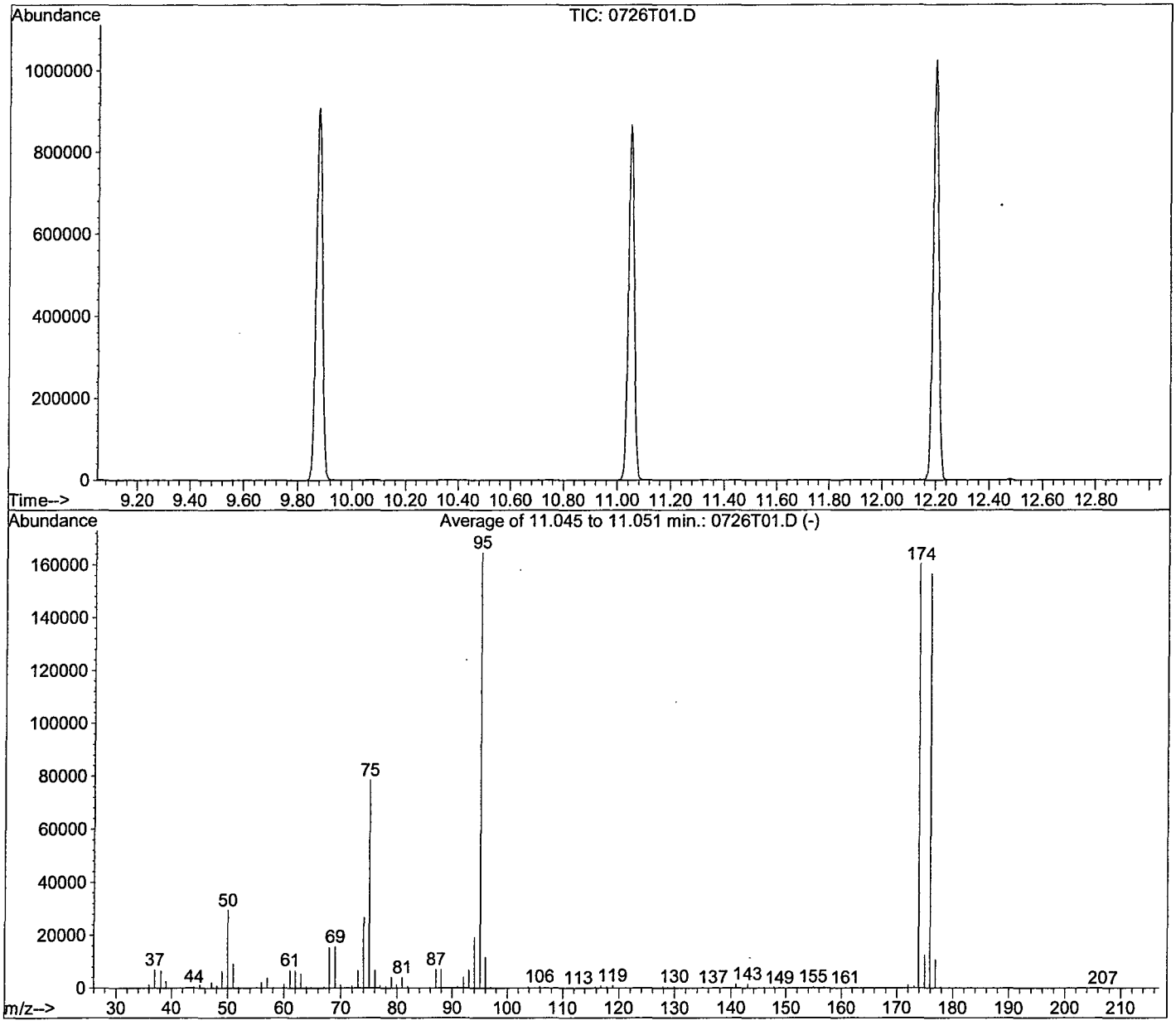
AutoFind: Scans 3065, 3066, 3067; Background Corrected with Scan 3051

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

Data File : M:\THOR\DATA\T120725\0726T01.D
Acq On : 26 Jul 12 9:22
Sample : 5-ng BFB Std 07-16-12B
Misc : 2uL

Vial: 26
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B



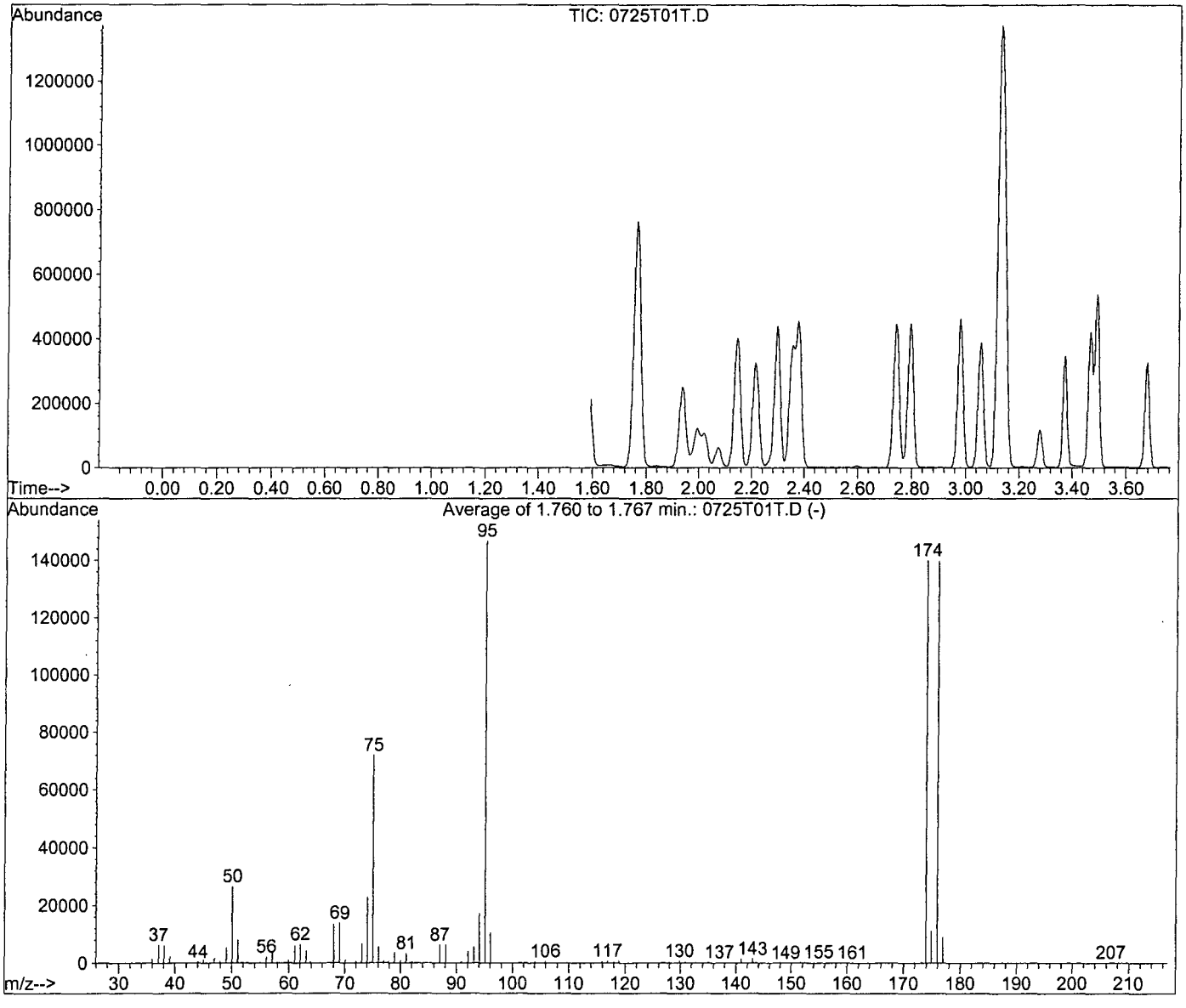
AutoFind: Scans 3065, 3066, 3067; Background Corrected with Scan 3051

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	29448	PASS
75	95	30	60	47.7	78560	PASS
95	95	100	100	100.0	164757	PASS
96	95	5	9	7.2	11824	PASS
173	174	0.00	2	0.4	693	PASS
174	95	50	100	97.3	160299	PASS
175	174	5	9	7.9	12626	PASS
176	174	95	101	97.8	156715	PASS
177	176	5	9	6.8	10638	PASS

Data File : M:\THOR\DATA\T120725\0725T01T.D
Acq On : 25 Jul 12 9:32
Sample : 5ng- BFB STD 07-16-12B
Misc : 2ul

Vial: 1
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B



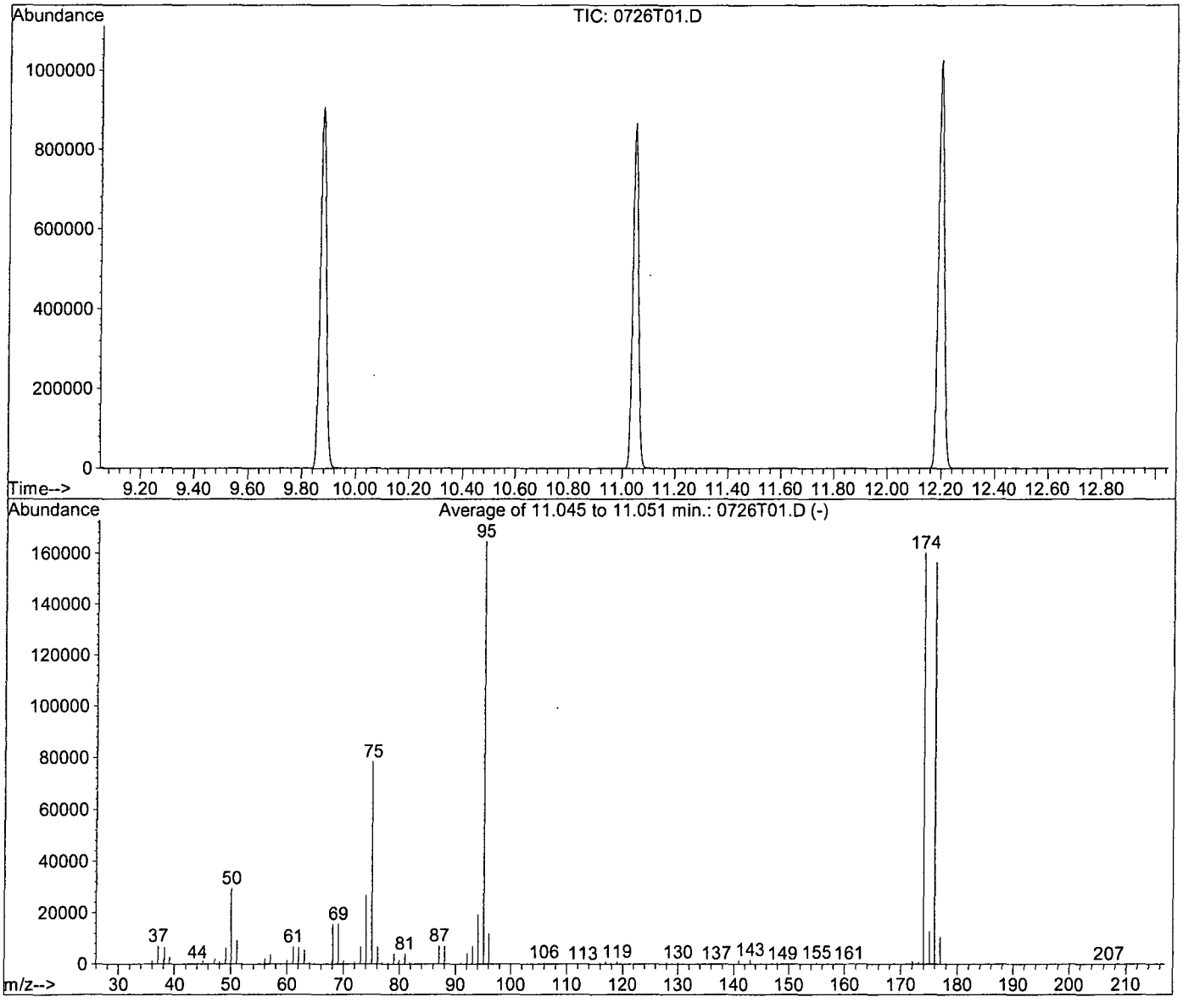
Spectrum Information: Average of 1.760 to 1.767 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.1	26589	PASS
75	95	30	60	49.1	72077	PASS
95	95	100	100	100.0	146837	PASS
96	95	5	9	7.2	10518	PASS
173	174	0.00	2	0.4	583	PASS
174	95	50	100	95.3	139968	PASS
175	174	5	9	8.0	11175	PASS
176	174	95	101	99.8	139627	PASS
177	176	5	9	6.3	8859	PASS

Data File : M:\THOR\DATA\T120725\0726T01.D
Acq On : 26 Jul 12 9:22
Sample : 5-ng BFB Std 07-16-12B
Misc : 2uL

Vial: 26
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 11.045 to 11.051 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	29448	PASS
75	95	30	60	47.7	78560	PASS
95	95	100	100	100.0	164757	PASS
96	95	5	9	7.2	11824	PASS
173	174	0.00	2	0.4	693	PASS
174	95	50	100	97.3	160299	PASS
175	174	5	9	7.9	12626	PASS
176	174	95	101	97.8	156715	PASS
177	176	5	9	6.8	10638	PASS

GC/MS STANDARD PREPARATION BOOK # _____ PAGE # _____

6/08/12 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA										
	Expiration Date:		06/09/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12
06-08-12A	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
06-08-12B	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
06-08-12C	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
06-08-12D	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
06-08-12E	50	n/a	n/a	5	5	5	n/a	5	n/a	5
06-08-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	10
06-08-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	20

6/11/12 RS

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

6/11/12 RS

06-11-12A							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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.

6/11/12 RS

Volatile Standard Cur	
	Expiratio
Date	Conc.
Code	µg/L
06-11-12I	0.3
06-11-12J	0.5
06-11-12K	1
06-11-12L	2
06-11-12M	5
06-11-12N	10
06-11-12O	20
06-11-12P	40
06-11-12Q	100

6/11/12 RS.

D-

Method 8260 Internal Standard Solution, 2,000 mg/L, 1 ml
120302-03
Lot# 166255 Storage ≤ -10 Degrees C Expiry 11/18/12
Solv: P/T Methanol
solutions
R&D only, not human consump. Made in the USA

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
020132-02
Lot # 169170 Storage ≤ 6 Degrees C Expiry 2/13/14
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Fluorobenzene
Lot #: 169170 - 28869
Rec: 5/25/11 MFR exp. 02/13/14

RS.

6/12/12 RS

Volatile Standard Cu	
	Expiratio
Date	Conc.
Code	µg/L
06-11-12R	2
06-11-12S	5
06-11-12T	10
06-11-12U	20
06-11-12V	50
06-11-12W	100
06-11-12X	200

50µg/mL Vol Std #12
06-02-12AB
Exp:06-09-12
n/a
n/a
n/a
n/a
5
10
20

6/11/12 RS

F-

Method 8260B Surrogate Solution, 2,000 mg/L, 1 ml

120002 01

Lot#	Storage	Expiry
185763	< 10 Degrees C	2/19/15

Solv: P/T Methanol

Made in the USA

LD only, not human consump.

Method 8260B Surrogate

Lot # 185763 - 30467

Rec' 2/20/12 MFR exp. 02/19/15

RS

nL TBA	Final Vol
12AE	w/P&T H2O
09-12	mL
	5
	5
	5
	5
	5
	5
	5

6/11/12 RS

e	ul
/12	20
/12	1980

	ul
12	20
12	1980

	ul
12	20
12	1980

Thor							
06-11-12G							
50ug/ml 8260 Internal Standard			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120302-03	Internal Standard Mix	2000	166255-29275	06-11-12D	12/13/12	375
O2SI	020132-02	Fluorobenzene Standard	2000	169170-28869	06-11-12E	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14250
06-11-12H							
50ug/ml 8260B Surrogate-Thor			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	8260B Surr	Surrogate Standards	2000	178653-30467	06-11-12F	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14625

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR

	Expiration Date		06/12/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp.06-09-12	Exp:06-09-12	Exp:06-09-12	Exp.06-09-12	Exp:06-09-12
06-11-12I	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
06-11-12J	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
06-11-12K	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
06-11-12L	2	20	40	n/a	n/a	n/a	20	n/a	n/a	20
06-11-12M	5	n/a	n/a	5	5	10	n/a	5	5	n/a
06-11-12N	10	n/a	n/a	10	10	25	n/a	10	10	n/a
06-11-12O	20	n/a	n/a	20	20	40	n/a	20	20	n/a
06-11-12P	40	n/a	n/a	40	40	80	n/a	40	40	n/a
06-11-12Q	100	n/a	n/a	100	100	100	n/a	100	100	n/a

6/11/12 RS

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							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp 06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12	Exp 06-09-12	Exp:06-09-12	Exp.06-09-12
06-11-12R	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
06-11-12S	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
06-11-12T	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
06-11-12U	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
06-11-12V	50	n/a	n/a	5	5	5	n/a	5	n/a	5
06-11-12W	100	n/a	n/a	10	10	10	n/a	10	n/a	10
06-11-12X	200	n/a	n/a	20	20	20	n/a	20	n/a	20

6/12/12 RS

250µg/mL TBA	Final Vol
06-02-12AE	w/P&T H2O
Exp.06-09-12	mL
1	5
2	5
3	5
4	5
5	5
6	5
7	5

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

	Expiration Date:	07/12/12							
	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
	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
Conc.	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
µg/L									
0.2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
0.5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
1	10	10	n/a	n/a	n/a	10	n/a	10	n/a
2	20	20	n/a	n/a	n/a	20	n/a	20	n/a
5	n/a	n/a	5	5	5	n/a	5	n/a	5
10	n/a	n/a	10	10	10	n/a	10	n/a	10
20									
50									
100									

250µg/mL TBA	Final Vol
07-05-12N	w/P&T H2O
Exp:07-12-12	mL
1	5
2	5
3	5
4	5
5	5
6	5

CHICO

07-12-12A

50ug/ml 524 Internal Standard w/ Surrogate			Conc.		Date	Exp.	
			ug/ml	Lot #	Code	Date	uL
02SI	122450-02	524 Fortification Sol	1000	176776-29295	06-07-12A	10/10/12	200
J&T Baker		Purge & Trap MeOH		K14E06-00643	07/09/12	12/22/13	3800

Volatile Standard Curve Preparation for 10mL Purge (524 water)-CHICO

	Expiration Date:		07/13/12					
		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
Date	Conc.	07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N	w/P&T H2O
Code	µg/L	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	mL
07-12-12B	0.2	2	2	n/a	n/a	n/a	2	50
07-12-12C	0.5	5	5	n/a	n/a	n/a	5	50
07-12-12D	1	10	10	n/a	n/a	n/a	10	50
07-12-12E	2	20	20	n/a	n/a	n/a	15	50
07-12-12F	5	n/a	n/a	5	5	5	20	50
07-12-12G	10	n/a	n/a	10	10	10	25	50
07-12-12H	20	n/a	n/a	20	20	20	30	50
07-12-12I	40	n/a	n/a	40	40	40	35	50
07-02-12H	100	n/a	n/a	100	100	100	40	50

4-Bromofluorobenzene
Solution, 2,500 mg/L, 1 ml
020135-03
Lot # 163173 | Storage ≤ -10 Degrees | Expiry 8/24/13
Solv: P/T Methanol
Made in the USA

4-Bromofluorobenzene
Lot #: 163173 - 29063
Rec: 8/1/11 MFR exp. 08/24/13

07-16-12B							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12C							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12D							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12E							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980

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 #3
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	5
07-17-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	10
07-17-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	20

— Thor 524 curve on pg. 74 RS 7/18/12 RS.

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
7	5

7/18/12 RS

7/18/12 RS

9/18/12 RS

A-

Method 8260 Gases, 2,000 mg/L, 2 X 0.6 ml

R&D only, not human consump. Made in the USA

120016-03

Lot #	Storage	Expiry
180013	≤ -10 Degrees C	10/17/14

Solv: P/T Methanol

Method 8260 Gases

Lot #: 180013 - 29760

Rec: 10/24/11 MFR exp. 10/17/14

RS

7/18/12 RS

B-

Hexachloroethane Solution, 1000 mg/L, 1 ml

R&D only, not human consump. Made in the USA

020049-02

Lot #	Storage	Expiry
176700	≤ -10 Degrees C	7/31/13

Solv: P/T Methanol

Hexachloroethane

Lot #: 176700 - 30724

Rec: 5/9/12 MFR exp. 07/31/13

RS

7/18/12 RS

C-

Benzyl Chloride Solution, 1000 mg/L, 1 ml

R&D only, not human consump. Made in the USA

020228-02

Lot #	Storage	Expiry
176701	≤ -10 Degrees C	7/31/13

Solv: P/T Methanol

Benzyl Chloride

Lot #: 176701 - 31019

Rec: 6/19/12 MFR exp. 07/31/13

RS

7/18/12 RS

D-

n-Hexane Solution, 1,000 mg/L, 1 ml

R&D only, not human consump. Made in the USA

020620-02

Lot #	Storage	Expiry
176773	≤ -10 Degrees C	7/30/16

Solv: P/T Methanol

n-Hexane Solution

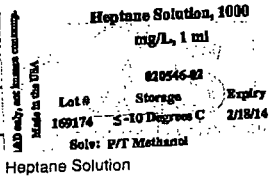
Lot #: 176773 - 31024

Rec: 6/19/12 MFR exp. 07/30/16

RS

E-

Heptane Solution, 1000 mg/L, 1 ml
020546-02
R&D only, not human consump. Made in the USA
Lot # 169174 | Storage ≤-10 Degrees C | Expiry 2/18/14
Solv: P/T Methanol

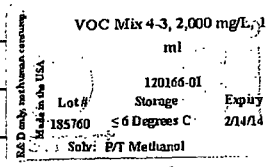


Heptane Solution
Lot #: 169174 - 31039
Rec: 6/19/12 MFR exp. 02/18/14

RS

F-

VOC Mix 4-3, 2,000 mg/L, 1 ml
120166-01
R&D only, not human consump. Made in the USA
Lot # 185760 | Storage ≤6 Degrees C | Expiry 2/14/14
Solv: P/T Methanol

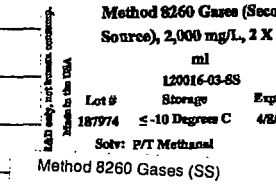


VOC Mix 4-3, 2000mg/L
Lot #: 185760 - 30739
Rec: 5/9/12 MFR exp. 02/14/14

RS

G-

Method 8260 Gases (Second Source), 2,000 mg/L, 2 X 0.6 ml
120016-03-SS
R&D only, not human consump. Made in the USA
Lot # 187974 | Storage ≤-10 Degrees C | Expiry 4/8/15
Solv: P/T Methanol



Method 8260 Gases (SS)
Lot #: 187974 - 31061
Rec: 6/19/12 MFR exp. 04/08/15

RS

07-18-12H							
50ug/ml Vol Work Std #7							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	180013-29760	07-18-12A	07/25/12	100
02SI	020049-02	HEXACHLOROETHANE	1000	176700-30724	07-18-12B	08/08/12	200
02SI	020228-02	Benzyl Chloride	1000	176701-31019	07-18-12C	08/08/12	200
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3500
07-18-12I							
50ug/ml Vol Work Std #1							
Exp:07/25/12							
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	176770-29827	06-19-12D	08/08/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1950
07-18-12J							
50ug/ml Vol Work Std #8							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	180114-29786	06-19-12E	08/08/12	100
02SI	120023-03	VOC'S-54 COMP	2000	176392-29207	06-19-12F	08/08/12	100
O2SI	020232-02	Vinyl Acetate	2000	189764-30727	06-19-12G	05/13/12	100
O2SI	020620-02	n-Hexane	1000	176773-31024	07-18-12D	08/08/12	200
02SI	020546-02	Heptane	1000	169174-31039	07-18-12E	08/08/12	200
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3300
07-18-12K							
50ug/ml Vol Work Std #2							
Exp:07/25/12							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	163375-27145	06-19-12J	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3900

		07-18-12L	Exp:	07/25/12			
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #7		07-18-12H	07/25/12	200	
		50ug/ml Vol Work Std #8		07-18-12J	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1600	
		07-18-12M	Exp:	07/25/12			
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #1		07-18-12I	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1800	
		07-18-12N	Exp:	07/25/12			
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #2		07-18-12K	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1800	
07-18-12O							
50ug/ml 8260 Surrogate			Conc.		Date	Exp.	
Exp:07/25/12			ug/ml	Lot #	Code	Date	ul
O2SI	120002-01	8260B Surr Solution	2000	185763-30471	07-05-12B	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3900
07-18-12P			Exp:	07/25/12			
5.0ug/ml 8260 Surrogate			**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml 8260 Surrogate		07-18-12O	07/25/12	200	
J&T Brand		Purge & Trap MeOH		06/18/12	10/08/12	1800	
07-18-12Q							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:07/25/12			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	ul
O2SI	120166-01	Volatile Mix 4-3	2000	185760-30739	07-18-12F	08/08/12	500
O2SI	020229-09	Acrolein	10000	191590-39077	06-19-12L	07/21/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3400

7/18/12 RS

07-18-12R							
50ug/ml VOC Std#5							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
O2SI	120016-03-SS	8260 Gases(SS)	2000	187974-31061	07-18-12G	07/25/12	50
O2SI	020145-02-02-S	2-CEVE	2000	181404-30001	06-19-12N	08/08/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3900
07-18-12S							
50ug/ml VOC Std#6							
Exp:07/25/12							
	ID #	ID	ug/ml	Lot #	Code	Date	ul
O2SI	120023-03-SS	VOC'S 54 COMP.	2000	176822-29269	06-19-12O	08/08/12	50
O2SI	120296-01	Custom 8260 Solution	2000	185766-60426	06-19-12P	08/08/12	50
O2SI	020232-02-SS	Vinyl Acetate(SS)	2000	189765-30729	05-08-12J	08/12/12	50
O2SI	020620-02-SS	n-HEXANE	1000	179199-29616	05-15-12K	08/08/12	100
O2SI	020049-02-SS	HEXACHLOROETHANE	1000	183795-30438	05-15-12L	08/08/12	100
O2SI	020546-02-SS	Heptane(SS)	1000	185762-30448	05-15-12M	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1550
07-18-12T							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:07/25/12			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	ul
O2SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	163778-29840	06-19-12Q	08/08/12	250
O2SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	151591-30979	06-19-12R	07/21/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1700

7/18/12 RS

Volatile Standard Curve Preparation for 10mL Purge (524 water)-THOR								
	Expiration Date:		07/18/12					
		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.
		07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N	w/P&T:H2O
Date	Conc.	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	mL
Code	µg/L							
07-17-12A	0.2	2	2	n/a	n/a	n/a	2	50
07-17-12B	0.5	5	5	n/a	n/a	n/a	5	50
07-17-12C	1	10	10	n/a	n/a	n/a	10	50
07-17-12D	2	20	20	n/a	n/a	n/a	15	50
07-17-12E	5	n/a	n/a	5	5	5	20	50
07-17-12F	10	n/a	n/a	10	10	10	25	50
07-17-12G	40	n/a	n/a	40	40	40	35	50
07-17-12H	100	n/a	n/a	100	100	100	40	50

7/18/12 RS.

GRL'S STANDARDS PREPARATION BOOK # _____ PAGE _____

07/19/12A							
2000ug/ml Gasoline							
			Conc.		Date	APPL Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Supelco	LB82077	Gasoline	20,000	LB82077-29979	01-26-12A	02/01/14	200
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13	1800
07/19/12B							
2000ug/ml Unleaded Gasoline							
			Conc.		Date	APPL Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Restek	30205	Unleaded Gasoline	50,000	A081012-29980	01-26-12B	02/01/14	80
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13	1920

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR

	Expiration Date:	07/20/12							
	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date: Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-19-12C 0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
07-19-12D 0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
07-19-12E 1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
07-19-12F 2	20	40	n/a	n/a	n/a	20	n/a	n/a	20
07-19-12G 5	n/a	n/a	5	5	10	n/a	5	5	n/a
07-19-12H 10	n/a	n/a	10	10	25	n/a	10	10	n/a
07-19-12I 20	n/a	n/a	20	20	40	n/a	20	20	n/a
07-19-12J 40	n/a	n/a	40	40	80	n/a	40	40	n/a
07-19-12K 100	n/a	n/a	100	100	100	n/a	100	100	n/a

250µg/mL TAPD 07-18-12Q Exp:07-25-12	Final Vol w/P&T H2O 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
		50µg/mL Gasoline
Date	Conc.	07-19-12A
Code	µg/L	Exp.01-03-13
07-19-12L	20	1
07-19-12M	50	2.5
07-19-12N	100	5
07-19-12O	300	15
07-19-12P	600	30
07-19-12Q	800	40
07-19-12R	1000	50

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

	Expiration Date:	07/20/12							
	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date: Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-19-12S 2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
07-19-12T 5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
07-19-12U 10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
07-19-12V 20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
07-19-12W 50	n/a	n/a	5	5	5	n/a	5	n/a	5
07-19-12X 100	n/a	n/a	10	10	10	n/a	10	n/a	10
07-19-12Y 200	n/a	n/a	20	20	20	n/a	20	n/a	20

250µg/mL TBA 07-18-12Q Exp:07-25-12	Final Vol w/P&T H2O 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							
	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date: Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-23-12A 0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
07-23-12B 0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
07-23-12C 1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
07-23-12D 5	n/a	n/a	5	5	10	n/a	5	5	n/a
07-23-12E 10	n/a	n/a	10	10	25	n/a	10	10	n/a
07-23-12F 20	n/a	n/a	20	20	40	n/a	20	20	n/a
07-23-12G 40	n/a	n/a	40	40	80	n/a	40	40	n/a
07-23-12H 100	n/a	n/a	100	100	100	n/a	100	100	n/a
07-23-12I 200	n/a	n/a	200	200	125	n/a	200	200	n/a

250µg/mL TAPD 07-18-12Q Exp:07-25-12	Final Vol w/P&T H2O mL
3	50
5	50
10	50
20	50
25	50
30	50
35	50
40	50
45	50

7/24/12 RS

Neo 524						
07-24-12A						
10ug/ml Neo-524 Internal Standard w/ Surrogate			Conc. ug/ml	Lot #	Date Code	Exp'd Date
02SI	122450-02	524 Fortification Sol	1000	176776-29295	06-07-12A	09/10/12
J.T.Baker		Purge & Trap MeOH		K08E01-00645	07/20/12	12/12/12

Volatile Standard Curve Preparation for 10mL Purge (524 water)-NEO

		Expiration Date:	07/25/12					
		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
Date	Conc.	07-18-12L	07-18-12N	07-18-12H	07-18-12J	07-18-12K	07-18-12O	w/P&T H2O
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	mL
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	15	50
07-24-12F	5	n/a	n/a	5	5	5	20	50
07-24-12G	10	n/a	n/a	10	10	10	25	50
07-24-12H	40	n/a	n/a	40	40	40	35	50

7/24/12 RS.

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

		Expiration Date:	07/25/12						
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #12	5µg/mL Vol Std #2
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K
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	2
07-24-12J	5	5	5	n/a	n/a	n/a	5	n/a	5
07-24-12K	10	10	10	n/a	n/a	n/a	10	n/a	10
07-24-12L	20	20	20	n/a	n/a	n/a	20	n/a	20
07-24-12M	50	n/a	n/a	5	5	5	n/a	5	n/a
07-24-12N	100	n/a	n/a	10	10	10	n/a	10	n/a
07-24-12O	200	n/a	n/a	20	20	20	n/a	20	n/a

	250µg/mL TAPD	Final Vol
	07-18-12O	w/P&T H2O
	Exp:07-25-12	mL
1	1	50
2	2	50
3	3	50
4	4	50
5	5	50
6	6	50
7	7	50

7/24/12 RS

Gasoline Curve Preparation for 100mL Purge (water)-THOR

		Expiration Date:	07/25/12
		50µg/mL Gasoline	Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/L	Exp.01-03-13	mL
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

Gasoline Curve Preparation for 100mL Purge (water)-THOR

		Expiration Date:	07/26/12
		50µg/mL Gasoline	Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/L	Exp.01-03-13	mL
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.

Custom VOC Mix, 16-4, 100 mg/L, 4 x 1 ml

122725-03-4PAK

Lot#	Storage	Expiry
181120	≤ -10 Degrees C	11/6/13

Solv: P/T Methanol

R&D only, not human consump. Made in the USA

Custom VOC Mix 16-4

Lot #: 181120 - 30032

Rec: 11/16/11 MFR exp. 11/06/13

Injection Log

Directory: M:\THOR\DATA\T120719

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0719T01T.D	1	5ng- BFB STD 07-16-12B	2ul	07/19/2012 09:15
2	5	0719T05.D	1	0.3ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:01
3	6	0719T06.D	1	0.5ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:29
4	7	0719T07.D	1	1.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:57
5	8	0719T08.D	1	2.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:25
6	9	0719T09.D	1	5.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:53
7	10	0719T10.D	1	10ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:20
8	11	0719T11.D	1	20ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:48
9	12	0719T12.D	1	40ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:16
10	13	0719T13.D	1	100ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:44
11	28	0719T28.D	1	5ng- BFB Std 07-16-12B	2uL	07/19/2012 21:40
12	31	0719T31.D	1	120719A LCS-1WT (SS)	10ml w/5ul of IS&S: 06-7	07/19/2012 23:03

Injection Log

Directory: M:\THOR\DATA\T120725

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	26	0726T01.D	1	5-ng BFB Std 07-16-12B	2uL	07/26/2012 09:22
2	29	0726T04.D	1	10ug/L Vol Std 07-26-12	10ml w/5ul of IS&S: 06-7	07/26/2012 10:46
3	30	0726T05.D	1	120726A LCS-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 11:13
4	36	0726T11.D	1	120726A BLK-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 14:00
5	37	0726T12.D	1	AY65168W01	10ml w/5ul of IS&S: 06-7	07/26/2012 14:27
6	43	0726T18.D	1	AY65166W01	10ml w/5ul of IS&S: 06-7	07/26/2012 17:14
7	45	0726T20.D	1	AY65167W01	10ml w/5ul of IS&S: 06-7	07/26/2012 18:09
8	46	0726T21.D	1	AY65167W234 MS-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 18:37
9	47	0726T22.D	1	AY65167W234 MSD-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 19:04

Injection Log

Directory: M:\THOR\DATA\T120725

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0725T01T.D	1	5ng- BFB STD 07-16-12B	2ul	07/25/2012 09:32
2	2	0725T03.D	1	VOC MIX MARKER	10ml w/5ul of IS&S: 06-7	07/25/2012 10:22
3	3	0725T04.D	1	20ug/L Vol Std 07-25-12	10ml w/5ul of IS&S: 06-7	07/25/2012 10:50
4	4	0725T05.D	1	50ug/L Vol Std 07-25-12	10ml w/5ul of IS&S: 06-7	07/25/2012 11:17
5	5	0725T06.D	1	100ug/L Vol Std 07-25-12	10ml w/5ul of IS&S: 06-7	07/25/2012 11:45
6	6	0725T07.D	1	300ug/L Vol Std 07-25-13	10ml w/5ul of IS&S: 06-7	07/25/2012 12:13
7	7	0725T08.D	1	600ug/L Vol Std 07-25-14	10ml w/5ul of IS&S: 06-7	07/25/2012 12:41
8	8	0725T09.D	1	800ug/L Vol Std 07-25-15	10ml w/5ul of IS&S: 06-7	07/25/2012 13:08
9	9	0725T10.D	1	1000ug/L Vol Std 07-25-16	10ml w/5ul of IS&S: 06-7	07/25/2012 13:36
10	14	0725T15.D	1	LCS gas 300ug/L (SS)	10ml w/5ul of IS&S: 06-7	07/25/2012 15:55
11	26	0726T01.D	1	5-ng BFB Std 07-16-12B	2uL	07/26/2012 09:22
12	31	0726T06.D	1	CCV gas 300ug/L	10ml w/5ul of IS&S: 06-7	07/26/2012 11:41
13	32	0726T07.D	1	LCS gas 300ug/L	10ml w/5ul of IS&S: 06-7	07/26/2012 12:09
14	36	0726T11.D	1	120726A BLK-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 14:00
15	37	0726T12.D	1	AY65168W01	10ml w/5ul of IS&S: 06-7	07/26/2012 14:27
16	43	0726T18.D	1	AY65166W01	10ml w/5ul of IS&S: 06-7	07/26/2012 17:14
17	45	0726T20.D	1	AY65167W01	10ml w/5ul of IS&S: 06-7	07/26/2012 18:09
18	48	0726T23.D	1	AY65167W456 MS-1SS GAS	10ml w/5ul of IS&S: 06-7	07/26/2012 19:32
19	49	0726T24.D	1	AY65167W456 MSD-1WT GAS	10ml w/5ul of IS&S: 06-7	07/26/2012 20:00

METALS

APPL, INC.

METALS
QC Summary

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6020	LEAD (PB) (DISSOL	0.22 U	0.5	0.22	0.11	ug/L	07/23/12	07/23/12	#602D-120723A-AY65167

Printed: 07/24/12 9:41:25 AM
Metals SC-Blank-REG MDLs

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6020	LEAD (PB) (DISSOLVED)	50.0	45.5	91.0	80-120	07/23/12	07/23/12	#602D-120723A-AY65167

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **120723W-65167 MS - 169307**

Sample ID: AY65167

Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
6020	LEAD (PB) (DISSOLVE	50.0	ND	50.4	49.8	101	99.6	1.2	20	80-120	07/23/12	07/23/12	07/23/12	07/23/12	169307	AY65167

Comments: _____

METALS
Sample Data

APPL, INC.

Metals Analysis

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68268

Sample ID: ES083

APPL ID: AY65166

Sample Collection Date: 07/19/12

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.22U	0.5	0.22	0.11	ug/L	1	07/23/12	07/23/12

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\047SMPL.D\047SMPL.D#
Date Acquired: Jul 23 2012 04:07 pm
Operator: NBS
Sample Name: AY65166W08
Misc Info: 120723A-3015
Vial Number: 3304
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	0.00	ug/l	0.00	79.45	1000	
11 B	50.73	ug/l	56.36	0.26	1000	
23 Na	44310.00	ug/l	49228.41	1.40	25000	>Cal
24 Mg	12690.00	ug/l	14098.59	1.34	50000	
27 Al	75.82	ug/l	84.24	2.35	20000	
39 K	677.80	ug/l	753.04	0.93	20000	
44 Ca	10970.00	ug/l	12187.67	1.43	50000	
47 Ti	6.10	ug/l	6.78	3.84	1000	
51 V	0.14	ug/l	0.15	4.23	1000	
52 Cr	0.48	ug/l	0.53	5.44	1000	
55 Mn	232.80	ug/l	258.64	1.20	1000	
56 Fe	6290.00	ug/l	6988.19	0.85	20000	
59 Co	0.41	ug/l	0.46	1.55	1000	
60 Ni	0.60	ug/l	0.66	4.11	1000	
63 Cu	0.14	ug/l	0.16	6.63	1000	
65 Cu	0.13	ug/l	0.15	8.86	1000	
66 Zn	8.02	ug/l	8.91	0.76	1000	
75 As	0.03	ug/l	0.03	3.93	1000	
78 Se	0.03	ug/l	0.03	49.17	1000	
78 Se	0.72	ug/l	0.80	7.41	1000	
88 Sr	106.10	ug/l	117.88	0.27	1000	
88 Sr	101.40	ug/l	112.66	0.75	1000	
95 Mo	0.24	ug/l	0.26	1.45	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	0.00	ug/l	0.00	5266.90	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	0.04	ug/l	0.05	30.86	1000	
118 Sn	0.12	ug/l	0.14	4.35	#######	
118 Sn	0.13	ug/l	0.14	6.39	#######	
118 Sn	0.13	ug/l	0.15	6.09	1000	
121 Sb	0.09	ug/l	0.10	5.02	1000	
137 Ba	2.21	ug/l	2.45	1.48	1000	
205 Tl	0.06	ug/l	0.06	6.91	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	0.05	ug/l	0.06	6.60	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-51467.41	4.17	-41328.95	124.5	70 - 120	IS Fai
45 Sc	3135856.30	1.36	3008024.30	104.2	70 - 120	
45 Sc	449468.03	1.01	423303.94	106.2	70 - 120	
45 Sc	9494293.00	0.11	8607281.00	110.3	70 - 120	
72 Ge	778365.00	0.32	774468.63	100.5	70 - 120	
72 Ge	286896.78	0.89	282128.91	101.7	70 - 120	
72 Ge	1993621.10	1.09	1882554.90	105.9	70 - 120	
115 In	5489722.50	0.74	5556751.00	98.8	70 - 120	
115 In	2969654.50	0.57	3029632.80	98.0	70 - 120	
115 In	12687977.00	0.60	12097256.00	104.9	70 - 120	
159 Tb	17105158.00	1.69	16269544.00	105.1	70 - 120	
165 Ho	16565370.00	0.77	15819307.00	104.7	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

Metals Analysis

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen

Project: LTM Red Hill / 1022-024

ARF: 68268

Sample ID: ES084

APPL ID: AY65167

Sample Collection Date: 07/19/12

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.22 U	0.5	0.22	0.11	ug/L	1	07/23/12	07/23/12

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\048SMPL.D\048SMPL.D#
Date Acquired: Jul 23 2012 04:14 pm
Operator: NBS
Sample Name: AY65167W15
Misc Info: 120723A-3015
Vial Number: 3305
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	0.00	ug/l	0.00	71.91	1000	
11 B	34.42	ug/l	38.24	0.74	1000	
23 Na	280700.00	ug/l	311857.70	2.32	25000	>Cal
24 Mg	180200.00	ug/l	200202.20	2.92	50000	>Cal
27 Al	12.26	ug/l	13.62	5.67	20000	
39 K	6252.00	ug/l	6945.97	2.72	20000	
44 Ca	52860.00	ug/l	58727.46	4.25	50000	>Cal
47 Ti	2.14	ug/l	2.38	4.75	1000	
51 V	0.63	ug/l	0.70	4.85	1000	
52 Cr	8.18	ug/l	9.09	2.07	1000	
55 Mn	0.37	ug/l	0.41	2.79	1000	
56 Fe	7.35	ug/l	8.17	2.98	20000	
59 Co	1.23	ug/l	1.36	2.27	1000	
60 Ni	7.57	ug/l	8.41	1.71	1000	
63 Cu	0.34	ug/l	0.38	4.21	1000	
65 Cu	0.36	ug/l	0.40	5.42	1000	
66 Zn	5.28	ug/l	5.86	3.03	1000	
75 As	0.21	ug/l	0.23	6.18	1000	
78 Se	3.07	ug/l	3.41	1.42	1000	
78 Se	4.22	ug/l	4.69	3.71	1000	
88 Sr	1039.00	ug/l	1154.33	1.50	1000	>Cal
88 Sr	1112.00	ug/l	1235.43	0.11	1000	>Cal
95 Mo	1.37	ug/l	1.52	0.83	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	0.00	ug/l	0.00	44.05	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	0.04	ug/l	0.04	17.39	1000	
118 Sn	0.15	ug/l	0.16	15.52	#######	
118 Sn	0.15	ug/l	0.16	23.06	#######	
118 Sn	0.15	ug/l	0.16	34.78	1000	
121 Sb	0.11	ug/l	0.12	5.30	1000	
137 Ba	64.25	ug/l	71.38	0.49	1000	
205 Tl	0.03	ug/l	0.03	4.01	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	0.00	ug/l	0.00	185.19	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-55937.32	5.70	-41328.95	135.3	70 - 120	IS Fai
45 Sc	3146550.30	0.38	3008024.30	104.6	70 - 120	
45 Sc	459108.28	2.54	423303.94	108.5	70 - 120	
45 Sc	9546233.00	0.59	8607281.00	110.9	70 - 120	
72 Ge	762266.69	0.55	774468.63	98.4	70 - 120	
72 Ge	279988.94	0.55	282128.91	99.2	70 - 120	
72 Ge	1974646.10	0.37	1882554.90	104.9	70 - 120	
115 In	5266013.50	0.38	5556751.00	94.8	70 - 120	
115 In	2831528.30	1.37	3029632.80	93.5	70 - 120	
115 In	12034210.00	0.16	12097256.00	99.5	70 - 120	
159 Tb	16419015.00	0.29	16269544.00	100.9	70 - 120	
165 Ho	15978333.00	1.08	15819307.00	101.0	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

5 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

METALS
Calibration Data

APPL, INC.

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.
ARF No: 68268 SDG: 68268
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:45	%R(1)	True CCV1	Found 12:05	%R(1)	True CCV1	Found 13:32	%R(1)	
Lead (Pb)	100	99.7	99.7	50	52.39	105	50	51.97	104	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.
ARF No: 68268 SDG: 68268
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:45	%R(1)	True CCV1	Found 15:07	%R(1)	True CCV1	Found 16:40	%R(1)	
Lead (Pb)	100	99.7	99.7	50	51.71	103	50	51.63	103	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.

ARF No: 68268 SDG: 68268

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:45	%R(1)	True CCV1	Found 17:47	%R(1)	True	Found	%R(1)	
Lead (Pb)	100	99.7	99.7	50	50.72	101				P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.

ARF No.: 68268 SDG: 68268

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 07/23/12

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C				C	
	11:58		12:12		13:45		15:20				12:58		
Lead (Pb)	.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.: 68268 SDG: 68268

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 07/23/12

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	11:58		16:54		18:00				12:58		
Lead (Pb)	.50	U	.50	U	.50	U			.50	U	P

A.P.P.L. INC.
4
ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	Environet, Inc.
ARF No.:	68268	SDG:	68268
ICP ID Number:	Optimus	ICS Source:	Environmental Express

Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 12:18	Sol AB 12:25	%R(1)
Lead (Pb)		500	0.4092	437.6	87.5

(1) Control Limits: Metals 80-120

A.P.P.L. INC.

9

ICP SERIAL DILUTION

CLIENT SAMPLE NO.

ES084

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.

ARF No.: 68268 SDG: 68268

Matrix: water

Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	%D	Q	M
Lead (Pb)	0.0013332		ND		NA		

Comments:

07/23/12 16:14 AY65167W15

07/23/12 17:14 AY65167W15-1/5

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\057SMPL.D\057SMPL.D#
Date Acquired: Jul 23 2012 05:14 pm
Operator: NBS
Sample Name: AY65167W15-1/5
Misc Info: 120723A-3015
Vial Number: 3309
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 5.56
Total Dil Factor: 5.56

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	0.00	ug/l	0.03	24.33	1000	
11 B	11.82	ug/l	65.67	1.10	1000	
23 Na	58710.00	ug/l	326192.76	0.74	25000	>Cal
24 Mg	37800.00	ug/l	210016.80	0.26	50000	
27 Al	3.56	ug/l	19.77	8.25	20000	
39 K	1408.00	ug/l	7822.85	0.54	20000	
44 Ca	11350.00	ug/l	63060.60	0.83	50000	
47 Ti	0.51	ug/l	2.85	13.44	1000	
51 V	0.17	ug/l	0.93	4.25	1000	
52 Cr	1.78	ug/l	9.91	1.47	1000	
55 Mn	0.51	ug/l	2.86	9.82	1000	
56 Fe	17.17	ug/l	95.40	7.05	20000	
59 Co	0.28	ug/l	1.57	1.61	1000	
60 Ni	1.77	ug/l	9.82	3.44	1000	
63 Cu	0.14	ug/l	0.79	6.19	1000	
65 Cu	0.15	ug/l	0.82	14.12	1000	
66 Zn	1.59	ug/l	8.85	0.40	1000	
75 As	0.16	ug/l	0.90	15.51	1000	
78 Se	0.85	ug/l	4.74	3.99	1000	
78 Se	1.31	ug/l	7.27	16.64	1000	
88 Sr	215.10	ug/l	1195.10	0.63	1000	
88 Sr	224.00	ug/l	1244.54	0.64	1000	
95 Mo	0.33	ug/l	1.84	6.27	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	0.03	ug/l	0.15	13.39	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	0.01	ug/l	0.04	203.40	1000	
118 Sn	0.20	ug/l	1.11	4.90	#######	
118 Sn	0.22	ug/l	1.24	6.67	#######	
118 Sn	0.16	ug/l	0.90	6.93	1000	
121 Sb	0.53	ug/l	2.93	3.35	1000	
137 Ba	13.31	ug/l	73.95	0.35	1000	
205 Tl	0.08	ug/l	0.42	5.29	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	-0.02	ug/l	-0.11	5.06	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-37074.82	19.02	-41328.95	89.7	70 - 120	IS Fai
45 Sc	3226942.00	0.98	3008024.30	107.3	70 - 120	
45 Sc	444938.16	0.23	423303.94	105.1	70 - 120	
45 Sc	9721833.00	0.39	8607281.00	112.9	70 - 120	
72 Ge	819775.56	1.04	774468.63	105.9	70 - 120	
72 Ge	292111.56	0.65	282128.91	103.5	70 - 120	
72 Ge	2089239.10	0.41	1882554.90	111.0	70 - 120	
115 In	5791615.50	0.51	5556751.00	104.2	70 - 120	
115 In	3009210.00	0.75	3029632.80	99.3	70 - 120	
115 In	13018047.00	0.95	12097256.00	107.6	70 - 120	
159 Tb	17535648.00	0.81	16269544.00	107.8	70 - 120	
165 Ho	16918122.00	0.82	15819307.00	106.9	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

ES084

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.

ARF No.: 68268 SDG: 68268

Analysis Date: 07/23/12 Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Lead (Pb)	75-125	234.9765		0.0013332		277.500	84.7		

Comments:

07/23/12 16:14 AY65167W15

07/23/12 17:01 AY65167W15-A

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\055SMPL.D\055SMPL.D#
Date Acquired: Jul 23 2012 05:01 pm
Operator: NBS
Sample Name: AY65167W15-A
Misc Info: 120723A-3015
Vial Number: 3308
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	47.32	ug/l	52.57	2.28	1000	
11 B	289.30	ug/l	321.41	2.83	1000	
23 Na	296100.00	ug/l	328967.10	0.58	25000	>Cal
24 Mg	197200.00	ug/l	219089.20	0.84	50000	>Cal
27 Al	1947.00	ug/l	2163.12	0.51	20000	
39 K	10370.00	ug/l	11521.07	0.48	20000	
44 Ca	74230.00	ug/l	82469.53	1.65	50000	>Cal
47 Ti	241.60	ug/l	268.42	0.61	1000	
51 V	242.70	ug/l	269.64	0.72	1000	
52 Cr	238.90	ug/l	265.42	0.47	1000	
55 Mn	231.70	ug/l	257.42	0.42	1000	
56 Fe	906.00	ug/l	1006.57	0.75	20000	
59 Co	201.50	ug/l	223.87	1.12	1000	
60 Ni	219.30	ug/l	243.64	0.73	1000	
63 Cu	206.70	ug/l	229.64	0.24	1000	
65 Cu	206.20	ug/l	229.09	0.61	1000	
66 Zn	463.70	ug/l	515.17	0.56	1000	
75 As	245.80	ug/l	273.08	0.55	1000	
78 Se	223.90	ug/l	248.75	0.68	1000	
78 Se	231.00	ug/l	256.64	0.92	1000	
88 Sr	1251.00	ug/l	1389.86	0.28	1000	>Cal
88 Sr	1329.00	ug/l	1476.52	1.50	1000	>Cal
95 Mo	238.10	ug/l	264.53	1.27	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	79.24	ug/l	88.04	7.22	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	45.69	ug/l	50.76	0.67	1000	
118 Sn	246.10	ug/l	273.42	7.28	#######	
118 Sn	255.00	ug/l	283.31	0.42	#######	
118 Sn	232.00	ug/l	257.75	0.74	1000	
121 Sb	234.70	ug/l	260.75	0.89	1000	
137 Ba	283.30	ug/l	314.75	0.86	1000	
205 Tl	221.10	ug/l	245.64	0.24	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	211.50	ug/l	234.98	0.41	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-54259.83	7.06	-41328.95	131.3	70 - 120	IS Fai
45 Sc	3088834.30	1.41	3008024.30	102.7	70 - 120	
45 Sc	445216.53	0.42	423303.94	105.2	70 - 120	
45 Sc	9508867.00	1.47	8607281.00	110.5	70 - 120	
72 Ge	742801.56	0.14	774468.63	95.9	70 - 120	
72 Ge	274085.34	0.60	282128.91	97.1	70 - 120	
72 Ge	1971161.60	0.99	1882554.90	104.7	70 - 120	
115 In	5223743.00	1.25	5556751.00	94.0	70 - 120	
115 In	2750701.00	0.54	3029632.80	90.8	70 - 120	
115 In	12222015.00	0.45	12097256.00	101.0	70 - 120	
159 Tb	16760083.00	0.23	16269544.00	103.0	70 - 120	
165 Ho	16320475.00	0.69	15819307.00	103.2	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

5 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

Calibration Blank QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\004CAL
Date Acquired: Jul 23 2012 11:12 am
Operator: NBS
Sample Name: Calibration Blank
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:09 am
Sample Type: CalBlk
Total Dil Factor: 1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	-41328.94	A	2428.00	5.87
7	(Li)	4659754.00	A	18000.00	0.39
9	Be	44.45	P	5.09	11.46
11	B	13122.80	P	299.70	2.28
23	Na	64072.43	P	449.30	0.70
24	Mg	208.90	P	51.68	24.74
27	Al	91.11	P	10.71	11.75
39	K	42023.77	P	406.10	0.97
44	Ca	376.38	P	20.70	5.50
45	Sc	3008024.00	A	6696.00	0.22
45	Sc	423303.91	A	3421.00	0.81
45	Sc	8607281.00	A	46940.00	0.55
47	Ti	1.78	P	1.54	86.62
51	V	48.45	P	8.57	17.69
52	Cr	424.90	P	14.87	3.50
55	Mn	212.89	P	30.82	14.48
56	Fe	3307.53	P	84.69	2.56
59	Co	83.56	P	8.04	9.62
60	Ni	109.34	P	9.33	8.54
63	Cu	295.56	P	2.04	0.69
65	Cu	135.11	P	17.40	12.88
66	Zn	310.23	P	10.10	3.26
72	Ge	774468.63	A	4129.00	0.53
72	Ge	282128.91	A	1085.00	0.38
72	Ge	1882555.00	A	1994.00	0.11
75	As	27.11	P	4.68	17.27
78	Se	22.89	P	3.27	14.30
78	Se	148.78	P	4.86	3.26
88	Sr	168.90	P	24.12	14.28
88	Sr	598.92	P	5.09	0.85
95	Mo	93.34	P	14.53	15.57
106	(Cd)	3.33	P	3.33	99.99
107	Ag	126.67	P	8.82	6.96
108	(Cd)	5.56	P	5.09	91.65
111	Cd	13.08	P	16.84	128.75
115	In	5556751.00	A	25450.00	0.46
115	In	3029633.00	A	2589.00	0.09
115	In	12097260.00	A	3381.00	0.03
118	Sn	187.79	P	62.04	33.04
118	Sn	96.67	P	8.82	9.12
118	Sn	352.24	P	45.38	12.88
121	Sb	131.12	P	15.75	12.01
137	Ba	72.23	P	27.76	38.44
159	Tb	16269540.00	A	108400.00	0.67
165	Ho	15819310.00	A	42930.00	0.27
205	Tl	195.56	P	65.18	33.33
206	(Pb)	530.03	P	72.19	13.62
207	(Pb)	423.36	P	56.67	13.39
208	Pb	1940.13	P	171.40	8.83

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\005CALS.D\005CALS.D#
Date Acquired: Jul 23 2012 11:18 am
Operator: NBS
Sample Name: 120723 Standard 1
Misc Info:
Vial Number: 1103
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:16 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-41816.46	A	2968.00	7.10	0.0000
7 (Li)	4828315.00	A	24030.00	0.50	0.0000
9 Be	431.13	P	39.49	9.16	0.0000
11 B	13550.97	P	211.20	1.56	0.0000
23 Na	68743.03	P	482.40	0.70	0.0000
24 Mg	1320.10	P	78.40	5.94	0.0000
27 Al	323.35	P	17.64	5.46	0.0000
39 K	42278.87	P	294.60	0.70	0.0000
44 Ca	453.33	P	18.07	3.99	0.0000
45 Sc	2965625.00	A	8375.00	0.28	0.0000
45 Sc	409348.19	A	5583.00	1.36	0.0000
45 Sc	8658112.00	A	37130.00	0.43	0.0000
47 Ti	16.44	P	2.78	16.88	0.0000
51 V	457.35	P	18.04	3.94	0.0000
52 Cr	881.37	P	20.83	2.36	0.0000
55 Mn	432.46	P	14.69	3.40	0.0000
56 Fe	10304.63	P	194.30	1.89	0.0000
59 Co	556.02	P	39.26	7.06	0.0000
60 Ni	221.78	P	29.82	13.45	0.0000
63 Cu	848.93	P	36.62	4.31	0.0000
65 Cu	429.35	P	5.81	1.35	0.0000
66 Zn	473.79	P	16.88	3.56	0.0000
72 Ge	782088.38	A	7482.00	0.96	0.0000
72 Ge	280806.41	A	3743.00	1.33	0.0000
72 Ge	1881152.00	A	8788.00	0.47	0.0000
75 As	89.00	P	5.24	5.89	0.0000
78 Se	46.89	P	2.87	6.13	0.0000
78 Se	154.67	P	3.71	2.40	0.0000
88 Sr	594.48	P	28.74	4.83	0.0000
88 Sr	4045.16	P	130.50	3.23	0.0000
95 Mo	706.71	P	10.00	1.42	0.0000
106 (Cd)	47.78	P	7.70	16.11	0.0000
107 Ag	994.52	P	69.32	6.97	0.0000
108 (Cd)	28.89	P	10.18	35.24	0.0000
111 Cd	397.49	P	77.04	19.38	0.0000
115 In	5449510.00	A	78530.00	1.44	0.0000
115 In	2939285.00	A	18850.00	0.64	0.0000
115 In	11960780.00	A	79640.00	0.67	0.0000
118 Sn	1004.52	P	97.90	9.75	0.0000
118 Sn	555.59	P	7.70	1.39	0.0000
118 Sn	2132.46	P	102.20	4.79	0.0000
121 Sb	1841.30	P	47.65	2.59	0.0000
137 Ba	583.37	P	41.64	7.14	0.0000
159 Tb	16219180.00	A	173500.00	1.07	0.0000
165 Ho	15690520.00	A	6789.00	0.04	0.0000
205 Tl	3149.38	P	120.10	3.81	0.0000
206 (Pb)	1167.88	P	66.20	5.67	0.0000
207 (Pb)	974.52	P	68.35	7.01	0.0000
208 Pb	4646.06	P	99.59	2.14	0.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-41816.47	7.10	-41328.95	101.2	70 -	120	IS Fail
45 Sc	2965624.50	0.28	3008024.30	98.6	70 -	120	
45 Sc	409348.25	1.36	423303.94	96.7	70 -	120	
45 Sc	8658112.00	0.43	8607281.00	100.6	70 -	120	
72 Ge	782088.44	0.96	774468.63	101.0	70 -	120	
72 Ge	280806.38	1.33	282128.91	99.5	70 -	120	
72 Ge	1881152.00	0.47	1882554.90	99.9	70 -	120	
115 In	5449510.50	1.44	5556751.00	98.1	70 -	120	
115 In	2939285.30	0.64	3029632.80	97.0	70 -	120	
115 In	11960782.00	0.67	12097256.00	98.9	70 -	120	
159 Tb	16219185.00	1.07	16269544.00	99.7	70 -	120	
165 Ho	15690520.00	0.04	15819307.00	99.2	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\006CALS.D\006CALS.D#
Date Acquired: Jul 23 2012 11:25 am
Operator: NBS
Sample Name: 120723 Standard 2
Misc Info:
Vial Number: 1104
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:22 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-38271.70	A	2707.00	7.07	0.0000
7 (Li)	4793284.00	A	21050.00	0.44	1.0000
9 Be	4235.18	P	94.10	2.22	1.0000
11 B	14857.80	P	552.40	3.72	1.0000
23 Na	75362.73	P	100.00	0.13	1.0000
24 Mg	10653.06	P	135.80	1.27	1.0000
27 Al	1959.08	P	90.10	4.60	1.0000
39 K	48852.40	P	393.50	0.81	1.0000
44 Ca	1103.45	P	35.31	3.20	1.0000
45 Sc	2946623.00	A	16940.00	0.57	0.0000
45 Sc	412843.69	A	2177.00	0.53	0.0000
45 Sc	8594454.00	A	44450.00	0.52	0.0000
47 Ti	96.00	P	12.22	12.73	1.0000
51 V	2942.12	P	46.06	1.57	1.0000
52 Cr	3650.28	P	70.82	1.94	1.0000
55 Mn	2454.02	P	50.72	2.07	1.0000
56 Fe	62723.29	P	271.00	0.43	1.0000
59 Co	4763.95	P	121.10	2.54	1.0000
60 Ni	1299.19	P	41.19	3.17	1.0000
63 Cu	3529.81	P	57.76	1.64	1.0000
65 Cu	1788.58	P	45.70	2.56	1.0000
66 Zn	1012.94	P	61.69	6.09	1.0000
72 Ge	775596.38	A	1679.00	0.22	0.0000
72 Ge	280488.00	A	3782.00	1.35	0.0000
72 Ge	1879230.00	A	21100.00	1.12	0.0000
75 As	564.46	P	12.53	2.22	1.0000
78 Se	248.34	P	9.84	3.96	1.0000
78 Se	213.11	P	13.02	6.11	1.0000
88 Sr	4516.43	P	56.70	1.26	1.0000
88 Sr	32554.49	P	334.70	1.03	1.0000
95 Mo	6087.07	P	193.60	3.18	1.0000
106 (Cd)	324.46	P	6.94	2.14	1.0000
107 Ag	7810.19	P	109.40	1.40	1.0000
108 (Cd)	241.12	P	50.15	20.80	1.0000
111 Cd	3325.03	P	144.20	4.34	1.0000
115 In	5421674.00	A	15610.00	0.29	0.0000
115 In	2910753.00	A	26240.00	0.90	0.0000
115 In	11770410.00	A	19480.00	0.17	0.0000
118 Sn	4565.35	P	94.32	2.07	1.0000
118 Sn	2638.12	P	42.87	1.63	1.0000
118 Sn	9902.71	P	120.40	1.22	1.0000
121 Sb	13280.07	P	116.80	0.88	1.0000
137 Ba	5013.31	P	58.37	1.16	1.0000
159 Tb	16000270.00	A	160400.00	1.00	0.0000
165 Ho	15559700.00	A	126400.00	0.81	0.0000
205 Tl	28171.76	P	356.80	1.27	1.0000
206 (Pb)	9680.50	P	330.70	3.42	1.0000
207 (Pb)	8091.67	P	204.00	2.52	1.0000
208 Pb	38229.67	P	528.20	1.38	1.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-38271.70	7.07	-41328.95	92.6	70 -	120	IS Fail
45 Sc	2946623.30	0.57	3008024.30	98.0	70 -	120	
45 Sc	412843.72	0.53	423303.94	97.5	70 -	120	
45 Sc	8594454.00	0.52	8607281.00	99.9	70 -	120	
72 Ge	775596.38	0.22	774468.63	100.1	70 -	120	
72 Ge	280488.03	1.35	282128.91	99.4	70 -	120	
72 Ge	1879229.80	1.12	1882554.90	99.8	70 -	120	
115 In	5421673.50	0.29	5556751.00	97.6	70 -	120	
115 In	2910753.50	0.90	3029632.80	96.1	70 -	120	
115 In	11770411.00	0.17	12097256.00	97.3	70 -	120	
159 Tb	16000275.00	1.00	16269544.00	98.3	70 -	120	
165 Ho	15559705.00	0.81	15819307.00	98.4	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\007CALS.D\007CALS.D#
Date Acquired: Jul 23 2012 11:32 am
Operator: NBS
Sample Name: 120723 Standard 3
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:29 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-40141.68	A	5393.00	13.44	0.0000
7 (Li)	4772095.00	A	27750.00	0.58	0.4044
9 Be	208836.70	P	1267.00	0.61	1.0000
11 B	137641.50	P	1350.00	0.98	0.9952
23 Na	561413.63	P	2113.00	0.38	0.8916
24 Mg	524168.31	P	2475.00	0.47	1.0000
27 Al	92849.74	P	461.20	0.50	0.9997
39 K	344469.09	P	2025.00	0.59	0.9939
44 Ca	38040.14	P	664.10	1.75	0.9998
45 Sc	2929570.00	A	29350.00	1.00	0.0000
45 Sc	413552.91	A	3122.00	0.75	0.0000
45 Sc	8628072.00	A	89100.00	1.03	0.0000
47 Ti	4933.33	P	62.99	1.28	0.9984
51 V	135471.50	P	1339.00	0.99	0.9991
52 Cr	158083.50	P	1018.00	0.64	0.9990
55 Mn	112729.30	P	106.60	0.09	1.0000
56 Fe	2648855.00	A	17400.00	0.66	0.9998
59 Co	230427.80	P	180.70	0.08	1.0000
60 Ni	57533.91	P	431.00	0.75	1.0000
63 Cu	155413.50	P	641.40	0.41	0.9973
65 Cu	75685.46	P	891.90	1.18	0.9968
66 Zn	32393.10	P	111.10	0.34	0.9902
72 Ge	768266.81	A	21970.00	2.86	0.0000
72 Ge	277329.91	A	2067.00	0.75	0.0000
72 Ge	1886908.00	A	20910.00	1.11	0.0000
75 As	25744.79	P	105.60	0.41	0.9999
78 Se	10980.96	P	103.00	0.94	1.0000
78 Se	2890.63	P	48.87	1.69	0.9990
88 Sr	209820.50	P	803.00	0.38	1.0000
88 Sr	1454092.00	A	8453.00	0.58	1.0000
95 Mo	293486.50	P	604.00	0.21	1.0000
106 (Cd)	15022.92	P	191.90	1.28	0.9993
107 Ag	377162.50	P	3424.00	0.91	0.9999
108 (Cd)	10984.61	P	170.90	1.56	1.0000
111 Cd	165458.50	P	465.90	0.28	0.9999
115 In	5327447.00	A	55260.00	1.04	0.0000
115 In	2910250.00	A	24200.00	0.83	0.0000
115 In	11944630.00	A	109500.00	0.92	0.0000
118 Sn	198230.09	P	1792.00	0.90	0.9964
118 Sn	115238.30	P	443.30	0.38	0.9969
118 Sn	450003.50	P	3055.00	0.68	0.9966
121 Sb	649268.31	P	6236.00	0.96	0.9996
137 Ba	238687.59	P	2297.00	0.96	1.0000
159 Tb	16069320.00	A	147900.00	0.92	0.0000
165 Ho	15575810.00	A	135900.00	0.87	0.0000
205 Tl	1268132.00	A	1504.00	0.12	1.0000
206 (Pb)	468874.31	P	1209.00	0.26	0.9996
207 (Pb)	395048.69	P	2701.00	0.68	0.9997
208 Pb	1851604.00	P	7982.00	0.43	0.9997

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)			Flag
6 Li	-40141.69	13.44	-41328.95	97.1	70 -		120	IS Fail
45 Sc	2929570.30	1.00	3008024.30	97.4	70 -		120	
45 Sc	413552.91	0.75	423303.94	97.7	70 -		120	
45 Sc	8628072.00	1.03	8607281.00	100.2	70 -		120	
72 Ge	768266.88	2.86	774468.63	99.2	70 -		120	
72 Ge	277329.88	0.75	282128.91	98.3	70 -		120	
72 Ge	1886908.30	1.11	1882554.90	100.2	70 -		120	
115 In	5327447.00	1.04	5556751.00	95.9	70 -		120	
115 In	2910250.50	0.83	3029632.80	96.1	70 -		120	
115 In	11944625.00	0.92	12097256.00	98.7	70 -		120	
159 Tb	16069324.00	0.92	16269544.00	98.8	70 -		120	
165 Ho	15575815.00	0.87	15819307.00	98.5	70 -		120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\008CALS.D\008CALS.D#
Date Acquired: Jul 23 2012 11:39 am
Operator: NBS
Sample Name: 120723 Standard 4
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:36 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-38098.84	A	8974.00	23.56	0.0000
7 (Li)	4836046.00	A	91920.00	1.90	0.0872
9 Be	423835.19	P	6357.00	1.50	1.0000
11 B	267890.91	P	3612.00	1.35	1.0000
23 Na	1070874.00	A	4310.00	0.40	1.0000
24 Mg	1031127.00	A	10470.00	1.02	1.0000
27 Al	188079.59	P	454.70	0.24	1.0000
39 K	660046.19	P	3327.00	0.50	1.0000
44 Ca	76449.13	P	280.60	0.37	1.0000
45 Sc	3012870.00	A	36160.00	1.20	0.0000
45 Sc	415503.00	A	2302.00	0.55	0.0000
45 Sc	8724734.00	A	61090.00	0.70	0.0000
47 Ti	10057.35	P	118.60	1.18	1.0000
51 V	274992.41	P	1358.00	0.49	1.0000
52 Cr	318432.59	P	2283.00	0.72	1.0000
55 Mn	229116.20	P	2629.00	1.15	1.0000
56 Fe	5265441.00	A	60300.00	1.15	1.0000
59 Co	463151.41	P	3143.00	0.68	1.0000
60 Ni	115989.80	P	858.10	0.74	1.0000
63 Cu	312560.19	P	284.40	0.09	1.0000
65 Cu	153215.50	P	1440.00	0.94	1.0000
66 Zn	65080.04	P	448.40	0.69	1.0000
72 Ge	784051.63	A	4382.00	0.56	0.0000
72 Ge	278662.41	A	4547.00	1.63	0.0000
72 Ge	1912165.00	A	7636.00	0.40	0.0000
75 As	52232.86	P	125.80	0.24	1.0000
78 Se	22351.78	P	86.89	0.39	1.0000
78 Se	5691.24	P	66.14	1.16	1.0000
88 Sr	432452.91	P	383.60	0.09	1.0000
88 Sr	2910274.00	A	5311.00	0.18	1.0000
95 Mo	594285.13	P	5554.00	0.93	1.0000
106 (Cd)	30253.12	P	587.80	1.94	1.0000
107 Ag	759463.69	P	6407.00	0.84	1.0000
108 (Cd)	22110.18	P	292.70	1.32	1.0000
111 Cd	329599.69	P	1169.00	0.35	1.0000
115 In	5454744.00	A	67430.00	1.24	0.0000
115 In	2935754.00	A	7842.00	0.27	0.0000
115 In	11935970.00	A	72980.00	0.61	0.0000
118 Sn	405178.81	P	4698.00	1.16	1.0000
118 Sn	234336.80	P	592.90	0.25	1.0000
118 Sn	907635.88	P	8976.00	0.99	1.0000
121 Sb	1204220.00	A	13910.00	1.16	1.0000
137 Ba	475384.59	P	3682.00	0.77	1.0000
159 Tb	16151070.00	A	201800.00	1.25	0.0000
165 Ho	15582170.00	A	199800.00	1.28	0.0000
205 Tl	2472780.00	A	25800.00	1.04	1.0000
206 (Pb)	935228.19	P	12790.00	1.37	1.0000
207 (Pb)	786432.88	P	10080.00	1.28	1.0000
208 Pb	3497400.00	A	34560.00	0.99	1.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-38098.85	23.56	-41328.95	92.2	70 -	120	IS Fail
45 Sc	3012869.50	1.20	3008024.30	100.2	70 -	120	
45 Sc	415502.97	0.55	423303.94	98.2	70 -	120	
45 Sc	8724734.00	0.70	8607281.00	101.4	70 -	120	
72 Ge	784051.56	0.56	774468.63	101.2	70 -	120	
72 Ge	278662.41	1.63	282128.91	98.8	70 -	120	
72 Ge	1912165.40	0.40	1882554.90	101.6	70 -	120	
115 In	5454744.00	1.24	5556751.00	98.2	70 -	120	
115 In	2935754.00	0.27	3029632.80	96.9	70 -	120	
115 In	11935967.00	0.61	12097256.00	98.7	70 -	120	
159 Tb	16151070.00	1.25	16269544.00	99.3	70 -	120	
165 Ho	15582175.00	1.28	15819307.00	98.5	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

--- :Element Failures --- :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

QCS QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\009_QCS.D\009_QCS.D#
Date Acquired: Jul 23 2012 11:45 am
Operator: NBS
Sample Name: ICV 120723
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: QCS
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)		Flag
7 (Li)	--------	ug/l	--------	100.00	90 -	110	
9 Be	100.60	ug/l	0.64	100.00	90 -	110	
11 B	101.80	ug/l	1.22	100.00	90 -	110	
23 Na	2398.00	ug/l	0.47	2500.00	90 -	110	
24 Mg	2487.00	ug/l	0.77	2500.00	90 -	110	
27 Al	2446.00	ug/l	0.17	2500.00	90 -	110	
39 K	2316.00	ug/l	0.48	2500.00	90 -	110	
44 Ca	2406.00	ug/l	0.84	2500.00	90 -	110	
47 Ti	97.92	ug/l	1.55	100.00	90 -	110	
51 V	101.80	ug/l	0.59	100.00	90 -	110	
52 Cr	101.70	ug/l	0.35	100.00	90 -	110	
55 Mn	101.10	ug/l	0.14	100.00	90 -	110	
56 Fe	2430.00	ug/l	0.38	2500.00	90 -	110	
59 Co	99.14	ug/l	0.73	100.00	90 -	110	
60 Ni	101.20	ug/l	0.59	100.00	90 -	110	
63 Cu	99.40	ug/l	0.49	100.00	90 -	110	
65 Cu	99.41	ug/l	0.52	100.00	90 -	110	
66 Zn	101.50	ug/l	1.04	100.00	90 -	110	
75 As	99.15	ug/l	1.09	100.00	90 -	110	
78 Se	99.79	ug/l	0.71	100.00	90 -	110	
78 Se	100.20	ug/l	1.67	100.00	90 -	110	
88 Sr	98.23	ug/l	1.15	100.00	90 -	110	
88 Sr	97.55	ug/l	0.36	100.00	90 -	110	
95 Mo	99.68	ug/l	1.27	100.00	90 -	110	
106 (Cd)	--------	ug/l	--------	100.00	90 -	110	
107 Ag	51.17	ug/l	1.02	50.00	90 -	110	
108 (Cd)	--------	ug/l	--------	100.00	90 -	110	
111 Cd	99.11	ug/l	0.54	100.00	90 -	110	
118 Sn	48.25	ug/l	5.45	50.00	90 -	110	
118 Sn	47.94	ug/l	8.36	50.00	90 -	110	
118 Sn	50.31	ug/l	5.64	50.00	90 -	110	
121 Sb	102.00	ug/l	1.63	100.00	90 -	110	
137 Ba	98.36	ug/l	0.60	100.00	90 -	110	
205 Tl	98.39	ug/l	0.49	100.00	90 -	110	
206 (Pb)	--------	ug/l	--------	100.00	90 -	110	
207 (Pb)	--------	ug/l	--------	100.00	90 -	110	
208 Pb	99.70	ug/l	0.09	100.00	90 -	110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-42030.20	5.53	-41328.95	101.7	70 -	120	IS Fail
45 Sc	3002840.00	1.08	3008024.30	99.8	70 -	120	
45 Sc	417571.03	0.15	423303.94	98.6	70 -	120	
45 Sc	8771717.00	1.09	8607281.00	101.9	70 -	120	
72 Ge	784054.69	1.30	774468.63	101.2	70 -	120	
72 Ge	283383.13	0.95	282128.91	100.4	70 -	120	
72 Ge	1906694.80	0.29	1882554.90	101.3	70 -	120	
115 In	5475908.00	1.09	5556751.00	98.5	70 -	120	
115 In	2925404.50	1.07	3029632.80	96.6	70 -	120	
115 In	12051751.00	0.51	12097256.00	99.6	70 -	120	
159 Tb	16249860.00	0.32	16269544.00	99.9	70 -	120	
165 Ho	15777454.00	0.86	15819307.00	99.7	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\011_CCB.D\011_CCB.D#
Date Acquired: Jul 23 2012 11:58 am
Operator: NBS
Sample Name: ICB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	--------	#######	
9 Be	0.01 ug/l	62.17	0.12	
11 B	-0.06 ug/l	103.17	15.00	
23 Na	-8.87 ug/l	28.81	77.10	
24 Mg	-0.02 ug/l	266.60	7.50	
27 Al	0.35 ug/l	64.01	3.96	
39 K	2.17 ug/l	108.79	19.20	
44 Ca	-7.98 ug/l	38.97	90.00	
47 Ti	0.00 ug/l	285.52	0.78	
51 V	0.01 ug/l	77.78	0.21	
52 Cr	-0.02 ug/l	56.40	0.12	
55 Mn	-0.01 ug/l	30.35	0.18	
56 Fe	0.09 ug/l	39.91	40.80	
59 Co	0.01 ug/l	50.79	0.09	
60 Ni	0.00 ug/l	335.93	0.48	
63 Cu	-0.02 ug/l	3.48	0.39	
65 Cu	-0.01 ug/l	79.37	0.39	
66 Zn	0.01 ug/l	415.60	6.90	
75 As	0.01 ug/l	79.94	0.27	
78 Se	0.01 ug/l	150.15	0.30	
78 Se	0.08 ug/l	243.02	0.30	
88 Sr	0.00 ug/l	251.58	0.03	
88 Sr	0.00 ug/l	18.53	0.03	
95 Mo	0.05 ug/l	9.94	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	100.46	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.01 ug/l	54.35	0.06	
118 Sn	0.02 ug/l	75.03	#######	
118 Sn	0.02 ug/l	36.24	#######	
118 Sn	0.02 ug/l	34.99	0.30	
121 Sb	0.03 ug/l	9.49	0.03	
137 Ba	0.00 ug/l	110.58	0.12	
205 Tl	0.01 ug/l	34.92	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.01 ug/l	13.26	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-42072.89	9.05	-41328.95	101.8	70 - 120	IS Fail
45 Sc	3095275.50	0.67	3008024.30	102.9	70 - 120	
45 Sc	425403.59	1.36	423303.94	100.5	70 - 120	
45 Sc	8639370.00	1.70	8607281.00	100.4	70 - 120	
72 Ge	799887.75	0.92	774468.63	103.3	70 - 120	
72 Ge	283411.25	0.73	282128.91	100.5	70 - 120	
72 Ge	1897265.50	1.53	1882554.90	100.8	70 - 120	
115 In	5586231.50	0.97	5556751.00	100.5	70 - 120	
115 In	3015473.30	1.15	3029632.80	99.5	70 - 120	
115 In	12146847.00	1.16	12097256.00	100.4	70 - 120	
159 Tb	16155302.00	0.85	16269544.00	99.3	70 - 120	
165 Ho	15737558.00	0.71	15819307.00	99.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\012_CCV.D\012_CCV.D#
Date Acquired: Jul 23 2012 12:05 pm
Operator: NBS
Sample Name: CCV 120723
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)		Flag
7 (Li)	--------	ug/l	--------	50.00	90 -	110	
9 Be	49.60	ug/l	0.79	50.00	90 -	110	
11 B	51.10	ug/l	0.98	50.00	90 -	110	
23 Na	1238.00	ug/l	0.52	1250.00	90 -	110	
24 Mg	2526.00	ug/l	0.49	2500.00	90 -	110	
27 Al	990.40	ug/l	1.09	1000.00	90 -	110	
39 K	995.20	ug/l	0.67	1000.00	90 -	110	
44 Ca	2466.00	ug/l	0.42	2500.00	90 -	110	
47 Ti	48.94	ug/l	2.27	50.00	90 -	110	
51 V	49.00	ug/l	0.21	50.00	90 -	110	
52 Cr	49.04	ug/l	0.15	50.00	90 -	110	
55 Mn	48.94	ug/l	0.22	50.00	90 -	110	
56 Fe	993.80	ug/l	0.50	1000.00	90 -	110	
59 Co	49.21	ug/l	0.92	50.00	90 -	110	
60 Ni	49.66	ug/l	0.93	50.00	90 -	110	
63 Cu	49.23	ug/l	0.47	50.00	90 -	110	
65 Cu	48.96	ug/l	0.26	50.00	90 -	110	
66 Zn	49.71	ug/l	0.73	50.00	90 -	110	
75 As	49.67	ug/l	0.20	50.00	90 -	110	
78 Se	50.01	ug/l	1.21	50.00	90 -	110	
78 Se	49.30	ug/l	1.29	50.00	90 -	110	
88 Sr	50.00	ug/l	0.67	50.00	90 -	110	
88 Sr	49.73	ug/l	0.36	50.00	90 -	110	
95 Mo	49.04	ug/l	0.81	50.00	90 -	110	
106 (Cd)	--------	ug/l	--------	50.00	90 -	110	
107 Ag	24.88	ug/l	1.17	25.00	90 -	110	
108 (Cd)	--------	ug/l	--------	50.00	90 -	110	
111 Cd	49.56	ug/l	1.10	50.00	90 -	110	
118 Sn	49.77	ug/l	1.17	---	##### -	#####	
118 Sn	49.48	ug/l	0.73	---	##### -	#####	
118 Sn	49.50	ug/l	0.78	50.00	90 -	110	
121 Sb	52.78	ug/l	0.89	50.00	90 -	110	
137 Ba	49.50	ug/l	0.92	50.00	90 -	110	
205 Tl	51.14	ug/l	0.85	50.00	90 -	110	
206 (Pb)	--------	ug/l	--------	50.00	90 -	110	
207 (Pb)	--------	ug/l	--------	50.00	90 -	110	
208 Pb	52.39	ug/l	0.44	50.00	90 -	110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-36962.72	9.13	-41328.95	89.4	70 -	120	IS Fail
45 Sc	3048428.00	0.52	3008024.30	101.3	70 -	120	
45 Sc	425742.41	0.55	423303.94	100.6	70 -	120	
45 Sc	8837992.00	0.79	8607281.00	102.7	70 -	120	
72 Ge	786063.00	1.03	774468.63	101.5	70 -	120	
72 Ge	283188.31	1.08	282128.91	100.4	70 -	120	
72 Ge	1919384.60	0.76	1882554.90	102.0	70 -	120	
115 In	5483121.50	0.63	5556751.00	98.7	70 -	120	
115 In	2961335.00	0.42	3029632.80	97.7	70 -	120	
115 In	12216251.00	0.54	12097256.00	101.0	70 -	120	
159 Tb	16140742.00	0.69	16269544.00	99.2	70 -	120	
165 Ho	15761536.00	0.35	15819307.00	99.6	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\013_CCB.D\013_CCB.D#
Date Acquired: Jul 23 2012 12:12 pm
Operator: NBS
Sample Name: CCB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	--------	#######	
9 Be	0.01 ug/l	28.98	0.12	
11 B	-0.01 ug/l	2028.40	15.00	
23 Na	-9.93 ug/l	20.37	77.10	
24 Mg	0.41 ug/l	44.14	7.50	
27 Al	0.58 ug/l	23.47	3.96	
39 K	2.52 ug/l	104.72	19.20	
44 Ca	-7.69 ug/l	34.34	90.00	
47 Ti	0.02 ug/l	43.51	0.78	
51 V	0.01 ug/l	46.98	0.21	
52 Cr	-0.02 ug/l	32.90	0.12	
55 Mn	-0.01 ug/l	25.20	0.18	
56 Fe	0.13 ug/l	28.25	40.80	
59 Co	0.02 ug/l	14.80	0.09	
60 Ni	-0.01 ug/l	143.54	0.48	
63 Cu	-0.02 ug/l	29.44	0.39	
65 Cu	-0.02 ug/l	45.72	0.39	
66 Zn	0.03 ug/l	109.32	6.90	
75 As	0.00 ug/l	13.81	0.27	
78 Se	0.00 ug/l	1935.10	0.30	
78 Se	0.36 ug/l	43.44	0.30	Fail
88 Sr	0.02 ug/l	61.41	0.03	
88 Sr	0.01 ug/l	24.52	0.03	
95 Mo	0.08 ug/l	10.75	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	33.45	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.01 ug/l	112.87	0.06	
118 Sn	0.08 ug/l	13.90	#######	
118 Sn	0.08 ug/l	11.98	#######	
118 Sn	0.04 ug/l	14.86	0.30	
121 Sb	0.09 ug/l	3.60	0.03	Fail
137 Ba	0.01 ug/l	23.15	0.12	
205 Tl	0.01 ug/l	16.07	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.01 ug/l	14.05	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-41365.11	4.11	-41328.95	100.1	70 - 120	IS Fai
45 Sc	3109463.00	0.74	3008024.30	103.4	70 - 120	
45 Sc	436584.66	0.71	423303.94	103.1	70 - 120	
45 Sc	8702714.00	0.34	8607281.00	101.1	70 - 120	
72 Ge	794512.25	1.02	774468.63	102.6	70 - 120	
72 Ge	289162.22	1.20	282128.91	102.5	70 - 120	
72 Ge	1910565.90	0.18	1882554.90	101.5	70 - 120	
115 In	5651735.50	0.41	5556751.00	101.7	70 - 120	
115 In	3029258.30	0.13	3029632.80	100.0	70 - 120	
115 In	12209930.00	0.36	12097256.00	100.9	70 - 120	
159 Tb	16410115.00	0.53	16269544.00	100.9	70 - 120	
165 Ho	15792125.00	0.38	15819307.00	99.8	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\014SMPL.D\014SMPL.D#
Date Acquired: Jul 23 2012 12:18 pm
Operator: NBS
Sample Name: ICSA 120723
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.00
Total Dil Factor: 1.00

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	#VALUE!	--------	0	
9 Be	0.01 ug/l	0.01	16.22	1000	
11 B	1.24 ug/l	1.24	1.37	1000	
23 Na	89610.00 ug/l	89610.00	0.85	25000	>Cal
24 Mg	89070.00 ug/l	89070.00	0.41	50000	>Cal
27 Al	88750.00 ug/l	88750.00	0.72	20000	>Cal
39 K	87880.00 ug/l	87880.00	0.71	20000	>Cal
44 Ca	92120.00 ug/l	92120.00	0.78	50000	>Cal
47 Ti	1718.00 ug/l	1718.00	0.37	1000	>Cal
51 V	0.10 ug/l	0.10	8.87	1000	
52 Cr	1.58 ug/l	1.58	15.00	1000	
55 Mn	5.76 ug/l	5.76	1.34	1000	
56 Fe	90820.00 ug/l	90820.00	0.70	20000	>Cal
59 Co	1.94 ug/l	1.94	1.83	1000	
60 Ni	1.97 ug/l	1.97	2.48	1000	
63 Cu	0.75 ug/l	0.75	1.21	1000	
65 Cu	0.79 ug/l	0.79	3.08	1000	
66 Zn	1.40 ug/l	1.40	1.13	1000	
75 As	0.28 ug/l	0.28	2.03	1000	
78 Se	0.13 ug/l	0.13	8.50	1000	
78 Se	0.77 ug/l	0.77	9.40	1000	
88 Sr	1.32 ug/l	1.32	5.56	1000	
88 Sr	1.37 ug/l	1.37	1.25	1000	
95 Mo	1875.00 ug/l	1875.00	1.20	1000	>Cal
106 (Cd)	-------- ug/l	#VALUE!	--------	#######	
107 Ag	0.07 ug/l	0.07	5.89	500	
108 (Cd)	-------- ug/l	#VALUE!	--------	#######	
111 Cd	0.88 ug/l	0.88	1.42	1000	
118 Sn	0.21 ug/l	0.21	1.97	#######	
118 Sn	0.22 ug/l	0.22	18.96	#######	
118 Sn	0.23 ug/l	0.23	1.31	1000	
121 Sb	1.18 ug/l	1.18	1.23	1000	
137 Ba	2.58 ug/l	2.58	5.35	1000	
205 Tl	0.08 ug/l	0.08	2.29	1000	
206 (Pb)	-------- ug/l	#VALUE!	--------	#######	
207 (Pb)	-------- ug/l	#VALUE!	--------	#######	
208 Pb	0.41 ug/l	0.41	1.41	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-37598.05	8.88	-41328.95	91.0	70 - 120	IS Fai
45 Sc	3054391.50	0.51	3008024.30	101.5	70 - 120	
45 Sc	436433.34	0.64	423303.94	103.1	70 - 120	
45 Sc	8890298.00	0.21	8607281.00	103.3	70 - 120	
72 Ge	769231.75	0.38	774468.63	99.3	70 - 120	
72 Ge	281075.50	0.23	282128.91	99.6	70 - 120	
72 Ge	1923643.30	0.95	1882554.90	102.2	70 - 120	
115 In	5221821.50	1.14	5556751.00	94.0	70 - 120	
115 In	2776903.00	0.79	3029632.80	91.7	70 - 120	
115 In	11448044.00	0.61	12097256.00	94.6	70 - 120	
159 Tb	16053537.00	0.92	16269544.00	98.7	70 - 120	
165 Ho	15595900.00	0.15	15819307.00	98.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

8 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

ICS-AB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\015ICSB.D\015ICSB.D#
Date Acquired: Jul 23 2012 12:25 pm
Acq. Method: 62A0723A.M
Operator: NBS
Sample Name: ICSAB 120723
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal. Update: Jul 23 2012 11:42 am
Sample Type: ICSAB
Dilution Factor: 1.00

Data Results:
Analytes: Pass
ISTD: Fail

QC Elements

Element	IS Ref	Tune	Conc. ppb	RSD(%)	Expected	%Recovery	QC Range(%)	Flag
7 (Li)	---	3	---	---	---		-	
9 Be	45	3	241.10	0.75	250	96.4	80 - 120	
11 B	45	3	0.86	13.58	---		-	
23 Na	45	2	90140.00	1.67	---		-	
24 Mg	45	2	89040.00	1.39	---		-	
27 Al	45	2	88440.00	0.98	---		-	
39 K	45	2	88130.00	1.12	---		-	
44 Ca	45	2	91870.00	1.53	---		-	
47 Ti	45	2	1696.00	1.02	2000	84.8	80 - 120	
51 V	45	2	250.80	1.85	250	100.3	80 - 120	
52 Cr	45	2	238.10	1.41	250	95.2	80 - 120	
55 Mn	45	2	243.80	1.56	250	97.5	80 - 120	
56 Fe	45	2	89920.00	1.53	---		-	
59 Co	45	2	212.60	1.90	250	85.0	80 - 120	
60 Ni	45	2	449.60	1.55	500	89.9	80 - 120	
63 Cu	45	2	219.60	1.42	250	87.8	80 - 120	
65 Cu	45	2	219.10	1.07	250	87.6	80 - 120	
66 Zn	115	2	488.00	0.51	500	97.6	80 - 120	
75 As	115	2	263.10	0.67	250	105.2	80 - 120	
78 Se	115	1	254.90	1.16	250	102.0	80 - 120	
78 Se	115	2	253.80	0.63	250	101.5	80 - 120	
88 Sr	115	2	1.28	2.80	---		-	
88 Sr	115	3	1.41	0.61	---		-	
95 Mo	115	3	2133.00	1.20	2000	106.7	80 - 120	
106 (Cd)	---	3	---	---	---		-	
107 Ag	115	3	479.00	7.77	500	95.8	80 - 120	
108 (Cd)	---	3	---	---	---		-	
111 Cd	115	3	450.60	0.21	500	90.1	80 - 120	
118 Sn	115	1	0.21	7.95	---		-	
118 Sn	115	2	0.22	9.45	---		-	
118 Sn	115	3	0.23	3.94	---		-	
121 Sb	115	3	249.30	1.10	250	99.7	80 - 120	
137 Ba	115	3	241.40	0.52	250	96.6	80 - 120	
205 Tl	159	3	227.20	0.05	250	90.9	80 - 120	
206 (Pb)	---	3	---	---	---		-	
207 (Pb)	---	3	---	---	---		-	
208 Pb	159	3	437.60	0.77	500	87.5	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3	-35443	14.51	-41329	85.8	70 - 120	IS Fail
45 Sc	1	3173175	2.09	3008024	105.5	70 - 120	
45 Sc	2	445878	1.47	423304	105.3	70 - 120	
45 Sc	3	8959869	1.06	8607281	104.1	70 - 120	
72 Ge	1	787580	1.18	774469	101.7	70 - 120	
72 Ge	2	286166	0.66	282129	101.4	70 - 120	
72 Ge	3	1957866	0.62	1882555	104.0	70 - 120	
115 In	1	5428667	1.26	5556751	97.7	70 - 120	
115 In	2	2857644	0.53	3029633	94.3	70 - 120	
115 In	3	11548093	0.63	12097256	95.5	70 - 120	
159 Tb	3	15976363	0.50	16269544	98.2	70 - 120	
165 Ho	3	15533992	0.96	15819307	98.2	70 - 120	

Tune File# 1 c:\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\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\024_CCV.D\024_CCV.D#
Date Acquired: Jul 23 2012 01:32 pm
Operator: NBS
Sample Name: CCV 120723
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)		Flag
7 (Li)	--------	ug/l	--------	50.00	90 -	110	
9 Be	49.44	ug/l	0.67	50.00	90 -	110	
11 B	49.03	ug/l	0.99	50.00	90 -	110	
23 Na	1218.00	ug/l	2.36	1250.00	90 -	110	
24 Mg	2498.00	ug/l	1.95	2500.00	90 -	110	
27 Al	977.70	ug/l	2.12	1000.00	90 -	110	
39 K	985.10	ug/l	2.42	1000.00	90 -	110	
44 Ca	2430.00	ug/l	1.38	2500.00	90 -	110	
47 Ti	47.89	ug/l	1.44	50.00	90 -	110	
51 V	48.79	ug/l	2.43	50.00	90 -	110	
52 Cr	49.04	ug/l	1.97	50.00	90 -	110	
55 Mn	48.80	ug/l	1.39	50.00	90 -	110	
56 Fe	973.20	ug/l	2.18	1000.00	90 -	110	
59 Co	48.59	ug/l	1.75	50.00	90 -	110	
60 Ni	48.69	ug/l	1.92	50.00	90 -	110	
63 Cu	48.38	ug/l	2.01	50.00	90 -	110	
65 Cu	48.32	ug/l	1.36	50.00	90 -	110	
66 Zn	50.19	ug/l	0.70	50.00	90 -	110	
75 As	49.86	ug/l	0.81	50.00	90 -	110	
78 Se	49.64	ug/l	1.15	50.00	90 -	110	
78 Se	50.19	ug/l	1.35	50.00	90 -	110	
88 Sr	50.53	ug/l	0.83	50.00	90 -	110	
88 Sr	50.45	ug/l	0.55	50.00	90 -	110	
95 Mo	50.00	ug/l	0.20	50.00	90 -	110	
106 (Cd)	--------	ug/l	--------	50.00	90 -	110	
107 Ag	24.84	ug/l	0.45	25.00	90 -	110	
108 (Cd)	--------	ug/l	--------	50.00	90 -	110	
111 Cd	49.60	ug/l	0.95	50.00	90 -	110	
118 Sn	49.74	ug/l	1.06	---	##### -	#####	
118 Sn	49.48	ug/l	1.45	---	##### -	#####	
118 Sn	49.65	ug/l	0.60	50.00	90 -	110	
121 Sb	53.03	ug/l	0.38	50.00	90 -	110	
137 Ba	49.68	ug/l	1.02	50.00	90 -	110	
205 Tl	50.98	ug/l	0.55	50.00	90 -	110	
206 (Pb)	--------	ug/l	--------	50.00	90 -	110	
207 (Pb)	--------	ug/l	--------	50.00	90 -	110	
208 Pb	51.97	ug/l	0.08	50.00	90 -	110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-37208.29	23.54	-41328.95	90.0	70 -	120	IS Fail
45 Sc	3207763.50	0.47	3008024.30	106.6	70 -	120	
45 Sc	451396.47	1.87	423303.94	106.6	70 -	120	
45 Sc	9114044.00	0.70	8607281.00	105.9	70 -	120	
72 Ge	820047.81	0.42	774468.63	105.9	70 -	120	
72 Ge	296744.84	1.32	282128.91	105.2	70 -	120	
72 Ge	1965454.80	0.50	1882554.90	104.4	70 -	120	
115 In	5736711.50	0.79	5556751.00	103.2	70 -	120	
115 In	3076324.30	1.59	3029632.80	101.5	70 -	120	
115 In	12421903.00	0.30	12097256.00	102.7	70 -	120	
159 Tb	16660003.00	0.38	16269544.00	102.4	70 -	120	
165 Ho	16160466.00	0.80	15819307.00	102.2	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\026_CCB.D\026_CCB.D#
Date Acquired: Jul 23 2012 01:45 pm
Operator: NBS
Sample Name: CCB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	--------	#######	
9 Be	0.00 ug/l	68.10	0.12	
11 B	-1.57 ug/l	8.40	15.00	
23 Na	-19.39 ug/l	9.24	77.10	
24 Mg	-0.11 ug/l	32.48	7.50	
27 Al	0.65 ug/l	37.42	3.96	
39 K	-0.55 ug/l	422.51	19.20	
44 Ca	-13.14 ug/l	10.64	90.00	
47 Ti	0.05 ug/l	190.52	0.78	
51 V	0.00 ug/l	97.27	0.21	
52 Cr	-0.06 ug/l	3.59	0.12	
55 Mn	-0.02 ug/l	39.89	0.18	
56 Fe	0.03 ug/l	92.73	40.80	
59 Co	-0.01 ug/l	5.06	0.09	
60 Ni	-0.05 ug/l	20.94	0.48	
63 Cu	-0.03 ug/l	12.14	0.39	
65 Cu	-0.03 ug/l	27.56	0.39	
66 Zn	0.01 ug/l	522.05	6.90	
75 As	0.00 ug/l	201.72	0.27	
78 Se	-0.02 ug/l	28.35	0.30	
78 Se	0.30 ug/l	54.24	0.30	
88 Sr	0.01 ug/l	28.85	0.03	
88 Sr	0.00 ug/l	46.66	0.03	
95 Mo	0.04 ug/l	11.71	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.01 ug/l	25.03	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.00 ug/l	126.59	0.06	
118 Sn	0.02 ug/l	23.26	#######	
118 Sn	0.01 ug/l	84.96	#######	
118 Sn	0.01 ug/l	36.38	0.30	
121 Sb	0.03 ug/l	13.44	0.03	Fail
137 Ba	0.01 ug/l	47.38	0.12	
205 Tl	0.01 ug/l	3.62	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.02 ug/l	7.77	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-46601.30	1.93	-41328.95	112.8	70 - 120	IS Fai
45 Sc	3258366.00	1.08	3008024.30	108.3	70 - 120	
45 Sc	452200.25	0.37	423303.94	106.8	70 - 120	
45 Sc	8993459.00	0.85	8607281.00	104.5	70 - 120	
72 Ge	834886.63	1.35	774468.63	107.8	70 - 120	
72 Ge	300371.97	0.87	282128.91	106.5	70 - 120	
72 Ge	1964668.50	0.86	1882554.90	104.4	70 - 120	
115 In	5902867.00	0.62	5556751.00	106.2	70 - 120	
115 In	3136632.50	0.75	3029632.80	103.5	70 - 120	
115 In	12490374.00	0.82	12097256.00	103.2	70 - 120	
159 Tb	16903932.00	1.12	16269544.00	103.9	70 - 120	
165 Ho	16315825.00	1.13	15819307.00	103.1	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\038_CCV.D\038_CCV.D#
Date Acquired: Jul 23 2012 03:07 pm
Operator: NBS
Sample Name: CCV 120723
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)		Flag
7 (Li)	--------	ug/l	--------	50.00	90 -	110	
9 Be	50.82	ug/l	0.70	50.00	90 -	110	
11 B	60.80	ug/l	0.41	50.00	90 -	110	Fail
23 Na	1289.00	ug/l	0.40	1250.00	90 -	110	
24 Mg	2570.00	ug/l	0.63	2500.00	90 -	110	
27 Al	1010.00	ug/l	0.91	1000.00	90 -	110	
39 K	1010.00	ug/l	0.97	1000.00	90 -	110	
44 Ca	2527.00	ug/l	0.75	2500.00	90 -	110	
47 Ti	48.23	ug/l	2.50	50.00	90 -	110	
51 V	48.21	ug/l	1.09	50.00	90 -	110	
52 Cr	47.74	ug/l	1.05	50.00	90 -	110	
55 Mn	48.54	ug/l	0.37	50.00	90 -	110	
56 Fe	970.00	ug/l	0.78	1000.00	90 -	110	
59 Co	47.62	ug/l	0.81	50.00	90 -	110	
60 Ni	47.79	ug/l	0.59	50.00	90 -	110	
63 Cu	47.35	ug/l	1.79	50.00	90 -	110	
65 Cu	47.08	ug/l	0.91	50.00	90 -	110	
66 Zn	51.38	ug/l	0.35	50.00	90 -	110	
75 As	51.04	ug/l	0.81	50.00	90 -	110	
78 Se	50.77	ug/l	0.44	50.00	90 -	110	
78 Se	51.66	ug/l	0.32	50.00	90 -	110	
88 Sr	51.25	ug/l	1.09	50.00	90 -	110	
88 Sr	50.81	ug/l	1.01	50.00	90 -	110	
95 Mo	50.10	ug/l	0.93	50.00	90 -	110	
106 (Cd)	--------	ug/l	--------	50.00	90 -	110	
107 Ag	24.99	ug/l	1.82	25.00	90 -	110	
108 (Cd)	--------	ug/l	--------	50.00	90 -	110	
111 Cd	49.92	ug/l	1.71	50.00	90 -	110	
118 Sn	49.95	ug/l	0.31	---	##### -	#####	
118 Sn	49.60	ug/l	0.56	---	##### -	#####	
118 Sn	50.19	ug/l	1.41	50.00	90 -	110	
121 Sb	53.47	ug/l	2.63	50.00	90 -	110	
137 Ba	49.86	ug/l	1.62	50.00	90 -	110	
205 Tl	50.30	ug/l	0.77	50.00	90 -	110	
206 (Pb)	--------	ug/l	--------	50.00	90 -	110	
207 (Pb)	--------	ug/l	--------	50.00	90 -	110	
208 Pb	51.71	ug/l	0.38	50.00	90 -	110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-46384.73	10.88	-41328.95	112.2	70 -	120	IS Fail
45 Sc	3148572.80	0.41	3008024.30	104.7	70 -	120	
45 Sc	455889.47	1.12	423303.94	107.7	70 -	120	
45 Sc	9181851.00	0.79	8607281.00	106.7	70 -	120	
72 Ge	809349.19	0.46	774468.63	104.5	70 -	120	
72 Ge	291443.75	0.37	282128.91	103.3	70 -	120	
72 Ge	1986232.80	0.29	1882554.90	105.5	70 -	120	
115 In	5566992.00	0.59	5556751.00	100.2	70 -	120	
115 In	2998159.00	0.95	3029632.80	99.0	70 -	120	
115 In	12443523.00	1.27	12097256.00	102.9	70 -	120	
159 Tb	16734999.00	0.75	16269544.00	102.9	70 -	120	
165 Ho	16223907.00	0.28	15819307.00	102.6	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\040_CCB.D\040_CCB.D#
Date Acquired: Jul 23 2012 03:20 pm
Operator: NBS
Sample Name: CCB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	--------	#######	
9 Be	0.00	ug/l	628.28	0.12	
11 B	5.64	ug/l	2.47	15.00	
23 Na	6.28	ug/l	27.52	77.10	
24 Mg	0.40	ug/l	37.54	7.50	
27 Al	1.14	ug/l	18.54	3.96	
39 K	8.76	ug/l	45.49	19.20	
44 Ca	-12.54	ug/l	13.15	90.00	
47 Ti	0.02	ug/l	59.79	0.78	
51 V	0.01	ug/l	43.11	0.21	
52 Cr	-0.06	ug/l	3.00	0.12	
55 Mn	-0.03	ug/l	20.84	0.18	
56 Fe	0.03	ug/l	109.87	40.80	
59 Co	-0.01	ug/l	52.61	0.09	
60 Ni	-0.05	ug/l	20.44	0.48	
63 Cu	-0.03	ug/l	13.37	0.39	
65 Cu	-0.02	ug/l	31.00	0.39	
66 Zn	0.05	ug/l	67.78	6.90	
75 As	0.00	ug/l	140.00	0.27	
78 Se	-0.02	ug/l	104.66	0.30	
78 Se	0.46	ug/l	14.69	0.30	Fail
88 Sr	0.02	ug/l	51.01	0.03	
88 Sr	0.01	ug/l	6.84	0.03	
95 Mo	0.03	ug/l	27.08	0.21	
106 (Cd)	--------	ug/l	--------	#######	
107 Ag	0.00	ug/l	53.78	0.09	
108 (Cd)	--------	ug/l	--------	#######	
111 Cd	0.01	ug/l	63.57	0.06	
118 Sn	0.01	ug/l	44.20	#######	
118 Sn	0.02	ug/l	55.29	#######	
118 Sn	0.01	ug/l	8.30	0.30	
121 Sb	0.03	ug/l	16.15	0.03	Fail
137 Ba	0.01	ug/l	76.73	0.12	
205 Tl	0.01	ug/l	6.79	0.03	
206 (Pb)	--------	ug/l	--------	#######	
207 (Pb)	--------	ug/l	--------	#######	
208 Pb	-0.02	ug/l	2.57	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-45872.62	15.67	-41328.95	111.0	70 - 120	IS Fail
45 Sc	3225425.30	0.94	3008024.30	107.2	70 - 120	
45 Sc	455256.84	0.90	423303.94	107.5	70 - 120	
45 Sc	9025179.00	0.84	8607281.00	104.9	70 - 120	
72 Ge	829819.56	0.95	774468.63	107.1	70 - 120	
72 Ge	294491.41	1.41	282128.91	104.4	70 - 120	
72 Ge	1986792.00	0.34	1882554.90	105.5	70 - 120	
115 In	5757836.50	0.31	5556751.00	103.6	70 - 120	
115 In	3079085.80	1.03	3029632.80	101.6	70 - 120	
115 In	12604958.00	0.38	12097256.00	104.2	70 - 120	
159 Tb	16666065.00	1.06	16269544.00	102.4	70 - 120	
165 Ho	16233445.00	0.44	15819307.00	102.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\052_CCV.D\052_CCV.D#
Date Acquired: Jul 23 2012 04:40 pm
Operator: NBS
Sample Name: CCV 120723
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
7 (Li)	--------	ug/l	--------	50.00	90 - 110	
9 Be	50.78	ug/l	0.72	50.00	90 - 110	
11 B	57.71	ug/l	1.17	50.00	90 - 110	Fail
23 Na	1319.00	ug/l	0.48	1250.00	90 - 110	
24 Mg	2579.00	ug/l	0.37	2500.00	90 - 110	
27 Al	1018.00	ug/l	0.59	1000.00	90 - 110	
39 K	1016.00	ug/l	1.11	1000.00	90 - 110	
44 Ca	2500.00	ug/l	1.56	2500.00	90 - 110	
47 Ti	48.64	ug/l	0.92	50.00	90 - 110	
51 V	48.59	ug/l	0.64	50.00	90 - 110	
52 Cr	48.24	ug/l	0.21	50.00	90 - 110	
55 Mn	48.77	ug/l	0.21	50.00	90 - 110	
56 Fe	972.50	ug/l	0.68	1000.00	90 - 110	
59 Co	47.93	ug/l	0.27	50.00	90 - 110	
60 Ni	47.64	ug/l	0.88	50.00	90 - 110	
63 Cu	47.63	ug/l	0.34	50.00	90 - 110	
65 Cu	47.37	ug/l	1.13	50.00	90 - 110	
66 Zn	50.87	ug/l	0.96	50.00	90 - 110	
75 As	51.03	ug/l	1.07	50.00	90 - 110	
78 Se	49.43	ug/l	2.14	50.00	90 - 110	
78 Se	51.05	ug/l	1.97	50.00	90 - 110	
88 Sr	51.32	ug/l	0.95	50.00	90 - 110	
88 Sr	51.03	ug/l	0.80	50.00	90 - 110	
95 Mo	50.00	ug/l	1.43	50.00	90 - 110	
106 (Cd)	--------	ug/l	--------	50.00	90 - 110	
107 Ag	24.94	ug/l	0.63	25.00	90 - 110	
108 (Cd)	--------	ug/l	--------	50.00	90 - 110	
111 Cd	50.08	ug/l	1.04	50.00	90 - 110	
118 Sn	49.37	ug/l	0.94	---	##### - #####	
118 Sn	49.51	ug/l	0.72	---	##### - #####	
118 Sn	50.14	ug/l	1.28	50.00	90 - 110	
121 Sb	53.35	ug/l	0.58	50.00	90 - 110	
137 Ba	50.27	ug/l	0.22	50.00	90 - 110	
205 Tl	50.82	ug/l	0.84	50.00	90 - 110	
206 (Pb)	--------	ug/l	--------	50.00	90 - 110	
207 (Pb)	--------	ug/l	--------	50.00	90 - 110	
208 Pb	51.63	ug/l	3.23	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-49375.14	10.43	-41328.95	119.5	70 - 120	IS Fail
45 Sc	3197318.50	0.40	3008024.30	106.3	70 - 120	
45 Sc	451381.13	0.89	423303.94	106.6	70 - 120	
45 Sc	9347351.00	0.03	8607281.00	108.6	70 - 120	
72 Ge	807632.94	0.59	774468.63	104.3	70 - 120	
72 Ge	289867.19	0.94	282128.91	102.7	70 - 120	
72 Ge	2018690.80	0.40	1882554.90	107.2	70 - 120	
115 In	5650102.00	1.15	5556751.00	101.7	70 - 120	
115 In	2986436.50	0.46	3029632.80	98.6	70 - 120	
115 In	12552098.00	0.50	12097256.00	103.8	70 - 120	
159 Tb	16845086.00	1.06	16269544.00	103.5	70 - 120	
165 Ho	16324465.00	0.84	15819307.00	103.2	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\054_CCB.D\054_CCB.D#
Date Acquired: Jul 23 2012 04:54 pm
Operator: NBS
Sample Name: CCB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	--------	#######	
9 Be	0.00 ug/l	199.13	0.12	
11 B	4.03 ug/l	4.69	15.00	
23 Na	6.83 ug/l	40.71	77.10	
24 Mg	0.78 ug/l	25.44	7.50	
27 Al	1.32 ug/l	3.80	3.96	
39 K	7.31 ug/l	34.59	19.20	
44 Ca	-13.21 ug/l	3.83	90.00	
47 Ti	0.03 ug/l	27.34	0.78	
51 V	0.01 ug/l	74.03	0.21	
52 Cr	-0.06 ug/l	2.79	0.12	
55 Mn	-0.02 ug/l	32.55	0.18	
56 Fe	0.00 ug/l	259.61	40.80	
59 Co	-0.01 ug/l	28.03	0.09	
60 Ni	-0.04 ug/l	29.06	0.48	
63 Cu	-0.03 ug/l	7.88	0.39	
65 Cu	-0.03 ug/l	5.38	0.39	
66 Zn	0.07 ug/l	56.30	6.90	
75 As	0.00 ug/l	372.43	0.27	
78 Se	-0.01 ug/l	50.33	0.30	
78 Se	0.39 ug/l	11.97	0.30	Fail
88 Sr	0.02 ug/l	27.82	0.03	
88 Sr	0.01 ug/l	13.58	0.03	
95 Mo	0.03 ug/l	3.90	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	163.44	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.01 ug/l	33.83	0.06	
118 Sn	0.01 ug/l	39.76	#######	
118 Sn	0.02 ug/l	95.39	#######	
118 Sn	0.01 ug/l	39.52	0.30	
121 Sb	0.03 ug/l	16.05	0.03	Fail
137 Ba	0.01 ug/l	26.62	0.12	
205 Tl	0.02 ug/l	6.98	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.02 ug/l	5.07	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-55410.57	4.37	-41328.95	134.1	70 - 120	IS Fail
45 Sc	3202242.30	1.59	3008024.30	106.5	70 - 120	
45 Sc	466637.09	1.13	423303.94	110.2	70 - 120	
45 Sc	9634003.00	0.67	8607281.00	111.9	70 - 120	
72 Ge	827502.88	0.05	774468.63	106.8	70 - 120	
72 Ge	301976.69	0.47	282128.91	107.0	70 - 120	
72 Ge	2095323.50	0.14	1882554.90	111.3	70 - 120	
115 In	5732833.00	1.43	5556751.00	103.2	70 - 120	
115 In	3129113.00	1.25	3029632.80	103.3	70 - 120	
115 In	13193446.00	0.77	12097256.00	109.1	70 - 120	
159 Tb	17651998.00	0.73	16269544.00	108.5	70 - 120	
165 Ho	17105838.00	0.95	15819307.00	108.1	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\062_CCV.D\062_CCV.D#
Date Acquired: Jul 23 2012 05:47 pm
Operator: NBS
Sample Name: CCV 120723
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCV
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
7 (Li)	--------	ug/l	--------	50.00	90 - 110	
9 Be	50.92	ug/l	0.67	50.00	90 - 110	
11 B	54.04	ug/l	0.45	50.00	90 - 110	
23 Na	1269.00	ug/l	0.83	1250.00	90 - 110	
24 Mg	2563.00	ug/l	0.36	2500.00	90 - 110	
27 Al	981.20	ug/l	1.26	1000.00	90 - 110	
39 K	1002.00	ug/l	1.68	1000.00	90 - 110	
44 Ca	2461.00	ug/l	2.39	2500.00	90 - 110	
47 Ti	48.59	ug/l	4.35	50.00	90 - 110	
51 V	49.90	ug/l	1.30	50.00	90 - 110	
52 Cr	49.57	ug/l	1.38	50.00	90 - 110	
55 Mn	49.52	ug/l	0.96	50.00	90 - 110	
56 Fe	991.40	ug/l	0.41	1000.00	90 - 110	
59 Co	49.95	ug/l	1.16	50.00	90 - 110	
60 Ni	50.45	ug/l	1.58	50.00	90 - 110	
63 Cu	50.19	ug/l	1.56	50.00	90 - 110	
65 Cu	49.88	ug/l	0.81	50.00	90 - 110	
66 Zn	50.39	ug/l	0.82	50.00	90 - 110	
75 As	50.44	ug/l	1.03	50.00	90 - 110	
78 Se	49.94	ug/l	1.21	50.00	90 - 110	
78 Se	49.87	ug/l	1.74	50.00	90 - 110	
88 Sr	50.18	ug/l	0.42	50.00	90 - 110	
88 Sr	50.73	ug/l	0.76	50.00	90 - 110	
95 Mo	49.73	ug/l	0.32	50.00	90 - 110	
106 (Cd)	--------	ug/l	--------	50.00	90 - 110	
107 Ag	24.90	ug/l	0.67	25.00	90 - 110	
108 (Cd)	--------	ug/l	--------	50.00	90 - 110	
111 Cd	50.22	ug/l	0.62	50.00	90 - 110	
118 Sn	49.82	ug/l	0.46	---	##### - #####	
118 Sn	50.09	ug/l	1.43	---	##### - #####	
118 Sn	50.10	ug/l	0.89	50.00	90 - 110	
121 Sb	53.29	ug/l	0.30	50.00	90 - 110	
137 Ba	49.74	ug/l	0.89	50.00	90 - 110	
205 Tl	51.63	ug/l	0.28	50.00	90 - 110	
206 (Pb)	--------	ug/l	--------	50.00	90 - 110	
207 (Pb)	--------	ug/l	--------	50.00	90 - 110	
208 Pb	50.72	ug/l	0.46	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-40642.45	12.88	-41328.95	98.3	70 - 120	IS Fail
45 Sc	3216542.00	1.05	3008024.30	106.9	70 - 120	
45 Sc	444238.81	1.07	423303.94	104.9	70 - 120	
45 Sc	9740376.00	0.45	8607281.00	113.2	70 - 120	
72 Ge	833941.75	0.67	774468.63	107.7	70 - 120	
72 Ge	295284.78	0.72	282128.91	104.7	70 - 120	
72 Ge	2112553.50	0.79	1882554.90	112.2	70 - 120	
115 In	5888530.00	0.25	5556751.00	106.0	70 - 120	
115 In	3081768.50	0.46	3029632.80	101.7	70 - 120	
115 In	13309443.00	0.40	12097256.00	110.0	70 - 120	
159 Tb	17715054.00	0.62	16269544.00	108.9	70 - 120	
165 Ho	17254188.00	1.23	15819307.00	109.1	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

CCB QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\064_CCB.D\064_CCB.D#
Date Acquired: Jul 23 2012 06:00 pm
Operator: NBS
Sample Name: CCB 120723
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: CCB
Total Dil Factor: 1.00

QC Elements

Element	Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	--------	#######	
9 Be	0.00 ug/l	321.53	0.12	
11 B	2.12 ug/l	6.07	15.00	
23 Na	-7.66 ug/l	41.93	77.10	
24 Mg	-0.02 ug/l	983.32	7.50	
27 Al	1.36 ug/l	55.34	3.96	
39 K	-0.95 ug/l	354.85	19.20	
44 Ca	-13.11 ug/l	2.45	90.00	
47 Ti	0.02 ug/l	60.93	0.78	
51 V	0.01 ug/l	12.62	0.21	
52 Cr	-0.07 ug/l	11.31	0.12	
55 Mn	0.00 ug/l	362.83	0.18	
56 Fe	0.18 ug/l	15.08	40.80	
59 Co	-0.01 ug/l	12.02	0.09	
60 Ni	-0.04 ug/l	27.66	0.48	
63 Cu	-0.03 ug/l	13.27	0.39	
65 Cu	-0.04 ug/l	13.03	0.39	
66 Zn	0.09 ug/l	26.55	6.90	
75 As	0.01 ug/l	59.78	0.27	
78 Se	0.01 ug/l	48.08	0.30	
78 Se	0.26 ug/l	37.28	0.30	
88 Sr	0.01 ug/l	28.76	0.03	
88 Sr	0.01 ug/l	13.00	0.03	
95 Mo	0.03 ug/l	27.43	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	92.61	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.00 ug/l	62.99	0.06	
118 Sn	0.01 ug/l	62.50	#######	
118 Sn	0.03 ug/l	11.73	#######	
118 Sn	0.01 ug/l	57.13	0.30	
121 Sb	0.04 ug/l	1.58	0.03	Fail
137 Ba	0.01 ug/l	60.03	0.12	
205 Tl	0.02 ug/l	49.07	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.03 ug/l	4.20	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-48085.53	6.82	-41328.95	116.3	70 - 120	IS Fail
45 Sc	3293052.00	1.00	3008024.30	109.5	70 - 120	
45 Sc	458308.94	1.18	423303.94	108.3	70 - 120	
45 Sc	9818342.00	0.62	8607281.00	114.1	70 - 120	
72 Ge	837034.63	0.76	774468.63	108.1	70 - 120	
72 Ge	301523.75	0.56	282128.91	106.9	70 - 120	
72 Ge	2134747.00	0.51	1882554.90	113.4	70 - 120	
115 In	5989938.50	0.50	5556751.00	107.8	70 - 120	
115 In	3163820.30	0.53	3029632.80	104.4	70 - 120	
115 In	13474706.00	0.46	12097256.00	111.4	70 - 120	
159 Tb	17918080.00	1.14	16269544.00	110.1	70 - 120	
165 Ho	17493212.00	1.50	15819307.00	110.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

METALS
Raw Data

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6020	LEAD (PB) (DISSOL	0.22 U	0.5	0.22	0.11	ug/L	07/23/12	07/23/12	#602D-120723A-AY65167

Printed: 07/24/12 9:41:24 AM
Metals SC-Blank-REG MDLs

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\019SMPL.D\019SMPL.D#
Date Acquired: Jul 23 2012 12:58 pm
Operator: NBS
Sample Name: 120723A-3015-BLK
Misc Info: 120723A-3015
Vial Number: 3101
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	0.00	ug/l	0.00	101.03	1000	
11 B	-0.54	ug/l	-0.60	23.92	1000	
23 Na	-9.48	ug/l	-10.53	24.91	25000	
24 Mg	0.68	ug/l	0.75	15.39	50000	
27 Al	0.72	ug/l	0.80	27.58	20000	
39 K	3.46	ug/l	3.84	104.28	20000	
44 Ca	-9.56	ug/l	-10.62	23.29	50000	
47 Ti	0.11	ug/l	0.13	61.04	1000	
51 V	0.00	ug/l	0.00	187.34	1000	
52 Cr	0.09	ug/l	0.10	2.59	1000	
55 Mn	0.03	ug/l	0.04	24.16	1000	
56 Fe	2.25	ug/l	2.50	6.31	20000	
59 Co	0.25	ug/l	0.28	8.41	1000	
60 Ni	-0.03	ug/l	-0.03	21.25	1000	
63 Cu	0.06	ug/l	0.06	14.62	1000	
65 Cu	0.05	ug/l	0.05	41.40	1000	
66 Zn	0.25	ug/l	0.28	16.07	1000	
75 As	0.01	ug/l	0.01	13.09	1000	
78 Se	0.01	ug/l	0.01	54.14	1000	
78 Se	0.64	ug/l	0.71	8.48	1000	
88 Sr	0.00	ug/l	0.00	164.49	1000	
88 Sr	0.00	ug/l	0.00	197.18	1000	
95 Mo	0.23	ug/l	0.26	3.93	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	0.82	ug/l	0.91	7.30	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	0.04	ug/l	0.04	6.12	1000	
118 Sn	0.13	ug/l	0.14	7.71	#######	
118 Sn	0.13	ug/l	0.14	3.28	#######	
118 Sn	0.11	ug/l	0.12	9.34	1000	
121 Sb	0.13	ug/l	0.14	5.45	1000	
137 Ba	0.00	ug/l	0.00	121.47	1000	
205 Tl	0.08	ug/l	0.09	3.11	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	-0.02	ug/l	-0.03	3.12	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-41515.17	17.03	-41328.95	100.5	70 - 120	IS Fai
45 Sc	3134014.50	1.22	3008024.30	104.2	70 - 120	
45 Sc	431622.16	0.76	423303.94	102.0	70 - 120	
45 Sc	9041910.00	1.00	8607281.00	105.0	70 - 120	
72 Ge	790204.25	0.87	774468.63	102.0	70 - 120	
72 Ge	281787.47	2.04	282128.91	99.9	70 - 120	
72 Ge	1936014.10	0.17	1882554.90	102.8	70 - 120	
115 In	5556259.00	0.49	5556751.00	100.0	70 - 120	
115 In	2981638.30	0.15	3029632.80	98.4	70 - 120	
115 In	12374886.00	0.94	12097256.00	102.3	70 - 120	
159 Tb	16686016.00	0.57	16269544.00	102.6	70 - 120	
165 Ho	16112874.00	0.15	15819307.00	101.9	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

Laboratory Control Spike Recovery
METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
6020	LEAD (PB) (DISSOLVED)	50.0	45.5	91.0	80-120	07/23/12	07/23/12	#602D-120723A-AY65167

Comments: _____

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\021SMPL.D\021SMPL.D#
Date Acquired: Jul 23 2012 01:11 pm
Operator: NBS
Sample Name: 120723A-3015-LCS
Misc Info: 120723A-3015
Vial Number: 3103
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	#VALUE!	--------	0	
9 Be	7.49 ug/l	8.32	1.00	1000	
11 B	37.46 ug/l	41.62	1.36	1000	
23 Na	3667.00 ug/l	4074.04	1.15	25000	
24 Mg	3760.00 ug/l	4177.36	1.30	50000	
27 Al	307.00 ug/l	341.08	1.70	20000	
39 K	767.90 ug/l	853.14	1.74	20000	
44 Ca	3952.00 ug/l	4390.67	2.20	50000	
47 Ti	47.17 ug/l	52.41	2.99	1000	
51 V	39.18 ug/l	43.53	1.78	1000	
52 Cr	38.95 ug/l	43.27	1.71	1000	
55 Mn	39.16 ug/l	43.51	1.76	1000	
56 Fe	172.60 ug/l	191.76	1.33	20000	
59 Co	38.06 ug/l	42.28	1.55	1000	
60 Ni	38.05 ug/l	42.27	1.84	1000	
63 Cu	37.17 ug/l	41.30	1.89	1000	
65 Cu	37.09 ug/l	41.21	2.15	1000	
66 Zn	75.57 ug/l	83.96	0.44	1000	
75 As	36.26 ug/l	40.28	0.94	1000	
78 Se	33.81 ug/l	37.56	0.78	1000	
78 Se	34.37 ug/l	38.19	1.94	1000	
88 Sr	39.64 ug/l	44.04	0.91	1000	
88 Sr	39.14 ug/l	43.48	1.36	1000	
95 Mo	46.06 ug/l	51.17	1.69	1000	
106 (Cd)	-------- ug/l	#VALUE!	--------	#######	
107 Ag	17.93 ug/l	19.92	1.04	500	
108 (Cd)	-------- ug/l	#VALUE!	--------	#######	
111 Cd	7.41 ug/l	8.23	1.74	1000	
118 Sn	47.18 ug/l	52.42	0.07	#######	
118 Sn	47.95 ug/l	53.27	1.12	#######	
118 Sn	47.76 ug/l	53.06	1.40	1000	
121 Sb	48.00 ug/l	53.33	1.91	1000	
137 Ba	38.21 ug/l	42.45	1.63	1000	
205 Tl	39.51 ug/l	43.90	0.49	1000	
206 (Pb)	-------- ug/l	#VALUE!	--------	#######	
207 (Pb)	-------- ug/l	#VALUE!	--------	#######	
208 Pb	40.96 ug/l	45.51	1.51	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-42417.97	6.61	-41328.95	102.6	70 - 120	IS Fai
45 Sc	3132146.50	0.85	3008024.30	104.1	70 - 120	
45 Sc	438590.66	1.66	423303.94	103.6	70 - 120	
45 Sc	8973542.00	0.43	8607281.00	104.3	70 - 120	
72 Ge	781391.50	0.41	774468.63	100.9	70 - 120	
72 Ge	283396.16	0.60	282128.91	100.4	70 - 120	
72 Ge	1916729.60	0.53	1882554.90	101.8	70 - 120	
115 In	5655188.50	0.79	5556751.00	101.8	70 - 120	
115 In	2993471.00	0.53	3029632.80	98.8	70 - 120	
115 In	12415622.00	1.62	12097256.00	102.6	70 - 120	
159 Tb	16697993.00	0.82	16269544.00	102.6	70 - 120	
165 Ho	16175574.00	0.28	15819307.00	102.3	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

Matrix Spike Recoveries

METALS

APPL ID: **120723W-65167 MS - 169307**

Sample ID: AY65167

Client ID: ES084

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
6020	LEAD (PB) (DISSOLVE	50.0	ND	50.4	49.8	101	99.6	1.2	20	80-120	07/23/12	07/23/12	07/23/12	07/23/12	169307	AY65167

Comments: _____

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\049SMPL.D\049SMPL.D#
Date Acquired: Jul 23 2012 04:20 pm
Operator: NBS
Sample Name: AY65167W16 MS
Misc Info: 120723A-3015
Vial Number: 3306
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	8.86	ug/l	9.84	0.70	1000	
11 B	79.70	ug/l	88.55	0.61	1000	
23 Na	283000.00	ug/l	314413.00	1.72	25000	>Cal
24 Mg	168700.00	ug/l	187425.70	1.84	50000	>Cal
27 Al	418.20	ug/l	464.62	1.97	20000	
39 K	7258.00	ug/l	8063.64	0.98	20000	
44 Ca	81770.00	ug/l	90846.47	0.71	50000	>Cal
47 Ti	48.16	ug/l	53.51	0.63	1000	
51 V	47.55	ug/l	52.83	0.53	1000	
52 Cr	55.02	ug/l	61.13	0.75	1000	
55 Mn	44.80	ug/l	49.77	0.80	1000	
56 Fe	200.10	ug/l	222.31	0.54	20000	
59 Co	43.55	ug/l	48.38	0.74	1000	
60 Ni	48.43	ug/l	53.81	1.26	1000	
63 Cu	40.31	ug/l	44.78	0.29	1000	
65 Cu	39.98	ug/l	44.42	1.07	1000	
66 Zn	96.59	ug/l	107.31	0.90	1000	
75 As	47.37	ug/l	52.63	0.88	1000	
78 Se	45.41	ug/l	50.45	0.62	1000	
78 Se	47.91	ug/l	53.23	1.95	1000	
88 Sr	1617.00	ug/l	1796.49	0.61	1000	>Cal
88 Sr	1730.00	ug/l	1922.03	2.08	1000	>Cal
95 Mo	50.17	ug/l	55.74	1.67	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	17.31	ug/l	19.23	1.57	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	8.87	ug/l	9.85	1.03	1000	
118 Sn	48.82	ug/l	54.24	0.40	#######	
118 Sn	48.75	ug/l	54.16	0.19	#######	
118 Sn	48.89	ug/l	54.32	0.77	1000	
121 Sb	50.04	ug/l	55.59	1.23	1000	
137 Ba	130.00	ug/l	144.43	2.25	1000	
205 Tl	43.53	ug/l	48.36	2.01	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	45.37	ug/l	50.41	0.94	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-61358.96	3.34	-41328.95	148.5	70 - 120	IS Fai
45 Sc	3206676.00	1.26	3008024.30	106.6	70 - 120	
45 Sc	460034.59	0.85	423303.94	108.7	70 - 120	
45 Sc	9721317.00	0.41	8607281.00	112.9	70 - 120	
72 Ge	771567.56	1.16	774468.63	99.6	70 - 120	
72 Ge	282708.31	1.19	282128.91	100.2	70 - 120	
72 Ge	2014232.30	0.52	1882554.90	107.0	70 - 120	
115 In	5328178.00	0.37	5556751.00	95.9	70 - 120	
115 In	2843909.50	0.99	3029632.80	93.9	70 - 120	
115 In	12323368.00	1.67	12097256.00	101.9	70 - 120	
159 Tb	16626624.00	1.19	16269544.00	102.2	70 - 120	
165 Ho	16164570.00	0.68	15819307.00	102.2	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

5 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G23k00.B\050SMPL.D\050SMPL.D#
Date Acquired: Jul 23 2012 04:27 pm
Operator: NBS
Sample Name: AY65167W16 MSD
Misc Info: 120723A-3015
Vial Number: 3307
Current Method: C:\ICPCHEM\1\METHODS\62A0723A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0723A.C
Last Cal Update: Jul 23 2012 11:42 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.	Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	-------- ug/l	#VALUE!	--------	0	
9 Be	8.70 ug/l	9.67	1.65	1000	
11 B	80.59 ug/l	89.54	0.34	1000	
23 Na	274100.00 ug/l	304525.10	0.79	25000	>Cal
24 Mg	164700.00 ug/l	182981.70	1.62	50000	>Cal
27 Al	567.00 ug/l	629.94	0.68	20000	
39 K	7083.00 ug/l	7869.21	1.05	20000	
44 Ca	79410.00 ug/l	88224.51	0.98	50000	>Cal
47 Ti	49.91 ug/l	55.45	1.19	1000	
51 V	46.44 ug/l	51.59	0.88	1000	
52 Cr	54.02 ug/l	60.02	0.59	1000	
55 Mn	43.83 ug/l	48.70	0.62	1000	
56 Fe	228.50 ug/l	253.86	0.32	20000	
59 Co	42.29 ug/l	46.98	0.59	1000	
60 Ni	47.42 ug/l	52.68	1.37	1000	
63 Cu	39.56 ug/l	43.95	0.18	1000	
65 Cu	39.00 ug/l	43.33	0.83	1000	
66 Zn	95.84 ug/l	106.48	1.28	1000	
75 As	47.26 ug/l	52.51	0.82	1000	
78 Se	44.98 ug/l	49.97	0.22	1000	
78 Se	47.91 ug/l	53.23	2.40	1000	
88 Sr	1608.00 ug/l	1786.49	0.74	1000	>Cal
88 Sr	1728.00 ug/l	1919.81	1.21	1000	>Cal
95 Mo	49.14 ug/l	54.59	0.50	1000	
106 (Cd)	-------- ug/l	#VALUE!	--------	#######	
107 Ag	17.05 ug/l	18.94	0.78	500	
108 (Cd)	-------- ug/l	#VALUE!	--------	#######	
111 Cd	8.69 ug/l	9.65	0.75	1000	
118 Sn	47.39 ug/l	52.65	1.17	#######	
118 Sn	47.05 ug/l	52.27	0.73	#######	
118 Sn	47.97 ug/l	53.29	0.48	1000	
121 Sb	48.92 ug/l	54.35	0.91	1000	
137 Ba	130.60 ug/l	145.10	0.66	1000	
205 Tl	43.44 ug/l	48.26	1.47	1000	
206 (Pb)	-------- ug/l	#VALUE!	--------	#######	
207 (Pb)	-------- ug/l	#VALUE!	--------	#######	
208 Pb	44.85 ug/l	49.83	0.81	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-59047.83	3.14	-41328.95	142.9	70 - 120	IS Fai
45 Sc	3231522.30	0.23	3008024.30	107.4	70 - 120	
45 Sc	471627.59	0.53	423303.94	111.4	70 - 120	
45 Sc	9682802.00	0.81	8607281.00	112.5	70 - 120	
72 Ge	783272.31	0.23	774468.63	101.1	70 - 120	
72 Ge	285220.81	1.48	282128.91	101.1	70 - 120	
72 Ge	2002381.10	0.81	1882554.90	106.4	70 - 120	
115 In	5388815.00	0.85	5556751.00	97.0	70 - 120	
115 In	2865976.00	0.98	3029632.80	94.6	70 - 120	
115 In	12228663.00	1.30	12097256.00	101.1	70 - 120	
159 Tb	16562327.00	0.73	16269544.00	101.8	70 - 120	
165 Ho	16049775.00	1.22	15819307.00	101.5	70 - 120	

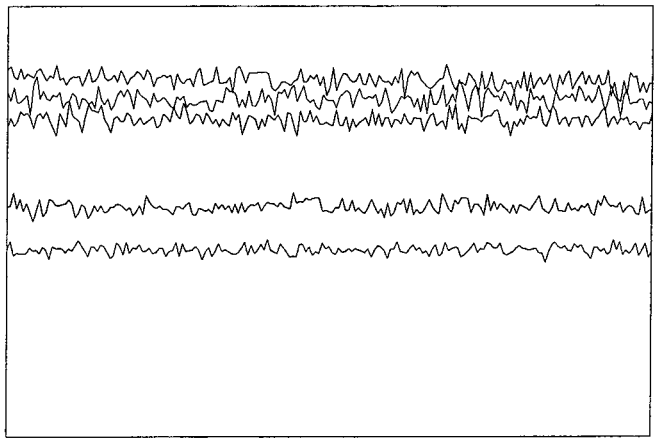
ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

5 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

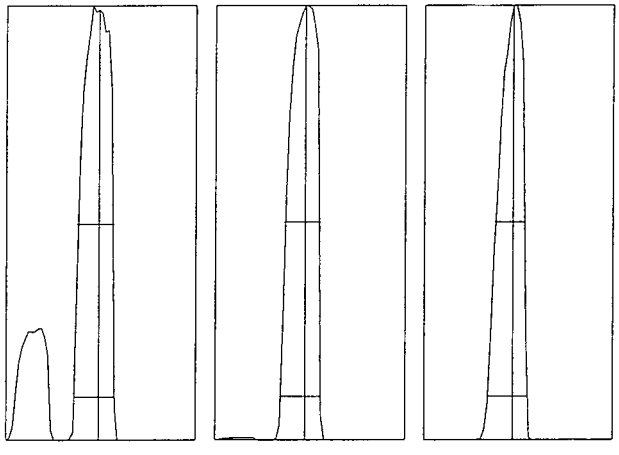
Tune Report

Tune File : NG_HMI.u
Comment : 120723



Integration Time:	0.1000 sec	
Sampling Period:	0.7200 sec	
n:	200	
Oxide:	156/140	0.740%
Doubly Charged:	70/140	0.995%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	16367.0	16532.4	2.08	2.20
89	50,000	37552.0	36668.9	2.15	2.80
205	50,000	26129.0	26508.7	2.48	7.40
156/140	2	0.770%	0.719%	7.34	
70/140	2	0.962%	0.970%	5.65	
140	50,000	38464.0	39095.6	2.26	4.80
59	50,000	21370.0	21531.4	2.38	2.70



m/z:	7	89	205
Height:	16,163	37,021	26,702
Axis:	7.00	88.95	204.95
W-50%:	0.60	0.60	0.50
W-10%:	0.6500	0.6500	0.6500

Integration Time:	0.1000 sec
Acquisition Time:	22.7600 sec

Y axis : Linear

Generated : Jul 23, 2012 10:45:06
Printed : Jul 23, 2012 10:45:08

Tune Report

Tune File : NG_HMI.u
Comment : 120723

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	128
RF Matching	:	1.7 V	Extract 2	:	-140 V	AMU Offset	:	129
Smpl Depth	:	8 mm	Omega Bias-ce	:	-24 V	Axis Gain	:	0.9999
Torch-H	:	0.2 mm	Omega Lens-ce	:	-0.4 V	Axis Offset	:	-0.05
Torch-V	:	-0.2 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.5 L/min	QP Focus	:	5 V			
Makeup Gas	:	0.5 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1720 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1350 V
S/C Temp	:	2 degC	OctP Bias	:	-6 V			

===Reaction Cell===								
Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

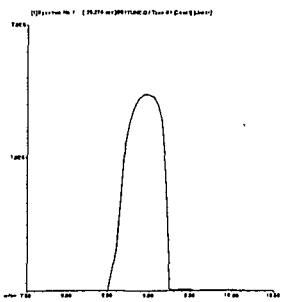
Generated : Jul 23, 2012 10:45:06
Printed : Jul 23, 2012 10:45:10

200.8 QC Tune Report

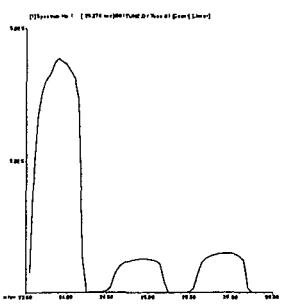
Data File: C:\ICPCHEM\1\DATA\12G23k00.B\001TUNE.D
Date Acquired: Jul 23 2012 10:53 am
Acq. Method: TN200_8.M
Operator: NBS
Sample Name: 100ppb Tune sol
Misc Info:
Vial Number: 1303
Current Method: C:\ICPCHEM\1\METHODS\TN200_8.M

RSD (%)

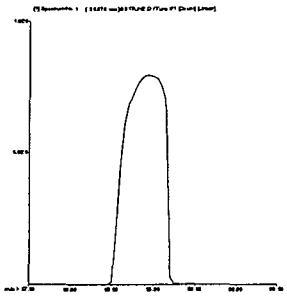
Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
9 Be	789604	786311	783280	790871	795505	792052	**0.90**	5.00	
24 Mg	2414013	2388869	2415273	2402944	2433304	2429676	**1.48**	5.00	
59 Co	4416874	4413714	4443242	4412276	4404885	4410252	**0.67**	5.00	
115 In	22042886	22072398	22207138	21950680	22067872	21916340	**0.77**	5.00	
208 Pb	3431875	3417255	3453186	3434662	3446885	3407388	**0.70**	5.00	



9 Be
Mass Calib.
Actual: 8.95
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



24 Mg
Mass Calib.
Actual: 23.95
Required: 23.90 - 24.10
Flag:
Peak Width
Actual: 0.60
Required: 0.80
Flag:



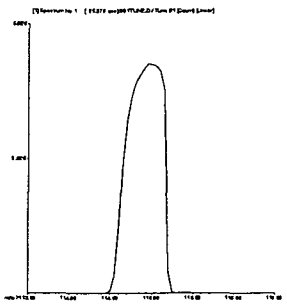
59 Co

Mass Calib.

Actual:	58.95		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.60		
Required:	0.90		
Flag:			



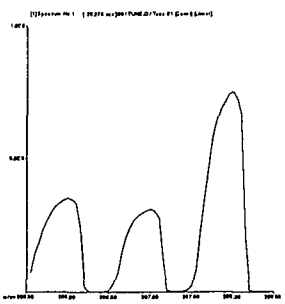
115 In

Mass Calib.

Actual:	115.00		
Required:	114.90	-	115.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



208 Pb

Mass Calib.

Actual:	207.95		
Required:	207.90	-	208.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.80		
Flag:			

Tune Result: Pass

054

Metals Standards Log Book # 35 Page # 055

SAM 7/16/12
6020 / 6020A
(A)

ICP-MS STANDARDS 6020/6020A/3015/3051A
Today's Date: 07/16/12
Expires: 07/23/12
Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL Di Water
Lot #L08023
20mL HCL / 2000mL Di Water
Lot #51305
Expires: 07/23/12

Internal Standard Mix: Prep 07/12/2012

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 07/17/12

Standard 3 07/23/12

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 07/17/12

Intermediate-Sb 07/23/12
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL
ICV-Sb 07/23/12
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL

SAM 7/16/12

Standard 2 07/23/12

Amount	STD		
500 uL	Standard 4		07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

Standard 1 07/23/12

Amount	STD	
50 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

ICP-MS ICV 07/23/12

Amount	STD		
50 uL	QCS ICV A	CPI	11C184-30611
50 uL	QCS ICV B	CPI	11C184-30612

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/16/12

ICSA Prep: 07/23/12

1 mL	ICSA	CPI	12E134

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/16/12

ICSAB Prep: 07/23/12

1mL	ICSA	CPI	12E134
0.025mL	INT	O2SI	1032370-30265

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/16/12

ICP-LDR 07/23/12

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 07/16/12

RBS 7/16/12

Hg WORKING STANDARD

RBS 7/16/12

1ml X 10ug/ml Hg STOCK STD. (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
1ml X 10ug/ml Hg STOCK ICV (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
Final concentration is 50 ug/L. Expires.....7/16/12.....

02030

SAM 7/17/12
6020 / 6020A
(A)

ICP-MS STANDARDS 6020/6020A/3015/3051A
Today's Date: 07/17/12
Expires: 07/24/12
Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL DI Water
Lot #L08023
20mL HCL / 2000mL DI Water
Lot #51305
Expires: 07/24/12

Internal Standard Mix: Prep 07/12/2012 NB> 07/18/12

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 07/17/12

Standard 3 07/24/12

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 07/17/12

Intermediate-Sb 07/24/12
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL
ICV-Sb 07/24/12
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL

SAM 7/17/12

Standard 2 07/24/12

Amount	STD		
500 uL	Standard 4		07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

Standard 1 07/24/12

Amount	STD	
50 uL	Standard 4	07/17/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

ICP-MS ICV 07/24/12

Amount	STD		
50 uL	QCS ICV A	CPI	11C184-30611
50 uL	QCS ICV B	CPI	11C184-30612

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/17/12

ICSA Prep: 07/24/12

1 mL	ICSA	CPI	12E134

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/17/12

ICSAB Prep: 07/24/12

1mL	ICSA	CPI	12E134
0.025mL	INT	O2SI	1032370-30265

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/17/12

ICP-LDR 07/24/12

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 07/17/12

SAM 7/17/12

Internal Standard Concentration

Amt	STD	Element	Vendor	Lot#	Final Conc. in Std	Expires
500uL	1000 ug/mL	Li	CPI	10L079-27839	5000 ug/L	06/10/12
500uL	1000 ug/mL	In	CPI	10J155-28574	5000 ug/L	09/25/12
500uL	1000 ug/mL	Ho	CPI	10A107-28576	5000 ug/L	09/25/12
500uL	1000 ug/mL	Tb	CPI	11B054-28575	5000 ug/L	09/25/12
500uL	1000 ug/mL	Sc	o2si	1024073-28527	5000 ug/L	08/18/12
500uL	1000 ug/mL	Ge	Environmental Express	1116011-29381	5000 ug/L	02/08/13

Prep:	07/17/12	NBS	Prep in -	1%HNO3/1.0%HCL:	Lot #L08023/51305	in 100mL
Expires:	08/16/12					

Metals Standards Log Book # 35 Page # 059

058

NBS 07/23/12

ICP-MS STANDARDS 6020/6020A/3015/3051A
Today's Date: 07/23/12
Expires: 07/30/12
Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL DI Water
Lot #L08023
20mL HCL / 2000mL DI Water
Lot #51305
Expires: 07/30/12

Internal Standard Mix: Prep 07/17/2012

Standard 4

Amount	STD	Manufacturer	Lot #
50 uL	CCV-A	ABS 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 07/23/12

Standard 3 07/30/12

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 07/23/12

Intermediate-Sb 07/30/12
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL
ICV-Sb 07/30/12
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL

Standard 2 07/30/12

Amount	STD	
500 uL	Standard 4	07/23/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/23/12

Standard 1 07/30/12

Amount	STD	
50 uL	Standard 4	07/23/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/23/12

ICP-MS ICV 07/30/12

Amount	STD		
50 uL	QCS ICV A	CPI	11C184-30811
50 uL	QCS ICV B	CPI	11C184-30812

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/23/12

ICSA Prep: 07/30/12

1 mL	ICSA	CPI	12E134

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/23/12

ICSAB Prep: 07/30/12

1mL	ICSA	CPI	12E134
0.025mL	INT	O2SI	1032370-30265

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/23/12

ICP-LDR 07/30/12

Amount	STD		
50 uL	CCV-A	ABS 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 07/23/12

1%HNO3 / 5%HCl BLK

AMT.	REAGENT	MANUFACTURER	LOT	OPEN DATE
100 mL	HCL	EMD	51258	07/13/12
20 mL	HNO3	JT BAKER	L10023	07/12/12

Prepared in 2000 ml DI Water

STD 1 / LDL 6010B/6010C

AMT.	STD	MANUFACTURER	LOT	EXP DATE
0.5 mL	6010 LDL	ABSOLUTE	091409-25205	09/14/12

Prepared in 50 ml 1%HNO3/5%HCl

STD 3 / HDL 6010B/6010C

1ML	CCV-A	ABSOLUTE	012512-30306	01/25/15
1ML	CCV-B	ABSOLUTE	021312-30339	02/13/15
1ML	CCV-C	ABSOLUTE	012512-30307	01/25/15

Prepared in 100 ml 1%HNO3 / 5%HCl

STD 2 / CCV1 6010B/6010C/6010C

AMT.	STD	PREP DATE	EXP DATE
25mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

CCV2 6010B/6010C

AMT.	STD	PREP DATE	EXP DATE
15mL	STD 3	Today	1 week
25mL	1%HNO3/5%HCl	Today	1 week

6010B/6010C ICSA

AMT.	STD	MANUFACTURER	LOT	EXP DATE
1mL	Al	CPI	11J015-30092	05/28/13
1mL	Ca	CPI	11J031-29989	05/14/13
1mL	Mg	CPI	11K178-30093	05/28/13
1mL	Fe	O2SI	1030787-30616	05/17/13

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICSAB

1mL	Al	CPI	11J015-30092	05/28/13
1mL	Ca	CPI	11J031-29989	05/14/13
1mL	Mg	CPI	11K178-30093	05/28/13
1mL	Fe	O2SI	1030787-30616	05/17/13
0.5mL	INT SPECIAL MIX	O2SI	1032370-30265	02/01/13

Prepared in 50 ml 1%HNO3/5%HCl

6010B/6010C ICV

0.5ML	QCS ICV A	CPI	12C184-30611	09/20/13
0.5ML	QCS ICV B	CPI	12C184-30612	09/20/13

Prepared in 50ml 1%HNO3/5%HCl

YITTRIUM INTERNAL STANDARD

2.0 mL	Yittrium	O2SI	1035051-30566	09/28/13

Prepared in 2000 ml 1%HNO3/5%HCl

BC 7-23-12

2%HNO3 / 2%HCl BLK

AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE
40 mL	HCL	BDH	51258	07/13/12
40 mL	HNO3	JT BAKER	L10023	07/12/12

Prepared in 2000 ml DI Water

STD 1 / LDL 200.7

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.250 mL	200.7 LDL	O2SI	1028857-29667	11/01/12

Prepared in 50 ml 2%HNO3/2%HCl

STD 3 / HDL 200.7

0.5 mL	CCV-A	ABSOLUTE	012512-30306	01/25/15
0.5 mL	CCV-B	ABSOLUTE	021312-30339	02/13/15
0.5 mL	CCV-C	ABSOLUTE	012512-30307	01/25/15

Prepared in 100 ml 2%HNO3/2%HCl

STD 2 / CCV1 200.7

AMOUNT	STD	PREP DATE	EXP DATE
25mL	STD 3	TODAY	1 WEEK
25mL	2%HNO3/2%HCl	TODAY	1 WEEK

CCV2 200.7

15mL	STD 3	TODAY	1 WEEK
25mL	2%HNO3/2%HCl	TODAY	1 WEEK

200.7 ICV

AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
0.25ML	QCS ICV A	CPI	12C184-30611	09/20/13
0.25ML	QCS ICV B	CPI	12C184-30612	09/20/13

Prepared in 50ml 2%HNO3/2%HCl

200.7 ICSA

0.5mL	Al	CPI	11J015-30092	05/28/13
0.5mL	Ca	CPI	11J031-29989	05/14/13
0.5mL	Mg	CPI	11K178-30093	05/28/13
0.5mL	Fe	O2SI	1030787-30616	05/17/13

Prepared in 50 ml 2%HNO3/2%HCl

200.7 ICSAB

0.5mL	Al	CPI	11J015-30092	05/28/13
0.5mL	Ca	CPI	11J031-29989	05/14/13
0.5mL	Mg	CPI	11K178-30093	05/28/13
0.5mL	Fe	O2SI	1030787-30616	05/17/13
0.25mL	INT SPECIAL MIX	O2SI	1032370-30265	2/1/13

Prepared in 50 ml 2%HNO3/2%HCl

Metals Digestion Worksheet

Method Name 3015 Digestion **Prep Method** M3015 **Set** 120723A **Units** mL

Spikes	
Spiked ID 1	LCSW LOT# 1036660-30911
Spiked ID 2	LCSW LOT# 1036821-30981
Spiked ID 3	
Spiked ID 4	
Spiked By	NM Date: 07/23/12 9:00:00 AM
Witnessed By	LO Date: 07/23/12 9:00:00 AM

Starting Temp:	20 c
Ending Temp:	170 c
Temperature Type:	Microwave
Sufficient Vol for Matrix QC:	Yes
End Date/Time	07/23/12 10:00

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	120723A Blk				45mL	50mL	07/23/12 9:00	equip: Venus
2	120723A LCS		90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
3	AY64692	AY64692W06			45mL	50mL	07/23/12 9:00	equip: Venus
4	AY65112	AY65112W08			45mL	50mL	07/23/12 9:00	equip: Venus
5	AY65113	AY65113W08			45mL	50mL	07/23/12 9:00	equip: Venus
6	AY65144	AY65144W23			45mL	50mL	07/23/12 9:00	equip: Venus
7	AY65144 MS	AY65144W24	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
8	AY65144 MSD	AY65144W24	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
9	AY65145	AY65145W08			45mL	50mL	07/23/12 9:00	equip: Venus
10	AY65146	AY65146W08			45mL	50mL	07/23/12 9:00	equip: Venus
11	AY65147	AY65147W08			45mL	50mL	07/23/12 9:00	equip: Venus
12	AY65148	AY65148W08			45mL	50mL	07/23/12 9:00	equip: Venus
13	AY65149	AY65149W08			45mL	50mL	07/23/12 9:00	equip: Venus
14	AY65150	AY65150W08			45mL	50mL	07/23/12 9:00	equip: Venus
15	AY65151	AY65151W08			45mL	50mL	07/23/12 9:00	equip: Venus
16	AY65166	AY65166W08			45mL	50mL	07/23/12 9:00	equip: Venus
17	AY65167	AY65167W15			45mL	50mL	07/23/12 9:00	equip: Venus
18	AY65167 MS	AY65167W16	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus
19	AY65167 MSD	AY65167W16	90uL	1+2	45mL	50mL	07/23/12 9:00	equip: Venus

Solvent and Lot#
HNO3 J.T.B L10023 0229

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	JA
Date	7-23-12
Time	10:00
Moved to	metals

Technician's Initials	
Scanned By	lo
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	07/23/12 8:25:49 AM

Reviewed By: JA **Date:** 7-23-12

6020/200.8 Injection Log

Directory: K:\ICP-MS Optimus\raw data output csv\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	23 Jul 2012	11:12	Calibration Blank		120723Arev	1.
2	23 Jul 2012	11:18	120723 Standard 1		120723Arev	1.
3	23 Jul 2012	11:25	120723 Standard 2		120723Arev	1.
4	23 Jul 2012	11:32	120723 Standard 3		120723Arev	1.
5	23 Jul 2012	11:39	120723 Standard 4		120723Arev	1.
6	23 Jul 2012	11:45	ICV 120723		120723Arev	1.
8	23 Jul 2012	11:58	ICB 120723		120723Arev	1.
9	23 Jul 2012	12:05	CCV 120723		120723Arev	1.
10	23 Jul 2012	12:12	CCB 120723		120723Arev	1.
11	23 Jul 2012	12:18	ICSA 120723		120723Arev	1.
12	23 Jul 2012	12:25	ICSAB 120723		120723Arev	1.
13	23 Jul 2012	12:58	120723A-3015-BLK		120723Arev	1.
15	23 Jul 2012	13:11	120723A-3015-LCS		120723Arev	1.
18	23 Jul 2012	13:32	CCV 120723		120723Arev	1.
19	23 Jul 2012	13:45	CCB 120723		120723Arev	1.
30	23 Jul 2012	15:07	CCV 120723		120723Arev	1.
31	23 Jul 2012	15:20	CCB 120723		120723Arev	1.
38	23 Jul 2012	16:07	AY65166W08		120723Arev	1.
39	23 Jul 2012	16:14	AY65167W15		120723Arev	1.
40	23 Jul 2012	16:20	AY65167W16 MS		120723Arev	1.
41	23 Jul 2012	16:27	AY65167W16 MSD		120723Arev	1.
43	23 Jul 2012	16:40	CCV 120723		120723Arev	1.
44	23 Jul 2012	16:54	CCB 120723		120723Arev	1.
45	23 Jul 2012	17:01	AY65167W15-A		120723Arev	1.
47	23 Jul 2012	17:14	AY65167W15-1/5		120723Arev	5.
51	23 Jul 2012	17:47	CCV 120723		120723Arev	1.
52	23 Jul 2012	18:00	CCB 120723		120723Arev	1.

908 North Temperance Ave. ∇ Clovis, CA 93611 ∇ Phone 559-275-2175 ∇ Fax 559-275-4422

Certification Number: CA1312
NELAP Certification number: 05233CA
DoD-ELAP Certificate number: ADE-1410

Data Validatable Report

August 13, 2012

Environet, Inc.
650 Iwilei Road, #204
Honolulu, Hawaii 96817

Attn: Max Solmssen

Title: Report of Data: Case 68284

Project: LTM Red Hill/1022-024

Contract #: Prime contract # for DoD: N62742-08-D-1930, CTO HC21

Dear Mr. Solmssen:

Two water samples were received July 24, 2012, in good condition. Written results for the requested analyses are provided on this August 13, 2012.

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

If you have any questions or require further information, please contact your APPL Project Manager, Cynthia Clark, at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC and DoD QSM. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/cm
Enclosure
cc: File

Number of pages in this report: ___

Data Validation Package
for
LTM Red Hill / 1022-024
SDG 68284

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Calibration Data _____

Raw Data _____

Method 8015B TPH-Diesel _____

QC Summary _____

Sample Data _____

Calibration Data _____

Raw Data _____

Method 8260B _____

QC Summary _____

Sample Data _____

Calibration Data _____

Raw Data _____

Method 6020 _____

QC Summary _____

Sample Data _____

Calibration Data _____

Raw Data _____

SAMPLE RECEIPT INFORMATION

Sample receipt information

ARF: 68284

Project: Red Hill/1022-024

Sample Receipt Information:

The samples were received on July 24, 2012, at 4.0°C. The samples were assigned Analytical Request Form (ARF) number 68284. The sample numbers and requested analyses were compared to the chain of custody and email communications. A collection time discrepancy was noted and the client was notified; the collection time for sample ES088 was changed to 13:20, as instructed. No other exception was encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received
ES087-TRIP BLANK	AY65219	WATER	07/20/12	07/24/12
ES088	AY65220	WATER	07/20/12	07/24/12

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 sample was extracted according to EPA method 3510C. All holding times were met.

Sample Analysis Information:

The sample was 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 sample was extracted according to EPA method 3510C. The samples were extracted within holding time.

Sample Analysis Information:

The sample was 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. All surrogate recoveries were within the control limits.

Summary:

No problem was encountered

EPA Method 8260B
Volatile Organic Analysis

Sample Preparation:

The water samples were purged according to EPA method 5030B. All holding times were met.

Sample Analysis Information:

The samples were analyzed according to the method using a Hewlett Packard Gas Chromatograph with a mass spectrometer detector. The samples were received in unpreserved vials. The vials were analyzed within seven days of collection; all holding times were met. Manual integrations were performed in accordance with APPL's SOP. All injections for gasoline were manually integrated due to the original integration not following the baseline. A summary of the manual integrations on the samples, blank and LCS is included in the QC Summary section of the report. Chromatograms from before and after the manual integrations are enclosed.

Quality Control/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.

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. All 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:

No other problem was encountered. The data generated are acceptable.

EPA Method 6020

Dissolved Lead

Digestion Information:

The water sample was digested according to EPA method 3015. All holding times were met.

Analysis Information:

Samples:

The sample was 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 ES088 was selected by the laboratory for QC analysis. All acceptance criteria were met in the MS/MSD and PDS. The DT was not applicable.

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 68284

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** # **36497**
RAD Screen (Y/N): **Y** pH (Y/N): **Y**
Turn Around Type: **2 WEEKS**

Received by: **TBV**
Date Received: **07/24/12** Time: **11:10**
Delivered by: **FED EX**
Shuttle Custody Seals (Y/N): **N** Time Zone: **-10**
Chest Temp(s): **4.0°C**
Color: **VOA,M-PRPNK,O-ORGRN**
Samples Chilled until Placed in Refrig/Freezer: **Y**
Project Manager: **Cynthia Clark**
QC Report Type: **DVP4/ADRDOD/HI**
Due Date: **08/07/12**

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
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
See attached emails for collection time discrepancies and corrections

Sample Distribution:
GC: 1-$SIMHC12W, 1-$TPETD2
Extractions: 1-_SEP004S, 1-_SEP011
VOA: 2-$86RHBF
Metals: 1-$602D(Pb)
Other: 1-_M3015

Charges:

Invoice To:
same

	Client ID	APPL ID	Sampled	Analyses Requested
1.	ES087-TRIP BLANK	AY65219W	07/20/12 08:00	$86RHBF -- Unpreserved VOA
2.	ES088	AY65220W	07/20/12 13:20	$602D(Pb), $86RHBF, $SIMHC12W, $TPETD2 -- Unpreserved VOA

Note: All times, excluding sample collection times, are Pacific Time Zone unless noted otherwise. Collection times are in: -10 UTC

APPL Sample Receipt Form

ARF# **68284**

Sample	Container Type	Count	pH
AY65219	[15] VOAs - NP	3	NA
AY65220	[6] PL 500mL - HNO3	1	1.7
	[15] VOAs - NP	3	NA
	[17] Amber Liter	4	NA

Sample	Container Type	Count	pH

Chue Moua

From: "Cynthia Clark" <cclark@applinc.com>
To: "'Receiving'" <receiving@applinc.com>
Cc: "'Chue Moua'" <cmoua@applinc.com>
Sent: Tuesday, July 24, 2012 12:48 PM
Subject: FW: Red Hill ARF 68284 label discrepancy

From: James R. Terry [mailto:JTerry@environetinc.com]
Sent: Tuesday, July 24, 2012 12:23 PM
To: Cynthia Clark
Subject: RE: Red Hill ARF 68284 label discrepancy

Hi Cynthia,

Sorry about that the correct time is 1320. I must have copied it down wrong.

Thanks,

JAMES TERRY
ENVIRONET, INC. ENV SCIENTIST I.
T/ 808.833.2225 EXT.1005

From: Cynthia Clark [mailto:cclark@applinc.com]
Sent: Tuesday, July 24, 2012 9:21 AM
To: James R. Terry
Subject: Red Hill ARF 68284 label discrepancy

Hi James,
Sample ES088 - COC collection time is 13:00 - Label collection time is 13:20
Please let us know which is correct

Cynthia Clark, Project Manager

APPL, Inc.
908 North Temperance Ave., Clovis, CA 93611
Phone: 559-275-2175
Fax: 559-275-4422
cclark@applinc.com
www.applinc.com

This is a PRIVATE and CONFIDENTIAL message. If you are not the intended recipient, please delete without copying and kindly advise us by e-mail of the mistake in delivery. NOTE: Regardless of content, this e-mail shall not operate to bind APPL, Inc. to any order or other contract unless pursuant to explicit written agreement or government initiative expressly permitting the use of e-mail for such purpose.

--
This message has been scanned for viruses and dangerous content by **MailScanner**, and is believed to be clean.

68284 4.0°C

APPL LABS

CHAIN OF CUSTODY RECORD

APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

Phone: (559) 275-2175
Fax: (559) 275-4422

C.O.C. 36497

Report to: PLEASE PRINT		Invoice to: A.P. PLEASE PRINT	
Company Name: Environet, Inc.	Phone: 808-833-2225	Company Name: Environet, Inc.	Phone: 808-833-2225
Address: 650 Iwilei Road, Suite 204 Honolulu, Hi 96817	Fax: 808-833-2231	Address: 650 Iwilei Rd., Suite 204 Honolulu, Hi 96817	Fax: 808-833-2231
Attn: Max Solmssen/msolmssen@environetinc.com		Attn: A.P.	

Project Name/Number	Sampler (Print)	Date Shipped: 7/23/2012
Red Hill/1022-024	James Terry	Carrier: FEDEX
Purchase Order Number	Sampler (Signature)	Waybill No.:
	James Terry	Comments: * Lead sample was field filtered

Sample Identification	Location	Date Collected	Time Collected	Time Zone	No. of Containers	Matrix: Aq	Matrix: Sed.	Matrix: Soil	Analysis Requested/Method Number: TPH-Lro (8260B)	VOCs (8260B)	TPH-Dro (8015B)	PAHs (8270C SIM)	Lead * (6020)
ES087 - trip blank	Red Hill	7/20/12	800	HI	3	X			X	X			
ES088	↓	↓	1300	↓	8	X			X	X	X	X	X

Shuttle Temperature:	Turnaround Requested: Check one	Sample Disposal:
	☒ Standard 2-3wk ☐ One week ☐ 24/48 Hrs. ☐ Other	☐ Return to client ☒ Disposal by Lab (30-day retention)

Relinquished by sampler:	Date	Time	Received by:	Relinquished by:	Date	Time	Received by:
James Terry	7/23/12	1335					
Relinquished by:	Date	Time	Received by:	Relinquished by:	Date	Time	Received at lab by:
					7/24/12	1110	Will Lehan

White: Return to client with report Yellow: Laboratory Copy Pink: Sampler

See reverse side for Container Preservative and Sampling Information

COOLER RECEIPT FORM

1) Project: LTM Red Hill / 1022-024 Date Received: 7/24/12
2) Coolers: Number of Coolers: 1
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) 8764 1243 3195 2)_____ 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) 4.0°C 2)_____ 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: Sample ES086 - COC collection time 13:00 - Label collection time 13:20.

Signature of personnel receiving samples: Yang Zou Second reviewer: Will Lobach
Signature of project manager notified: Renee Date and Time of notification: 7-24-12
Name of client notified:_____ Date and Time of notification:_____
Information given to client:_____
_____ by whom (Initials): _____

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons

APPL, INC.

EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
QC Summary

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120725W-65167 - 169430**
Batch ID: #SIMHC-120725A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	SURROGATE: 2-FLUORBIPHENY	73.2	50-110			%	07/25/12	07/25/12
BLANK	SURROGATE: NITROBENZENE-	71.0	40-110			%	07/25/12	07/25/12
BLANK	SURROGATE: TERPHENYL-D14 (	112	50-135			%	07/25/12	07/25/12

Quant Method: SIMB.M
Run #: 0725L003
Instrument: Linus
Sequence: L120613
Initials: LF

Printed: 07/27/12 12:17:23 PM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68284

Case No: 68284 Date Analyzed: 07/25/12

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: 2-FLUORBIPHENYL (S)			SURROGATE: NITROBENZENE-D5 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120725A-BLK	Blank	50-110	73.2		40-110	71.0	
120725A-LCS	Lab Control Spike	50-110	63.5		40-110	69.5	
AY65220	ES088	50-110	60.9		40-110	70.1	

Comments: Batch: #SIMHC-120725A

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68284

Case No: 68284 Date Analyzed: 07/25/12

Matrix: WATER Instrument: Linus

APPL ID.	Client Sample No.	SURROGATE: TERPHENYL-D14 (S)					
		Limits	Result	Qualifier	Limits	Result	Qualifier
120725A-BLK	Blank	50-135	112				
120725A-LCS	Lab Control Spike	50-135	99.5				
AY65220	ES088	50-135	112				

Comments: Batch: #SIMHC-120725A

Laboratory Control Spike Recovery

EPA 8270D SIM

APPL ID: **120725W-65167 LCS - 169430**
Batch ID: #SIMHC-120725A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	4.00	2.33	58.3	45-105
2-METHYLNAPHTHALENE	4.00	2.25	56.3	45-105
ACENAPHTHENE	4.00	2.54	63.5	45-110
ACENAPHTHYLENE	4.00	2.40	60.0	50-105
ANTHRACENE	4.00	2.54	63.5	55-110
BENZO(A)ANTHRACENE	4.00	2.31	57.8	55-110
BENZO(A)PYRENE	4.00	2.41	60.3	55-110
BENZO(B)FLUORANTHENE	4.00	2.65	66.3	45-120
BENZO(GHI)PERYLENE	4.00	2.48	62.0	40-125
BENZO(K)FLUORANTHENE	4.00	2.59	64.8	45-125
CHRYSENE	4.00	2.65	66.3	55-110
DIBENZ(A,H)ANTHRACENE	4.00	2.41	60.3	40-125
FLUORANTHENE	4.00	2.72	68.0	55-115
FLUORENE	4.00	2.66	66.5	50-110
INDENO(1,2,3-CD)PYRENE	4.00	2.22	55.5	45-125
NAPHTHALENE	4.00	2.27	56.8	40-100
PHENANTHRENE	4.00	2.61	65.3	50-115
PYRENE	4.00	2.56	64.0	50-130
SURROGATE: 2-FLUORBIPHENYL (S)	2.00	1.27	63.5	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.00	1.39	69.5	40-110
SURROGATE: TERPHENYL-D14 (S)	2.00	1.99	99.5	50-135

Comments: _____

Primary	SPK
Quant Method :	SIMB.M
Extraction Date :	07/25/12
Analysis Date :	07/25/12
Instrument :	Linus
Run :	0725L004
Initials :	LF

Printed: 07/27/12 12:17:29 PM
APPL Standard LCS

8270D-SIM

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68284

Case No: 68284 Date Analyzed: 07/25/12

Matrix: WATER Instrument: Linus

Blank ID: 120725A-BLK Time Analyzed: 1857

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120725A-BLK	Blank	0725L003	07/25/12 1857
120725A-LCS	Lab Control Spike	0725L004	07/25/12 1923
AY65220	ES088	0725L009	07/25/12 2133

Comments: Batch: #SIMHC-120725A

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 68284
Matrix: Water
ID: SVTUNE 2-28-12

SDG No: 68284
Date Analyzed: 07/25/12
Instrument: Linus
Time Analyzed: 18:12

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1	Blank	120725A BLK 1/1000	0725L003.D	07/25/12 18:57
2	Lab Control Spike	120725A LCS-1 1/1000	0725L004.D	07/25/12 19:23
3	ES088	AY65220W04 1/1000	0725L009.D	07/25/12 21:33
4				
5				
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	53.9
68	0 - 2.05% of mass 69	0.0
70	0 - 2% of mass 69	0.6
127	40 - 60% of mass 198	54.8
197	0 - 1% of mass 198	0.0
198	100 - 100% of mass 198	100.0
199	5 - 9% of mass 198	7.3
275	10 - 30% of mass 198	22.2
365	1 - 100% of mass 198	2.9
441	0.01 - 100% of mass 443	77.5
442	40 - 150% of mass 198	72.0
443	17 - 23% of mass 442	20.0

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 68284

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 #	AREA #	RT #
	12 HOUR STD	2713	6.09	1189	8.10	2090	9.82
	UPPER LIMIT	5426	6.59	2378	8.60	4180	10.32
	LOWER LIMIT	1357	5.59	595	7.60	1045	9.32
	SAMPLE NO.						
01	120725A BLK 1/1000	2466	6.08	1141	8.08	2211	9.82
02	120725A LCS-1 1/1000	2533	6.08	1174	8.08	2346	9.82
03	AY65220W04 1/1000	2654	6.08	1278	8.08	2377	9.82
04							
05							
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.: 68284

Lab File ID (Standard): 0613L007.D Date Analyzed: 06/13/12

Instrument ID: Linus Time Analyzed: 15:33

GC Column: ID: Heated Purge: (Y/N)

		Chrysene-D12(IS)		Perylene-D12(IS)			
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2430	12.91	2133	14.52		
	UPPER LIMIT	4860	13.41	4266	15.02		
	LOWER LIMIT	1215	12.41	1067	14.02		
	SAMPLE NO.						
01	120725A BLK 1/1000	2672	12.91	2109	14.53		
02	120725A LCS-1 1/1000	2948	12.90	2233	14.52		
03	AY65220W04 1/1000	2764	12.91	2141	14.54		
04							
05							
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

APPL, INC.

EPA 8270D SIM

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill /1022-024
Sample ID: ES088
Sample Collection Date: 07/20/12

ARF: 68284
APPL ID: AY65220
QCG: #SIMHC-120725A-169430

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
8270D-SIM	1-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
8270D-SIM	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
8270D-SIM	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
8270D-SIM	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	NAPHTHALENE	0.13 J	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
8270D-SIM	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
8270D-SIM	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
8270D-SIM	SURROGATE: 2-FLUORBIPHENYL (S)	60.9	50-110			%	07/25/12	07/25/12
8270D-SIM	SURROGATE: NITROBENZENE-D5 (S)	70.1	40-110			%	07/25/12	07/25/12
8270D-SIM	SURROGATE: TERPHENYL-D14 (S)	112	50-135			%	07/25/12	07/25/12

J = Estimated value.

Quant Method: SIMB.M
Run #: 0725L009
Instrument: Linus
Sequence: L120613
Dilution Factor: 1
Initials: LF

Printed: 07/27/12 12:17:35 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L009.D Vial: 9
Acq On : 25 Jul 12 21:33 Operator: LF
Sample : AY65220W04 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:26 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2654	2.50000 ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1278	2.50000 ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2377	2.50000 ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2764	2.50000 ppb	0.01
22) Perylene-D12(IS)	14.54	264	2141	2.50000 ppb	0.00
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.32	82	696	1.40238 ppb	-0.01
Spiked Amount 2.000			Recovery = 70.100%		
7) Surrogate Recovery (FBP)	7.32	172	1457	1.21780 ppb	-0.05
Spiked Amount 2.000			Recovery = 60.900%		
18) Surrogate Recovery (TPH)	11.69	244	3091	2.23538 ppb	-0.05
Spiked Amount 2.000			Recovery = 111.750%		
Target Compounds					Qvalue
3) Naphthalene	6.09	128	217	0.12695 ppb	# 1

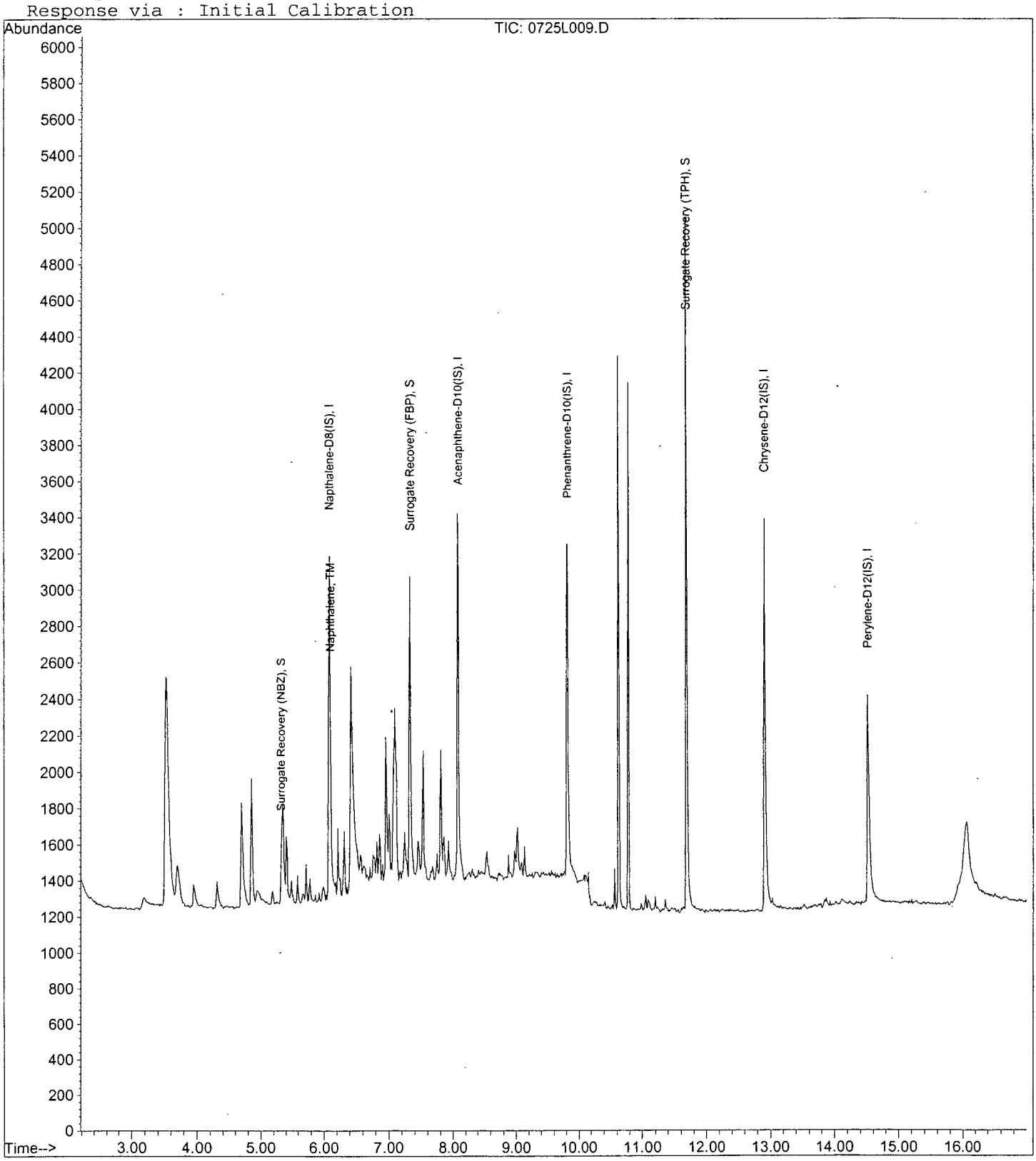
(#) = qualifier out of range (m) = manual integration

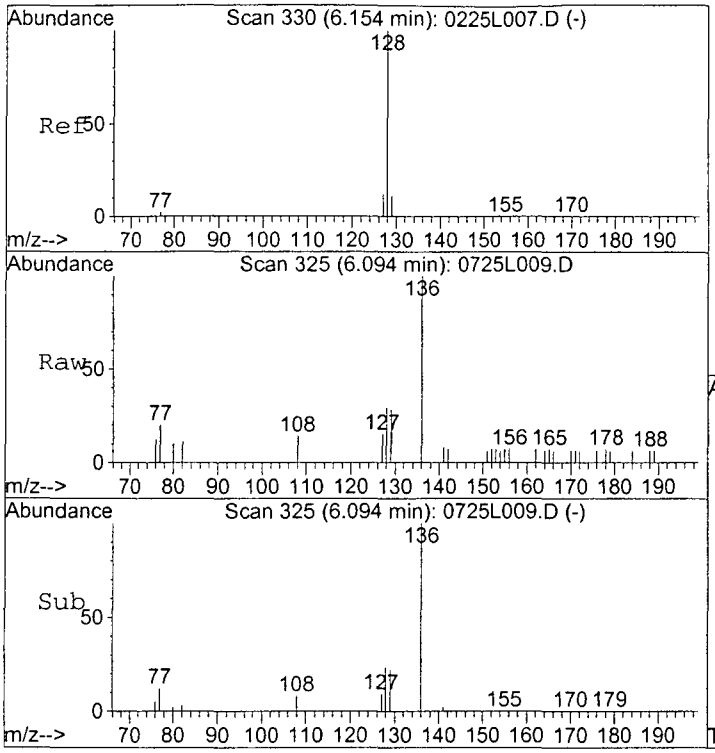
Quantitation Report

Data File : M:\LINUS\DATA\L120613\0725L009.D Vial: 9
Acq On : 25 Jul 12 21:33 Operator: LF
Sample : AY65220W04 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:26 2012 Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration

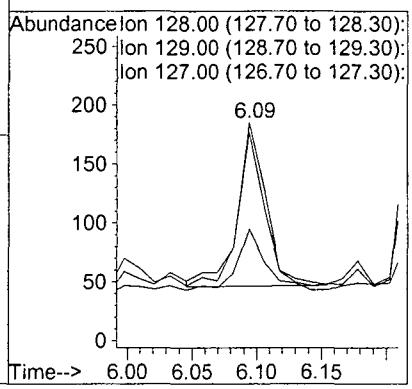




#3
Naphthalene
Concen: 0.12695 ppb
RT: 6.09 min Scan# 325
Delta R.T. -0.05 min
Lab File: 0725L009.D
Acq: 25 Jul 12 21:33

Tgt Ion:128 Resp: 217

Ion	Ratio	Lower	Upper
128	100		
129	94.9	7.8	14.4#
127	38.0	8.6	16.0#



EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Calibration Data

APPL, INC.

EPA 8270C SIM

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68284
Case No: Initial Cal. Date: 06/13/12
Matrix: 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	Napthalene-D8(IS)														
2	S	Surrogate Recovery (NBZ)	0.4582	0.4160	0.5318	0.4779	0.4460	0.4748	0.4769	0.4584			0.47	7.1	S	
3	TM	Naphthalene	1.842	1.750	1.792	1.659	1.423	1.727	1.409	1.279			1.6	13	TM	
4	TM	2-Methylnaphthalene	1.241	1.076	1.116	1.120	0.9307	1.112	0.9262	0.8257			1.0	13	TM	
5	TM	1-Methylnaphthalene	1.126	1.172	1.203	1.088	0.8644	1.036	0.8585				1.0	13	TM	
6	I	Acenaphthene-D10(IS)														
7	S	Surrogate Recovery (FBP)	2.582	2.805	2.664	2.529	2.150	2.143	1.969	1.882			2.3	15	S	
8	TM	1,1'-Biphenyl	2.787	2.890	2.770	2.823	2.494	2.718	2.250	2.042			2.6	12	TM	
9	TM	Acenaphthylene	3.955	4.033	3.713	3.520	3.060	3.526	2.830	2.701			3.4	15	TM	
10	*TM	Acenaphthene	2.090	2.180	2.070	2.027	1.756	1.959	1.627	1.454			1.9	13	*TM	
11	TM	Fluorene	2.398	2.371	2.439	2.352	2.050	2.300	1.873	1.659			2.2	13	TM	
12	I	Phenanthrene-D10(IS)														
13	TM	Phenanthrene	2.047	1.950	2.033	1.897	1.652	1.874	1.503	1.377			1.8	14	TM	
14	TM	Anthracene	2.130	1.841	1.997	1.890	1.692	1.793	1.496	1.348			1.8	14	TM	
15	*TM	Fluoranthene	3.076	2.754	2.876	2.744	2.354	2.691	2.122	2.002			2.6	15	*TM	
16	I	Chrysene-D12(IS)														
17	TM	Pyrene	2.479	2.491	2.445	2.361	2.151	2.307	1.879	1.969			2.3	10	TM	
18	S	Surrogate Recovery (TPH)	1.440	1.456	1.389	1.283	1.203	1.197	0.9916	1.046			1.3	14	S	
19	TM	Benz (a) anthracene	2.260	2.204	2.209	2.058	1.786	1.987	1.662	1.724			2.0	12	TM	
20	TM	Chrysene	2.088	2.135	2.151	2.031	1.970	1.967	1.407	1.602			1.9	14	TM	
21	TM	Indeno (1,2,3-cd) pyrene	2.365	2.214	2.159	2.037	1.899	2.069	1.653	1.810			2.0	11	TM	
22	I	Perylene-D12(IS)														
23	TM	Benzo (b) fluoranthene	2.382	2.407	2.462	2.408	1.885	2.105	2.227	1.721			2.2	12	TM	
24	TM	Benzo (k) fluoranthene	2.745	2.558	2.205	2.115	2.223	2.494	1.828	1.795			2.2	15	TM	
25	*TM	Benzo (a) pyrene	2.358	2.547	2.297	2.164	1.908	2.189	1.901	1.547			2.1	15	*TM	
26	TM	Dibenz (a,h) anthracene	2.206	2.196	2.054	1.889	1.755	1.968	1.762	1.529			1.9	12	TM	
27	TM	Benzo (g,h,i) perylene	2.288	2.284	2.189	1.980	1.781	2.022	1.834	1.643			2.0	12	TM	
28																
29																
30																
31																
32																
33																
34																
35																

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L003.D Vial: 3
Acq On : 13 Jun 12 13:51 Operator: LF
Sample : 0.1ug/ml PAH 06-13-12 Inst : Linus
Misc : 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) Napthalene-D8(IS)	6.09	136	2619	2.50000 ppb		-0.02
6) Acenaphthene-D10(IS)	8.10	164	1220	2.50000 ppb		-0.04
12) Phenanthrene-D10(IS)	9.83	188	2113	2.50000 ppb		-0.02
16) Chrysene-D12(IS)	12.91	240	2622	2.50000 ppb		-0.01
22) Perylene-D12(IS)	14.52	264	2131	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.35	82	48	0.18668 ppb		0.01
Spiked Amount 2.000			Recovery = 9.350%			
7) Surrogate Recovery (FBP)	7.34	172	126	0.16296 ppb		-0.04
Spiked Amount 2.000			Recovery = 8.150%			
18) Surrogate Recovery (TPH)	11.70	244	151	0.18456 ppb		-0.03
Spiked Amount 2.000			Recovery = 9.250%			
Target Compounds						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

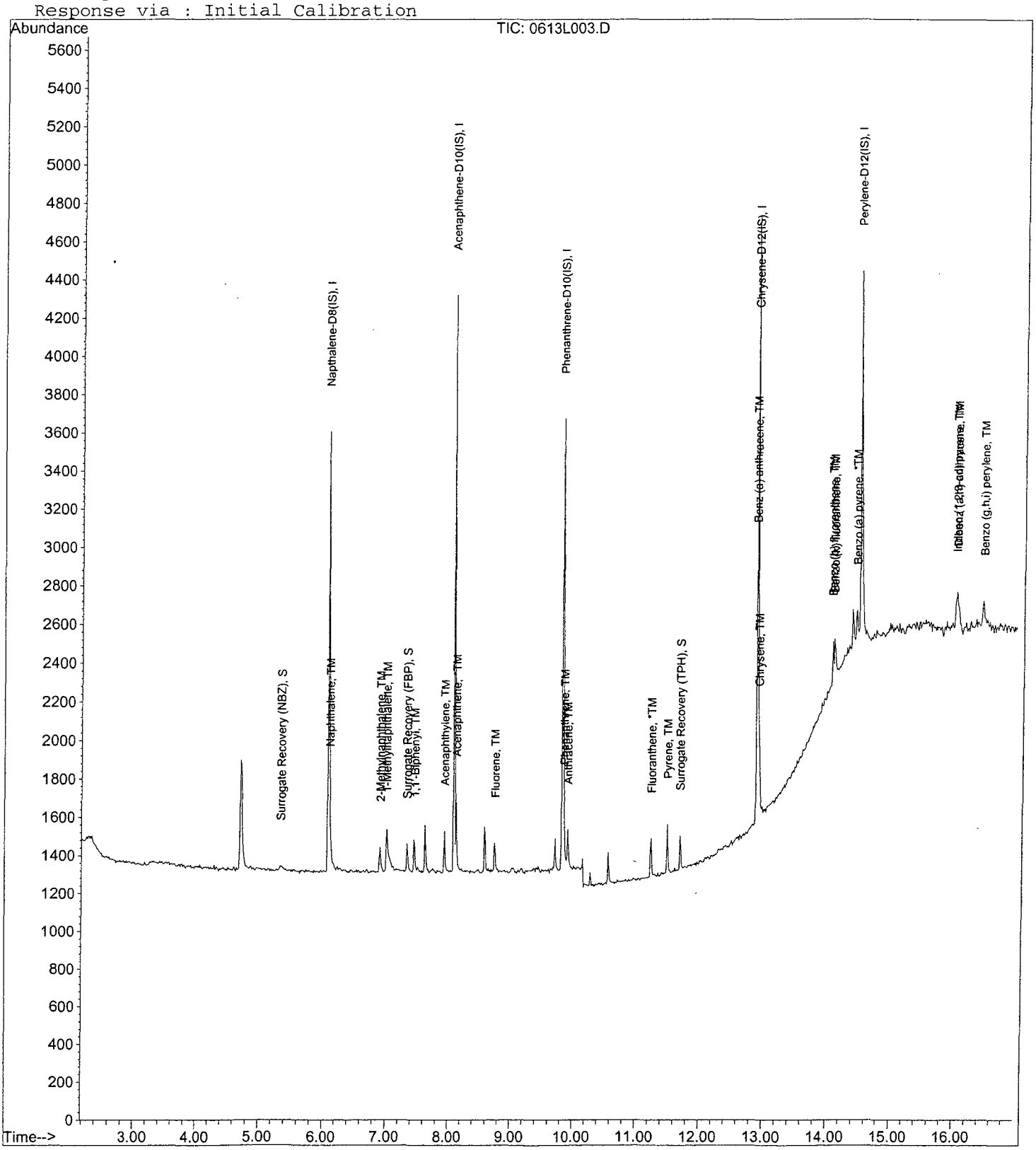
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L003.D 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

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 13 17:38:06 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L004.D Vial: 4
Acq On : 13 Jun 12 14:16 Operator: LF
Sample : 0.2ug/ml PAH Inst : Linus
Misc : 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						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

(#) = qualifier out of range (m) = manual integration

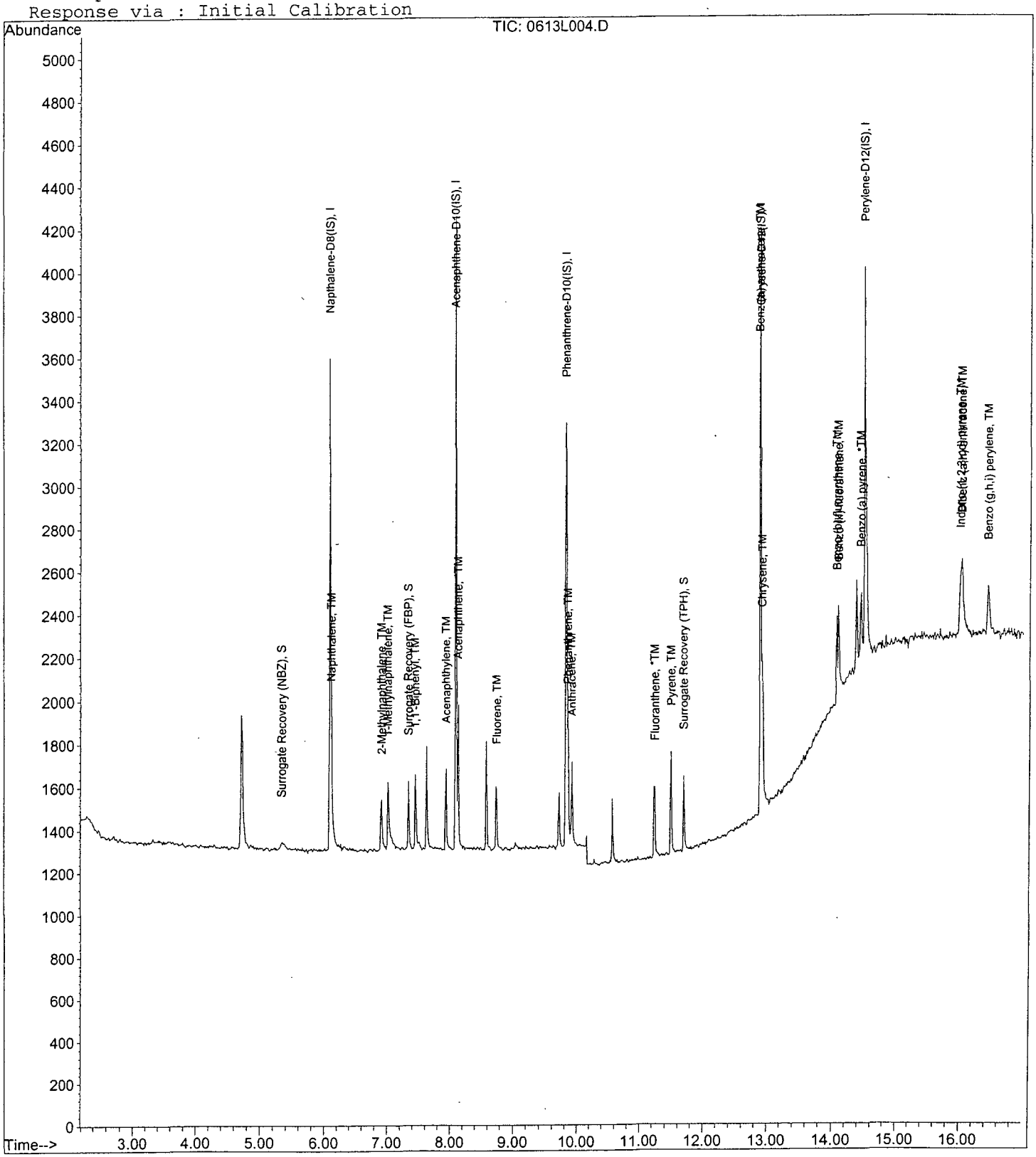
Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L004.D
Acq On : 13 Jun 12 14:16
Sample : 0.2ug/ml PAH
Misc :

Vial: 4
Operator: LF
Inst : Linus
Multiplr: 1.00

Quant Time: Jun 13 16:10 2012 Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 13 17:38:06 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L005.D Vial: 5
Acq On : 13 Jun 12 14:41 Operator: LF
Sample : 0.5ug/ml PAH Inst : Linus
Misc : 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

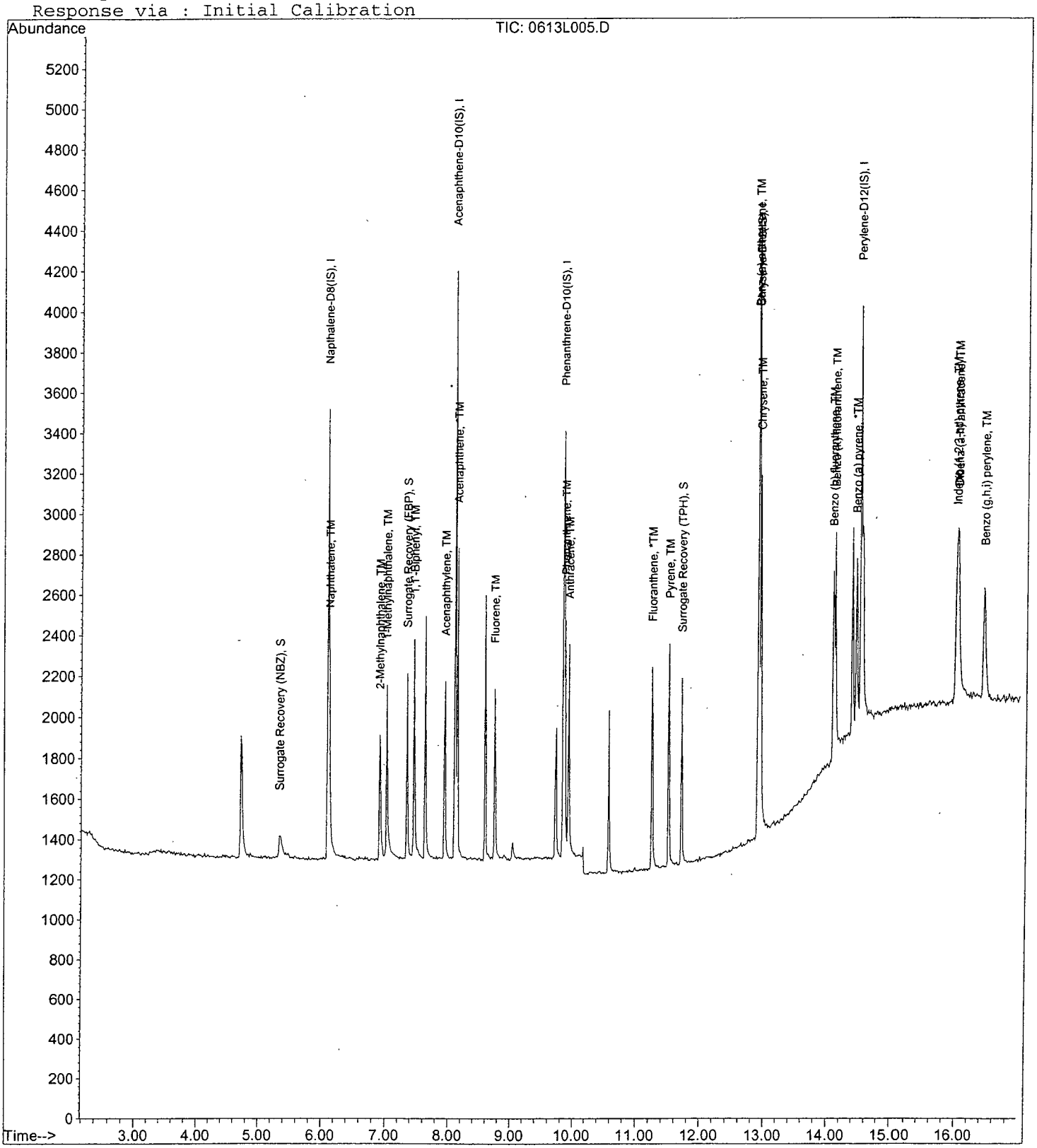
Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.09	136	2576	2.50000 ppb		-0.02
6) Acenaphthene-D10(IS)	8.10	164	1220	2.50000 ppb		-0.04
12) Phenanthrene-D10(IS)	9.83	188	2083	2.50000 ppb		-0.02
16) Chrysene-D12(IS)	12.91	240	2571	2.50000 ppb		-0.01
22) Perylene-D12(IS)	14.52	264	2220	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.33	82	274	0.60835 ppb		0.00
Spiked Amount 2.000			Recovery = 30.400%			
7) Surrogate Recovery (FBP)	7.34	172	650	0.49453 ppb		-0.04
Spiked Amount 2.000			Recovery = 24.750%			
18) Surrogate Recovery (TPH)	11.70	244	714	0.47952 ppb		-0.03
Spiked Amount 2.000			Recovery = 24.000%			
Target Compounds						Qvalue
3) Naphthalene	6.12	128	923	0.49869 ppb		100
4) 2-Methylnaphthalene	6.90	142	575	0.48172 ppb		100
5) 1-Methylnaphthalene	7.01	142	620	0.52369 ppb		94
8) 1,1'-Biphenyl	7.44	154	676	0.48807 ppb	#	94
9) Acenaphthylene	7.94	152	906	0.46486 ppb		99
10) Acenaphthene	8.13	154	505	0.48464 ppb		91
11) Fluorene	8.74	166	595	0.51139 ppb		99
13) Phenanthrene	9.86	178	847	0.50863 ppb		98
14) Anthracene	9.92	178	832	0.50291 ppb		96
15) Fluoranthene	11.23	202	1198	0.49327 ppb	#	86
17) Pyrene	11.50	202	1257	0.49186 ppb	#	89
19) Benz (a) anthracene	12.90	228	1136	0.49495 ppb		98
20) Chrysene	12.94	228	1106	0.50938 ppb	#	93
21) Indeno (1,2,3-cd) pyrene	16.00	276	1110	0.47150 ppb	#	92
23) Benzo (b) fluoranthene	14.08	252	1093	0.51930 ppb	#	90
24) Benzo (k) fluoranthene	14.11	252	979	0.42017 ppb	#	95
25) Benzo (a) pyrene	14.45	252	1020	0.47286 ppb	#	95
26) Dibenz (a,h) anthracene	16.03	278	912	0.47138 ppb	#	95
27) Benzo (g,h,i) perylene	16.44	276	972	0.41115 ppb		93

(#) = qualifier out of range (m) = manual integration

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

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 13 17:38:06 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L006.D Vial: 6
Acq On : 13 Jun 12 15:07 Operator: LF
Sample : 1.0ug/ml PAH Inst : Linus
Misc : 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							
2) Surrogate Recovery (NBZ)	5.33	82	501	1.01960	ppb		0.00
Spiked Amount 2.000			Recovery = 51.000%				
7) Surrogate Recovery (FBP)	7.34	172	1215	0.94245	ppb		-0.04
Spiked Amount 2.000			Recovery = 47.100%				
18) Surrogate Recovery (TPH)	11.70	244	1327	0.89865	ppb		-0.03
Spiked Amount 2.000			Recovery = 44.950%				
Target Compounds							Qvalue
3) Naphthalene	6.12	128	1739	0.92424	ppb		99
4) 2-Methylnaphthalene	6.90	142	1174	0.97858	ppb		98
5) 1-Methylnaphthalene	7.01	142	1141	0.93248	ppb		94
8) 1,1'-Biphenyl	7.45	154	1356	1.00249	ppb	#	91
9) Acenaphthylene	7.94	152	1691	0.90251	ppb		99
10) Acenaphthene	8.13	154	974	0.95935	ppb		89
11) Fluorene	8.74	166	1130	0.97914	ppb		98
13) Phenanthrene	9.86	178	1612	0.94390	ppb		99
14) Anthracene	9.92	178	1606	0.95018	ppb		98
15) Fluoranthene	11.23	202	2331	0.94550	ppb	#	88
17) Pyrene	11.50	202	2441	0.95516	ppb	#	88
19) 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

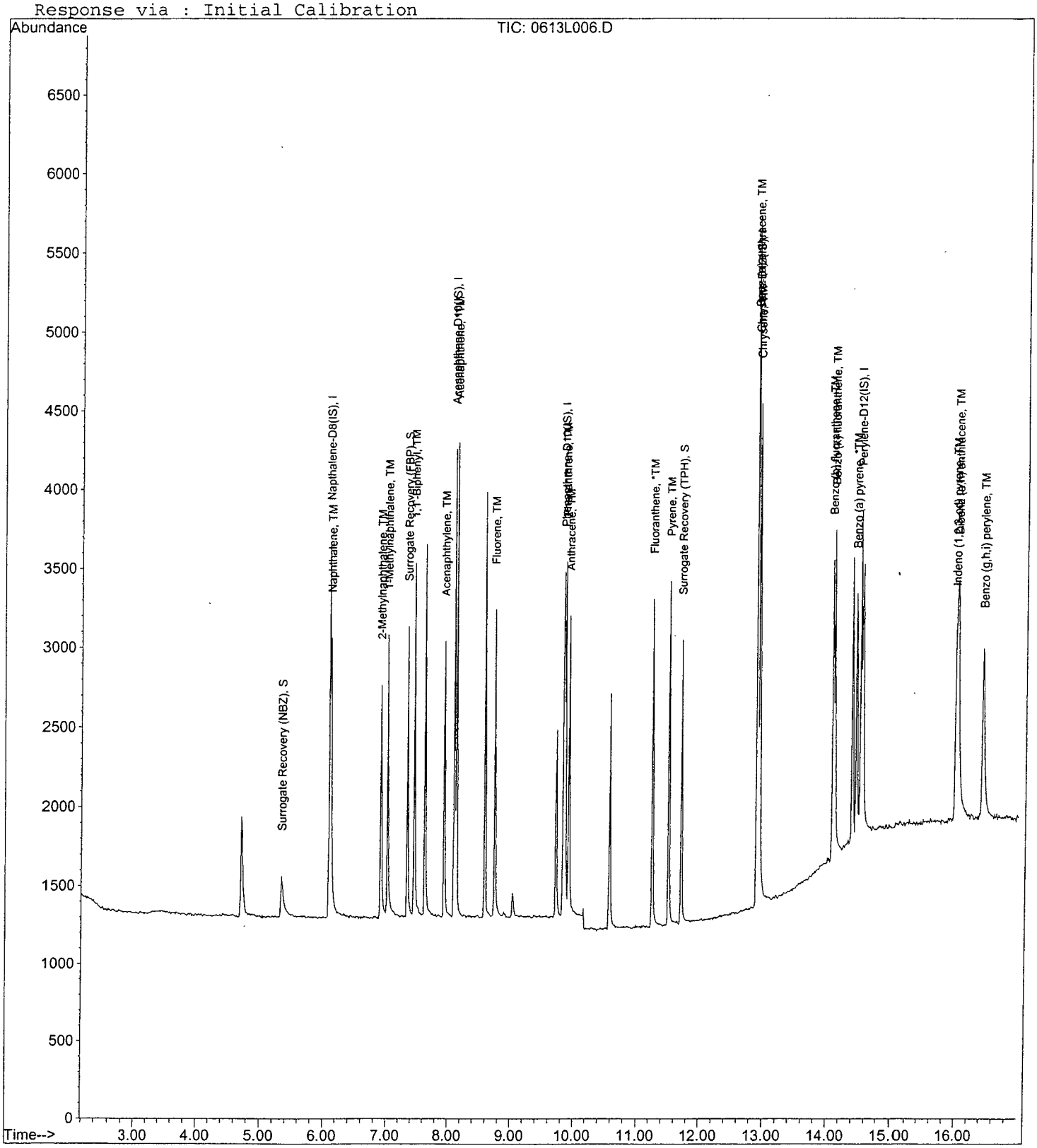
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 13 17:38:06 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L007.D Vial: 7
Acq On : 13 Jun 12 15:33 Operator: LF
Sample : 5.0ug/ml PAH Inst : Linus
Misc : 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) Napthalene-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						Qvalue
3) Naphthalene	6.12	128	7720	4.04041 ppb		100
4) 2-Methylnaphthalene	6.90	142	5050	4.08854 ppb		95
5) 1-Methylnaphthalene	7.01	142	4690	3.76651 ppb		93
8) 1,1'-Biphenyl	7.45	154	5931	4.42630 ppb	#	89
9) Acenaphthylene	7.93	152	7276	4.02049 ppb		97
10) Acenaphthene	8.13	154	4176	4.19734 ppb		93
11) Fluorene	8.74	166	4875	4.28917 ppb		98
13) Phenanthrene	9.86	178	6907	4.16861 ppb		99
14) Anthracene	9.92	178	7071	4.30520 ppb		98
15) Fluoranthene	11.23	202	9839	4.11183 ppb		95
17) Pyrene	11.49	202	10454	4.40089 ppb	#	90
19) Benz (a) anthracene	12.90	228	8681	4.09173 ppb		96
20) Chrysene	12.94	228	9575	4.68837 ppb	#	96
21) Indeno (1,2,3-cd) pyrene	15.99	276	9227	4.32779 ppb	#	88
23) Benzo (b) fluoranthene	14.08	252	8043	3.92370 ppb	#	84
24) Benzo (k) fluoranthene	14.12	252	9483	4.64656 ppb	#	92
25) Benzo (a) pyrene	14.45	252	8141	4.09554 ppb		98
26) Dibenz (a,h) anthracene	16.02	278	7487	4.22884 ppb	#	91
27) Benzo (g,h,i) perylene	16.43	276	7598	3.75225 ppb		96

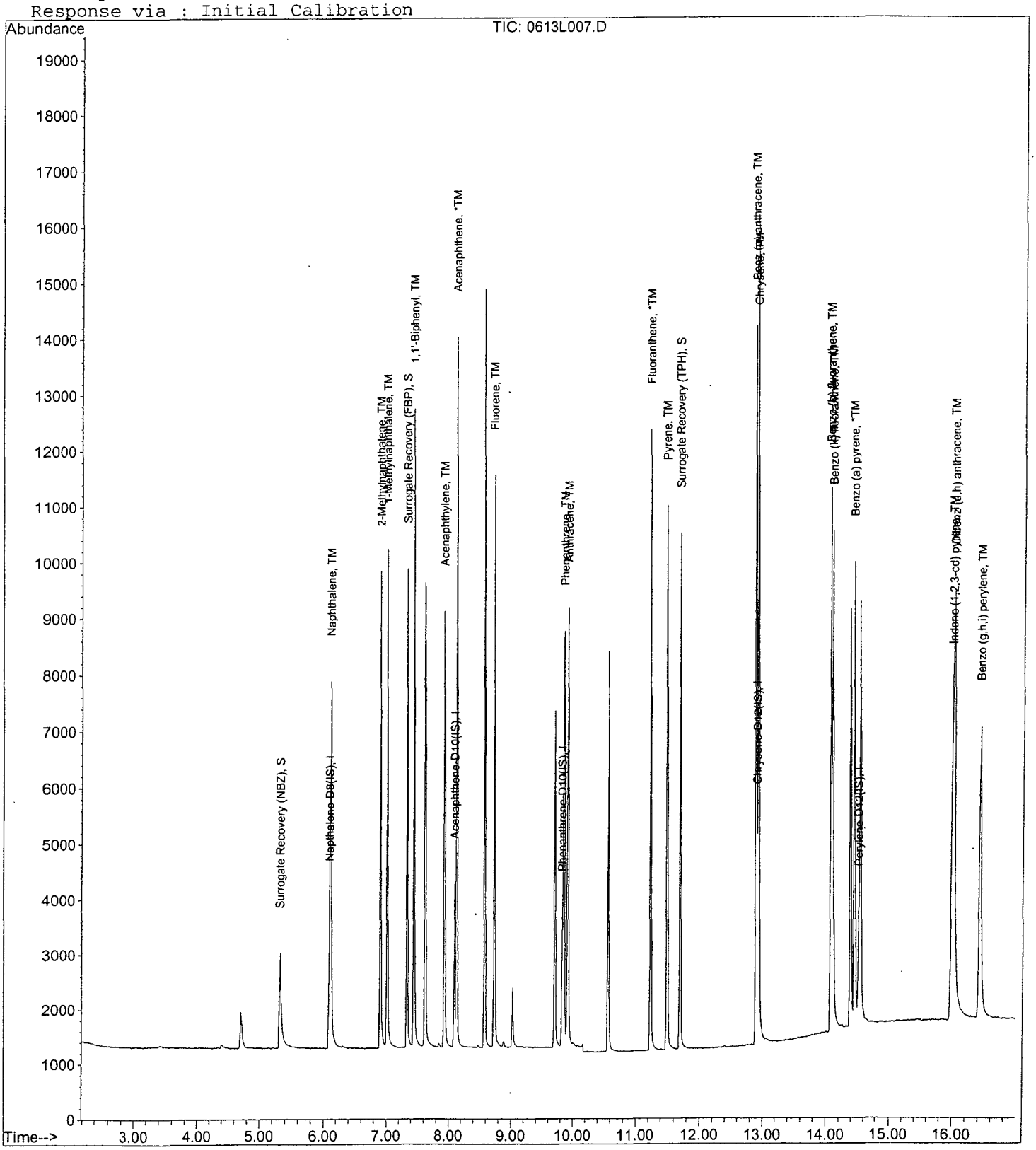
(#) = qualifier out of range (m) = manual integration

Quantitation Report

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

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 13 17:38:06 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L008.D Vial: 8
Acq On : 13 Jun 12 15:59 Operator: LF
Sample : 10ug/ml PAH Inst : Linus
Misc : 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						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

(#) = qualifier out of range (m) = manual integration

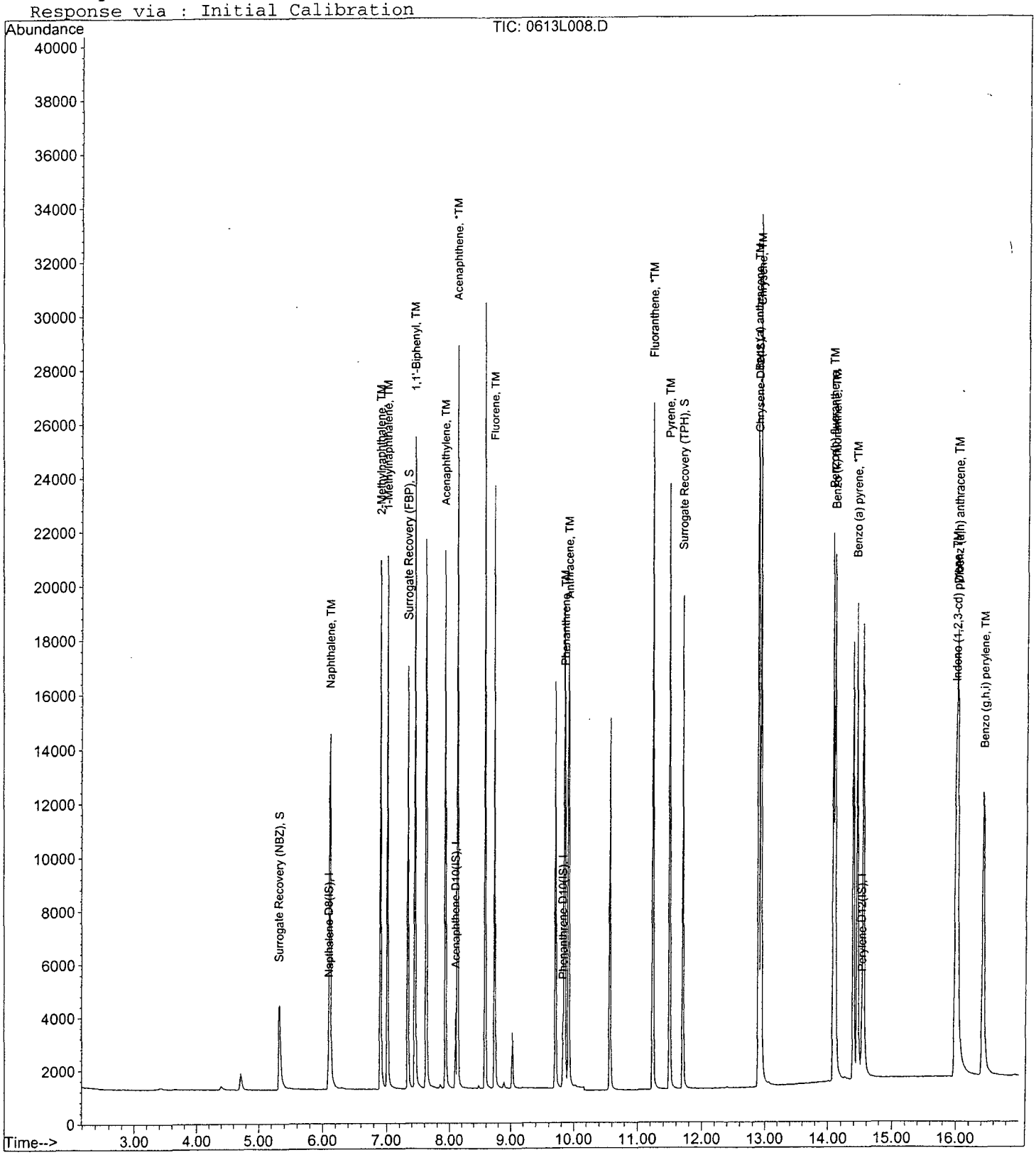
Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L008.D
Acq On : 13 Jun 12 15:59
Sample : 10ug/ml PAH
Misc :

Vial: 8
Operator: LF
Inst : Linus
Multiplr: 1.00

Quant Time: Jun 13 17:35 2012 Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 13 17:38:06 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L009.D Vial: 9
Acq On : 13 Jun 12 16:25 Operator: LF
Sample : 50ug/ml PAH Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jun 13 17:37 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 13 14:51:32 2012
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) 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							Qvalue
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

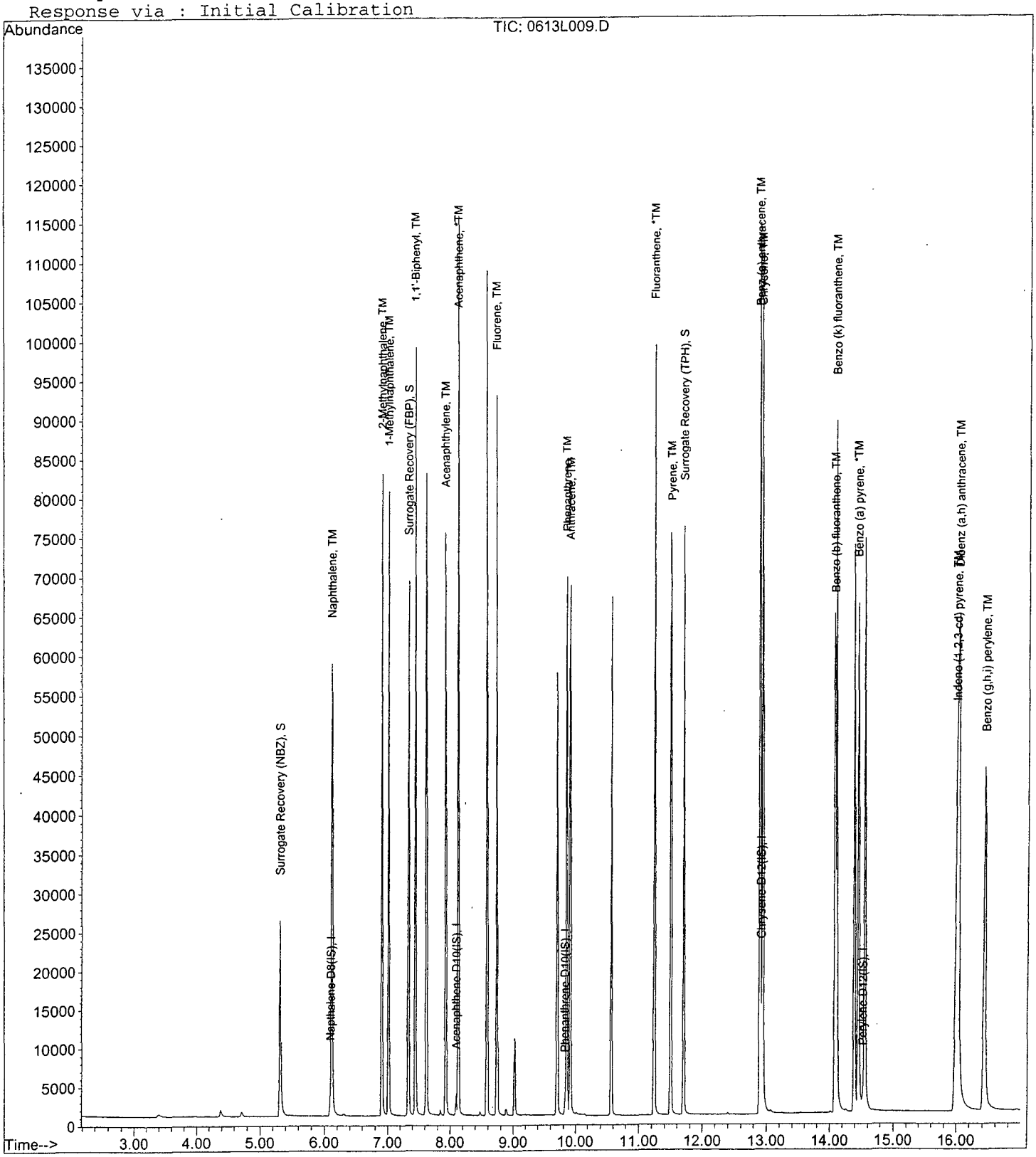
Quantitation Report

Data File : M:\LINUS\DATA\L120613\0613L009.D
Acq On : 13 Jun 12 16:25
Sample : 50ug/ml PAH
Misc :

Vial: 9
Operator: LF
Inst : Linus
Multiplr: 1.00

Quant Time: Jun 13 17:37 2012 Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jun 13 17:38:06 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L010.D Vial: 10
Acq On : 13 Jun 12 16:51 Operator: LF
Sample : 100ug/ml PAH Inst : Linus
Misc : 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							Qvalue
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

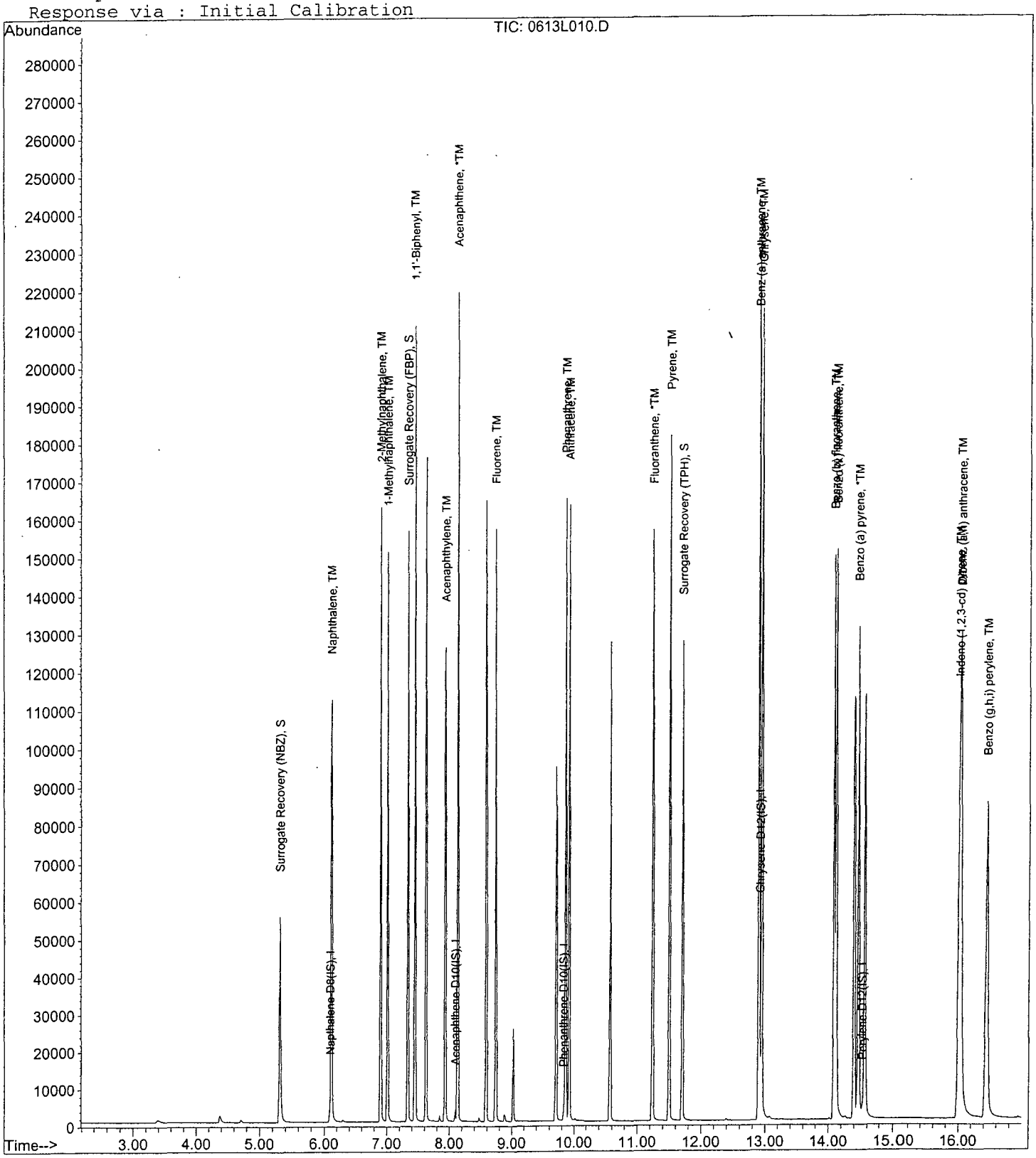
Quantitation Report

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



Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 68248
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	
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			4.8		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0613L011.D Vial: 11
Acq On : 13 Jun 12 17:17 Operator: LF
Sample : 5.0ug/ml SS PAH 06-13-12 Inst : Linus
Misc : 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) Napthalene-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						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

(#) = qualifier out of range (m) = manual integration

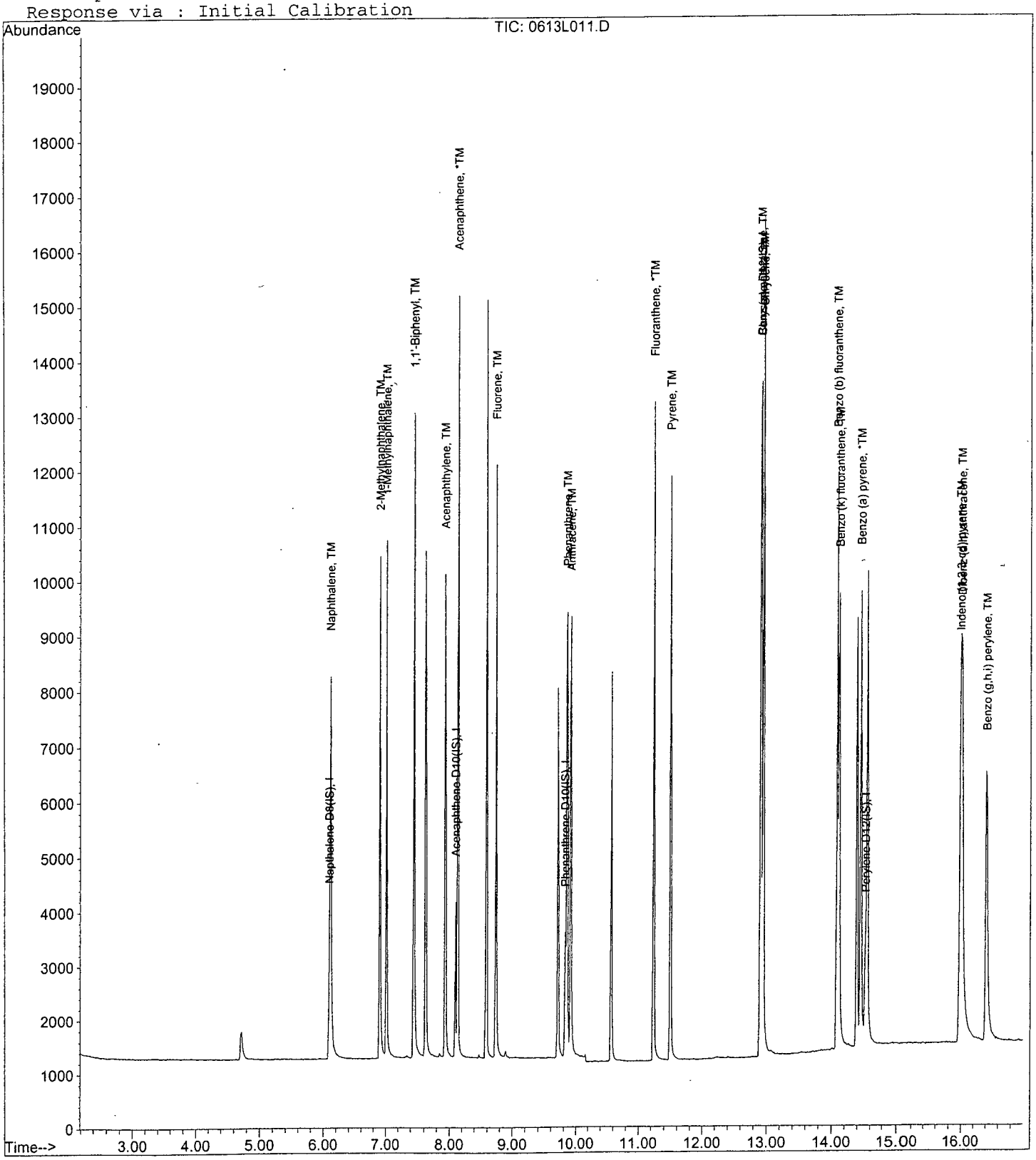
Quantitation Report

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



Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 68284
Date Analyzed: 07/25/12
Instrument: Linus
Initial Cal. Date: 06/13/12
Data File: 0725L002.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Napthalene-D8(IS)	ISTD			I	
2	S	Surrogate Recovery (NBZ)	0.4675	0.5118	9.5	S	
3	TM	Naphthalene	1.610	1.911	19	TM	
4	TM	2-Methylnaphthalene	1.043	1.175	13	TM	
5	TM	1-Methylnaphthalene	1.050	1.211	15	TM	
6	I	Acenaphthene-D10(IS)	ISTD			I	
7	S	Surrogate Recovery (FBP)	2.340	2.780	19	S	
8	TM	1,1'-Biphenyl	2.597	3.072	18	TM	
9	TM	Acenaphthylene	3.417	3.974	16	TM	
10	*TM	Acenaphthene	1.896	2.203	16	*TM	
11	TM	Fluorene	2.180	2.582	18	TM	
12	I	Phenanthrene-D10(IS)	ISTD			I	
13	TM	Phenanthrene	1.792	2.084	16	TM	
14	TM	Anthracene	1.773	2.065	16	TM	
15	*TM	Fluoranthene	2.577	2.914	13	*TM	
16	I	Chrysene-D12(IS)	ISTD			I	
17	TM	Pyrene	2.260	2.386	5.6	TM	
18	S	Surrogate Recovery (TPH)	1.251	1.390	11	S	
19	TM	Benz (a) anthracene	1.986	1.812	8.8	TM	
20	TM	Chrysene	1.919	2.072	8.0	TM	
21	TM	Indeno (1,2,3-cd) pyrene	2.025	1.789	12	TM	
22	I	Perylene-D12(IS)	ISTD			I	
23	TM	Benzo (b) fluoranthene	2.200	2.001	9.0	TM	
24	TM	Benzo (k) fluoranthene	2.246	2.411	7.4	TM	
25	*TM	Benzo (a) pyrene	2.114	2.010	4.9	*TM	
26	TM	Dibenz (a,h) anthracene	1.920	1.773	7.7	TM	
27	TM	Benzo (g,h,i) perylene	2.003	1.853	7.5	TM	
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			12.3		

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L002.D Vial: 2
Acq On : 25 Jul 12 18:31 Operator: LF
Sample : 5.0ug/ml PAH 06-13-12 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:19 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2501	2.50000 ppb		-0.04
6) Acenaphthene-D10(IS)	8.08	164	1116	2.50000 ppb		-0.05
12) Phenanthrene-D10(IS)	9.81	188	1962	2.50000 ppb		-0.05
16) Chrysene-D12(IS)	12.90	240	2496	2.50000 ppb		0.00
22) Perylene-D12(IS)	14.52	264	2012	2.50000 ppb		-0.01
System Monitoring Compounds						
2) Surrogate Recovery (NBZ)	5.32	82	2560	5.47373 ppb		-0.01
Spiked Amount 2.000			Recovery	= 273.700%		
7) Surrogate Recovery (FBP)	7.32	172	6206	5.94009 ppb		-0.05
Spiked Amount 2.000			Recovery	= 297.000%		
18) Surrogate Recovery (TPH)	11.69	244	6938	5.55622 ppb		-0.05
Spiked Amount 2.000			Recovery	= 277.800%		
Target Compounds						Qvalue
3) Naphthalene	6.09	128	9558	5.93382 ppb		98
4) 2-Methylnaphthalene	6.89	142	5878	5.63092 ppb		92
5) 1-Methylnaphthalene	7.00	142	6058	5.76845 ppb		98
8) 1,1'-Biphenyl	7.43	154	6857	5.91556 ppb	#	89
9) Acenaphthylene	7.92	152	8870	5.81469 ppb		98
10) Acenaphthene	8.12	154	4918	5.81209 ppb		95
11) Fluorene	8.72	166	5764	5.92274 ppb		97
13) Phenanthrene	9.85	178	8177	5.81518 ppb		99
14) Anthracene	9.91	178	8103	5.82225 ppb		98
15) Fluoranthene	11.22	202	11435	5.65361 ppb	#	91
17) Pyrene	11.49	202	11913	5.27934 ppb	#	89
19) Benz (a) anthracene	12.89	228	9044	4.56046 ppb		98
20) Chrysene	12.94	228	10343	5.39893 ppb	#	99
21) Indeno (1,2,3-cd) pyrene	16.02	276	8931	4.41642 ppb		78
23) Benzo (b) fluoranthene	14.08	252	8054	4.54976 ppb		84
24) Benzo (k) fluoranthene	14.11	252	9701	5.36801 ppb	#	92
25) Benzo (a) pyrene	14.45	252	8090	4.75550 ppb		99
26) Dibenz (a,h) anthracene	16.03	278	7133	4.61667 ppb		92
27) Benzo (g,h,i) perylene	16.45	276	7456	4.62630 ppb		92

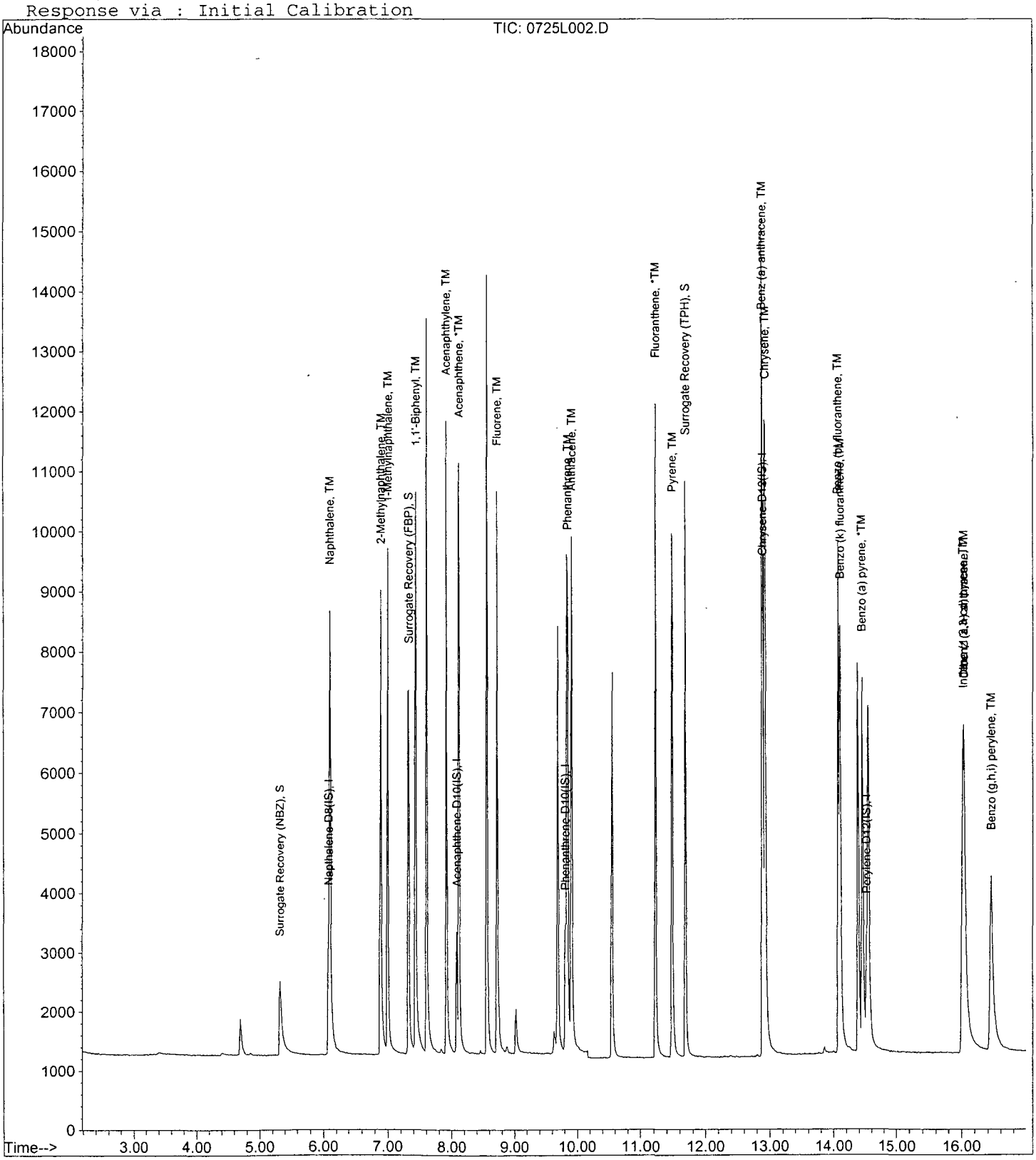
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0725L002.D Vial: 2
Acq On : 25 Jul 12 18:31 Operator: LF
Sample : 5.0ug/ml PAH 06-13-12 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:19 2012 Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration



EPA METHOD 8270
Polynuclear Aromatic Hydrocarbons
Raw Data

APPL, INC.

Method Blank
EPA 8270D SIM

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120725W-65167 - 169430**
Batch ID: #SIMHC-120725A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	2-METHYLNAPHTHALENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ACENAPHTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ACENAPHTHYLENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	BENZO(A)ANTHRACENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	BENZO(A)PYRENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	BENZO(B)FLUORANTHENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	BENZO(GHI)PERYLENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	BENZO(K)FLUORANTHENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	CHRYSENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	DIBENZ(A,H)ANTHRACENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	FLUORANTHENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	FLUORENE	0.12 U	0.2	0.12	0.06	ug/L	07/25/12	07/25/12
BLANK	INDENO(1,2,3-CD)PYRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	NAPHTHALENE	0.10 U	0.2	0.10	0.05	ug/L	07/25/12	07/25/12
BLANK	PHENANTHRENE	0.14 U	0.2	0.14	0.07	ug/L	07/25/12	07/25/12
BLANK	PYRENE	0.16 U	0.2	0.16	0.08	ug/L	07/25/12	07/25/12
BLANK	SURROGATE: 2-FLUORBIPHENY	73.2	50-110			%	07/25/12	07/25/12
BLANK	SURROGATE: NITROBENZENE-	71.0	40-110			%	07/25/12	07/25/12
BLANK	SURROGATE: TERPHENYL-D14 (	112	50-135			%	07/25/12	07/25/12

Quant Method: SIMB.M
Run #: 0725L003
Instrument: Linus
Sequence: L120613
Initials: LF

Printed: 07/27/12 12:17:37 PM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L003.D Vial: 3
Acq On : 25 Jul 12 18:57 Operator: LF
Sample : 120725A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:20 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2466	2.50000 ppb	-0.04
6) Acenaphthene-D10(IS)	8.08	164	1141	2.50000 ppb	-0.05
12) Phenanthrene-D10(IS)	9.82	188	2211	2.50000 ppb	-0.04
16) Chrysene-D12(IS)	12.91	240	2672	2.50000 ppb	0.01
22) Perylene-D12(IS)	14.53	264	2109	2.50000 ppb	0.00
System Monitoring Compounds					
2) Surrogate Recovery (NBZ)	5.32	82	655	1.42038 ppb	-0.01
Spiked Amount 2.000			Recovery = 71.000%		
7) Surrogate Recovery (FBP)	7.32	172	1563	1.46325 ppb	-0.05
Spiked Amount 2.000			Recovery = 73.150%		
18) Surrogate Recovery (TPH)	11.69	244	2997	2.24202 ppb	-0.05
Spiked Amount 2.000			Recovery = 112.100%		

Target Compounds Qvalue

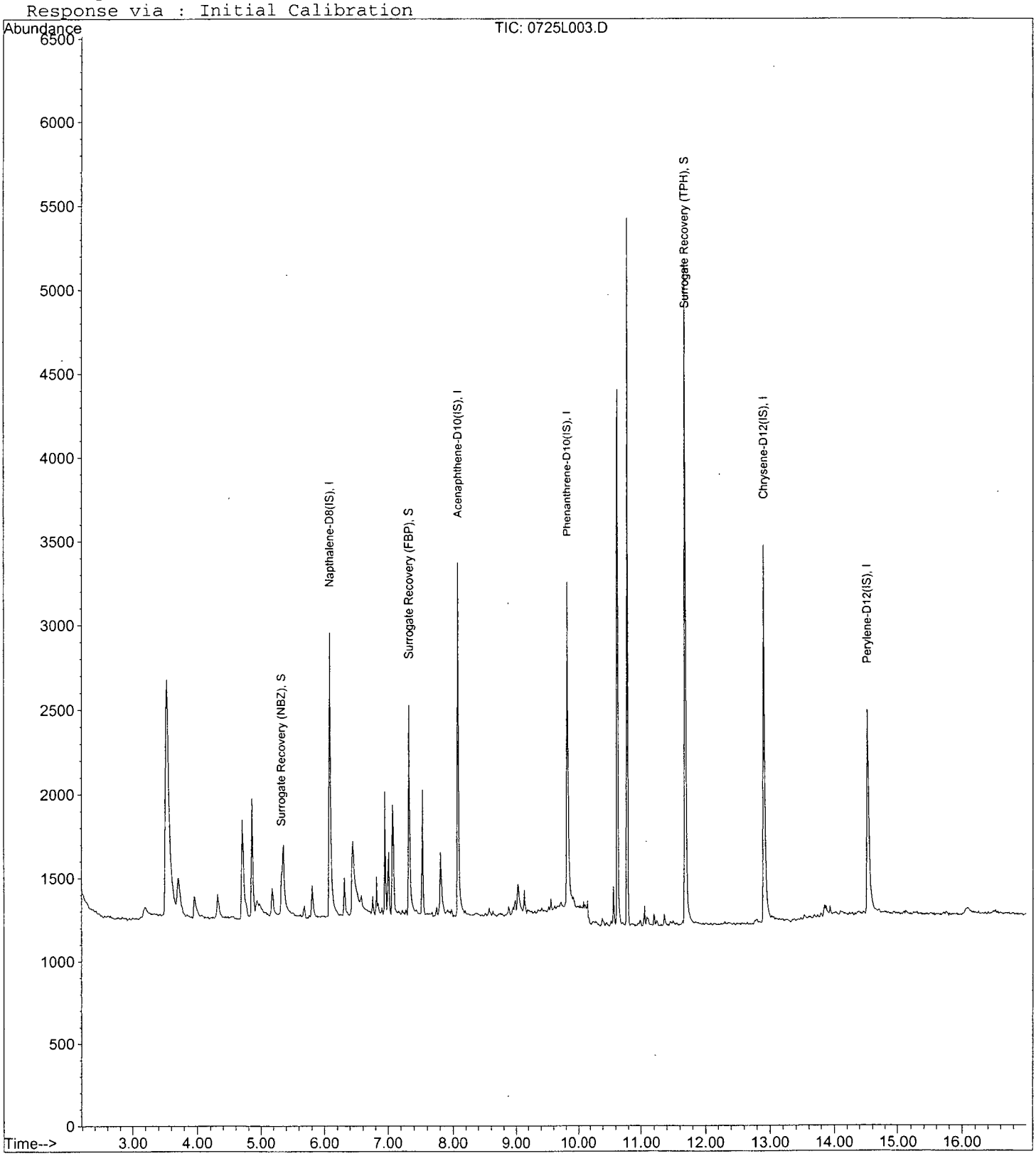
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0725L003.D Vial: 3
Acq On : 25 Jul 12 18:57 Operator: LF
Sample : 120725A BLK 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:20 2012 Quant Results File: SIMB.RES

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration



Laboratory Control Spike Recovery

EPA 8270D SIM

APPL ID: **120725W-65167 LCS - 169430**
Batch ID: #SIMHC-120725A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1-METHYLNAPHTHALENE	4.00	2.33	58.3	45-105
2-METHYLNAPHTHALENE	4.00	2.25	56.3	45-105
ACENAPHTHENE	4.00	2.54	63.5	45-110
ACENAPHTHYLENE	4.00	2.40	60.0	50-105
ANTHRACENE	4.00	2.54	63.5	55-110
BENZO(A)ANTHRACENE	4.00	2.31	57.8	55-110
BENZO(A)PYRENE	4.00	2.41	60.3	55-110
BENZO(B)FLUORANTHENE	4.00	2.65	66.3	45-120
BENZO(GHI)PERYLENE	4.00	2.48	62.0	40-125
BENZO(K)FLUORANTHENE	4.00	2.59	64.8	45-125
CHRYSENE	4.00	2.65	66.3	55-110
DIBENZ(A,H)ANTHRACENE	4.00	2.41	60.3	40-125
FLUORANTHENE	4.00	2.72	68.0	55-115
FLUORENE	4.00	2.66	66.5	50-110
INDENO(1,2,3-CD)PYRENE	4.00	2.22	55.5	45-125
NAPHTHALENE	4.00	2.27	56.8	40-100
PHENANTHRENE	4.00	2.61	65.3	50-115
PYRENE	4.00	2.56	64.0	50-130
SURROGATE: 2-FLUORBIPHENYL (S)	2.00	1.27	63.5	50-110
SURROGATE: NITROBENZENE-D5 (S)	2.00	1.39	69.5	40-110
SURROGATE: TERPHENYL-D14 (S)	2.00	1.99	99.5	50-135

Comments: _____

Primary	SPK
Quant Method :	SIMB.M
Extraction Date :	07/25/12
Analysis Date :	07/25/12
Instrument :	Linus
Run :	0725L004
Initials :	LF

Printed: 07/27/12 12:17:39 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : M:\LINUS\DATA\L120613\0725L004.D Vial: 4
Acq On : 25 Jul 12 19:23 Operator: LF
Sample : 120725A LCS-1 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:24 2012 Quant Results File: SIMB.RES

Quant Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration
DataAcq Meth : 87SIMAQ

Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Napthalene-D8(IS)	6.08	136	2533 ✓	2.50000	ppb ✓		-0.04
6) Acenaphthene-D10(IS)	8.08	164	1174	2.50000	ppb		-0.05
12) Phenanthrene-D10(IS)	9.82	188	2346	2.50000	ppb		-0.04
16) Chrysene-D12(IS)	12.90	240	2948	2.50000	ppb		0.00
22) Perylene-D12(IS)	14.52	264	2233	2.50000	ppb		-0.01
System Monitoring Compounds							
2) Surrogate Recovery (NBZ)	5.32	82	659	1.39126	ppb		-0.01
Spiked Amount 2.000			Recovery =	69.550%			
7) Surrogate Recovery (FBP)	7.32	172	1394	1.26835	ppb		-0.05
Spiked Amount 2.000			Recovery =	63.400%			
18) Surrogate Recovery (TPH)	11.69	244	2933	1.98872	ppb		-0.05
Spiked Amount 2.000			Recovery =	99.450%			
Target Compounds							Qvalue
3) Naphthalene	6.11	128	3703 ✓	2.26986 ✓	ppb		100
4) 2-Methylnaphthalene	6.89	142	2376	2.24737	ppb		94
5) 1-Methylnaphthalene	7.00	142	2475	2.32693	ppb		97
8) 1,1'-Biphenyl	7.43	154	2717	2.22817	ppb		90
9) Acenaphthylene	7.92	152	3849	2.39854	ppb		97
10) Acenaphthene	8.12	154	2259	2.53779	ppb		93
11) Fluorene	8.72	166	2727	2.66367	ppb		98
13) Phenanthrene	9.85	178	4389	2.61039	ppb		99
14) Anthracene	9.91	178	4226	2.53948	ppb		97
15) Fluoranthene	11.22	202	6569	2.71619	ppb	#	82
17) Pyrene	11.49	202	6814	2.55669	ppb		93
19) Benz (a) anthracene	12.89	228	5411	2.31016	ppb		95
20) Chrysene	12.94	228	6005	2.65394	ppb	#	96
21) Indeno (1,2,3-cd) pyrene	16.03	276	5297	2.21778	ppb		70
23) Benzo (b) fluoranthene	14.08	252	5215	2.65443	ppb	#	88
24) Benzo (k) fluoranthene	14.12	252	5193	2.58913	ppb		95
25) Benzo (a) pyrene	14.47	252	4549	2.40937	ppb		99
26) Dibenz (a,h) anthracene	16.04	278	4140	2.41433	ppb		88
27) Benzo (g,h,i) perylene	16.46	276	4436	2.48004	ppb		90

$\frac{3703 \times 2.5}{2533 \times 1.60} = 2.27$ LF 8/10/12

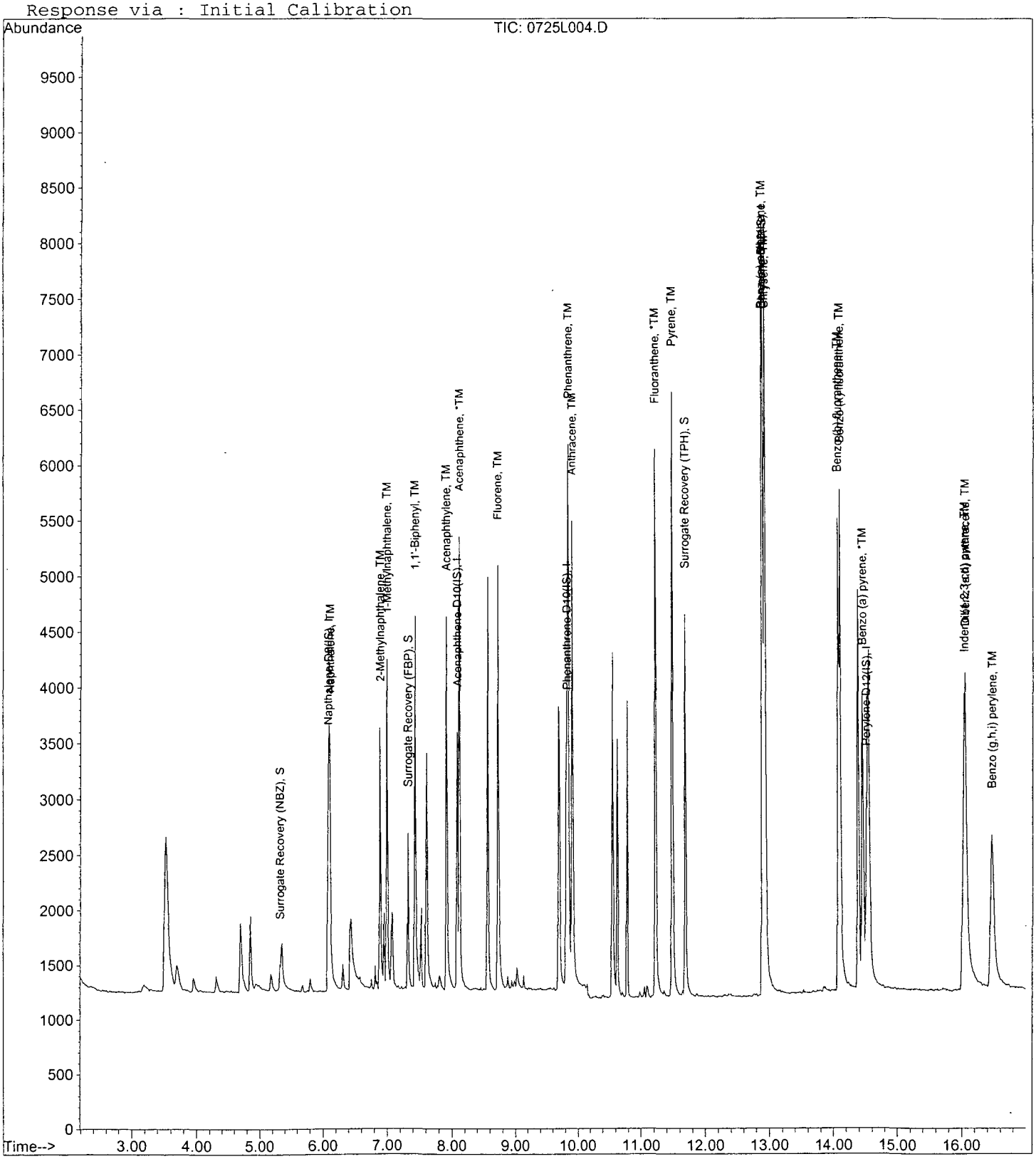
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\LINUS\DATA\L120613\0725L004.D Vial: 4
Acq On : 25 Jul 12 19:23 Operator: LF
Sample : 120725A LCS-1 1/1000 Inst : Linus
Misc : Multiplr: 1.00

Quant Time: Jul 27 8:24 2012 Quant Results File: SIMB.RES

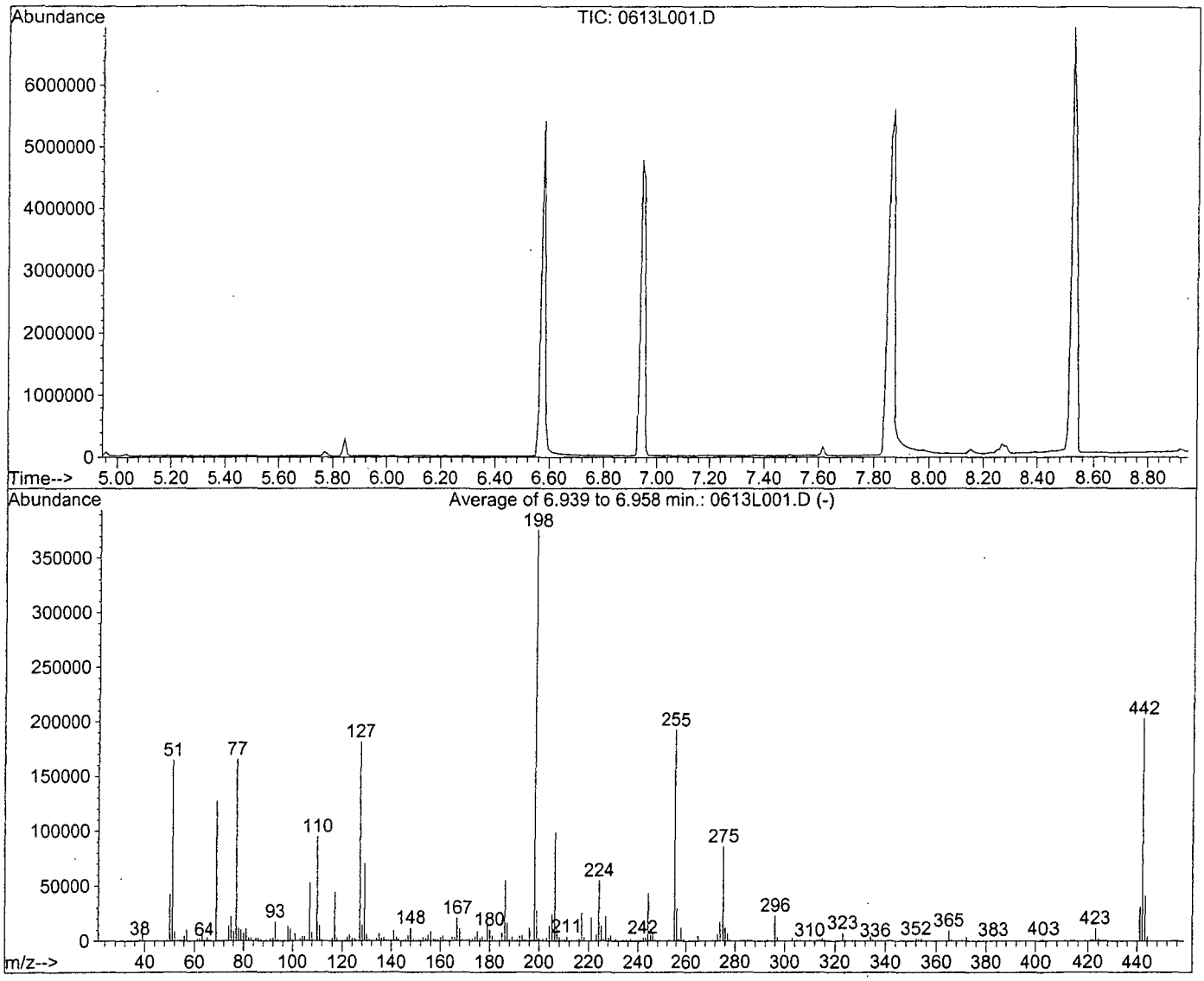
Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration



DFTPP

Data File : M:\LINUS\DATA\L120613\0613L001.D Vial: 1
Acq On : 13 Jun 12 13:07 Operator: LF
Sample : SVTUNE 2-28-12 Inst : Linus
Misc : Multiplr: 1.00

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 6.939 to 6.958 min.

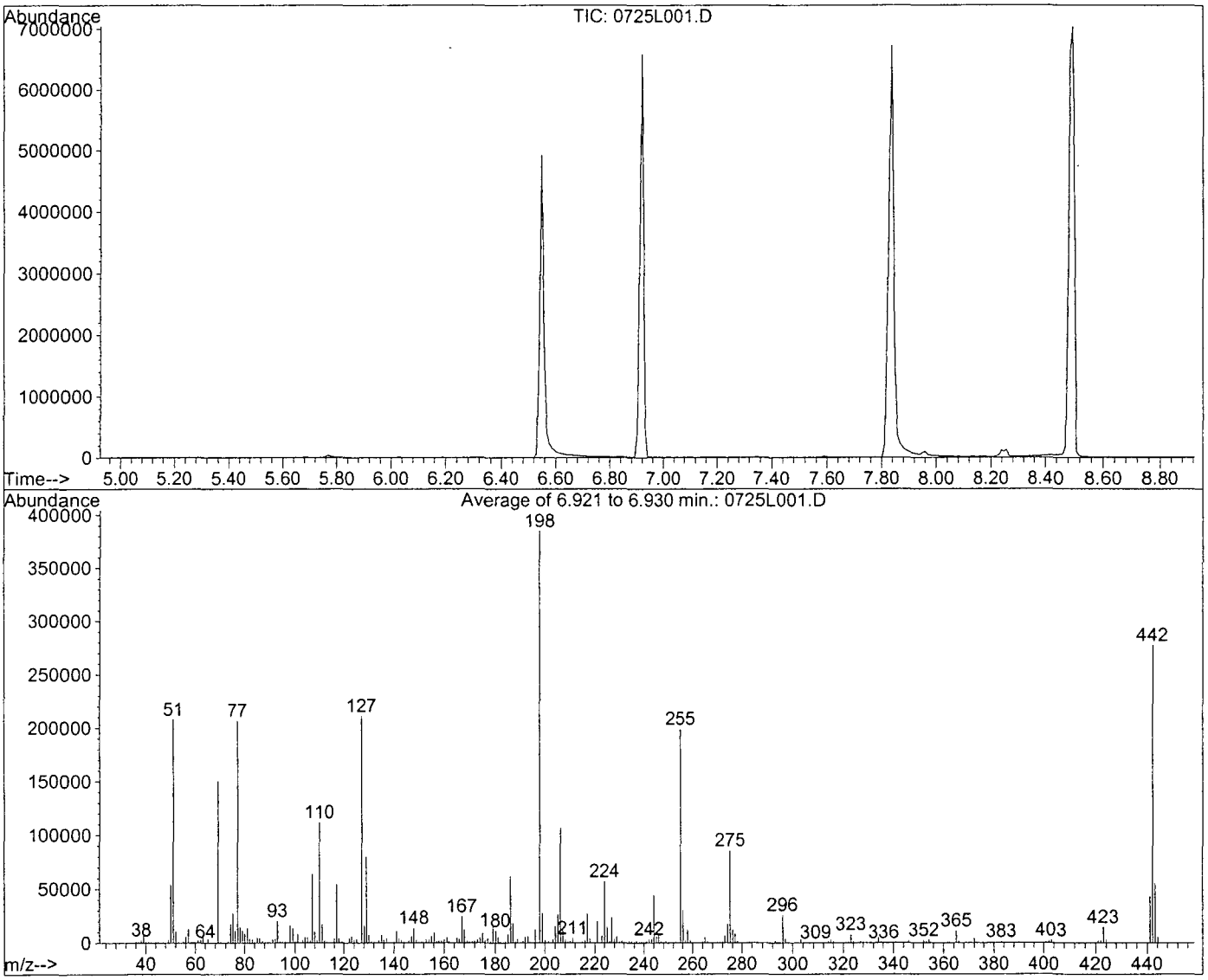
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	43.8	164628	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.5	681	PASS
127	198	40	60	48.3	181462	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	375479	PASS
199	198	5	9	7.2	27064	PASS
275	198	10	30	22.8	85713	PASS
365	198	1	100	2.5	9250	PASS
441	443	0.01	100	75.8	30917	PASS
442	198	40	150	53.9	202264	PASS
443	442	17	23	20.2	40782	PASS

DFTPP

Data File : M:\LINUS\DATA\L120613\0725L001.D
Acq On : 25 Jul 12 18:12
Sample : SVTUNE 2-28-12
Misc :

Vial: 1
Operator: LF
Inst : Linus
Multiplr: 1.00

Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C



Spectrum Information: Average of 6.921 to 6.930 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	53.9	207646	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	928	PASS
127	198	40	60	54.8	210956	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	384992	PASS
199	198	5	9	7.3	27977	PASS
275	198	10	30	22.2	85462	PASS
365	198	1	100	2.9	11042	PASS
441	443	0.01	100	77.5	42884	PASS
442	198	40	150	72.0	277056	PASS
443	442	17	23	20.0	55324	PASS

0725L001.D SIMB.M Fri Jul 27 09:12:50 2012

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
ABSOLUTE STANDARD
CLP Semi-Volatiles Base/Neutrals Mix #1
Lot # 042910 - 28440
Rec 3/8/11 MFR exp 4/29/2013

exp 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
ABSOLUTE STANDA
Lot #: 042910 - 29085
Rec: 8/4/11 MFR exp. 04/29/13

exp 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
ABSOLUTE STANDARDS
CLP Semi-Volatiles Base/Neutrals Mix #2
Lot # 073109 - 28446
Rec: 3/8/11 MFR exp. 7/31/2012

exp 7/31/12

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
ABSOLUTE STANDAF
CLP Semi-Volatiles Base Neutrals Mix #2
Lot # 073109 - 29090
Rec. 8/4/11 MFR exp 07/31/12

exp 7/31/12

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
ABSOLUTE STANDARDS
CLP Semi-Volatiles Toxic Substances #1
Lot #. 101509 - 28453
Rec. 3/8/11 MFR exp 10/15/201

exp 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 metl
ABSOLUTE STANDAR
CLP Semi-Volatiles Toxic Substances #1
Lot #: 101509 - 29095
Rec: 8/4/11 MFR exp. 10/15/14

exp 10/18/12

Part #: 10005 Laboratory Use Only - See MSDS
Lot #: 061209 Exp: 061214 Storage 4 °C
CLP Semi-Volatiles To... Substances #2
8 components
2000 ug/mL in methy
ABSOLUTE STANDARD
CLP Semi-Volatiles Toxic Substances #2
Lot #: 061209 - 28458
Rec: 3/8/11 MFR exp. 6/12/2014

exp 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
ABSOLUTE STANDAR
CLP Semi-Volatiles Toxic Substances #2
Lot #: 121208 - 29100
Rec: 8/4/11 MFR exp. 12/12/13

exp 10/18/12

GC/MS STANDARD PREPARATION BOOK # J PAGE # 112

VF 2/25/12

8270D PAH SIM Solution, 200 mg/L, 1 ml

110780-01

Lot #	Storage	Expiry
170253	≤-10 Degrees C	3/3/13

Solv: Methylene Chloride

Per R&D only, not known consump. Made in the USA

Exp 2/25/13

8270D PAH SIM
Lot # 170253 - 28478
Rec 3/10/11 MFR exp 3/3/2013

VF 2/25/12

8270D PAH SIM Solution, Second Source, 200 mg/L, 1 ml

110780-01-SS

Lot #	Storage	Expiry
170256	≤-10 Degrees C	3/3/13

Solv: Methylene Chloride

Per R&D only, not known consump. Made in the USA

Exp 2/25/13

8270D PAH SIM (SS)
Lot # 170256 - 28490
Rec: 3/10/11 MFR exp. 3/3/2013

VF 2/25/12

8270 BN:A (200:400) Surrogate Solution, 1 ml

110004-17

Lot #	Storage	Expiry
167802	≤-10 Degrees C	1/9/13

Solv: Methylene Chloride

R&D only, not known consump. Made in the USA

Exp 1/9/13

8270 BN:A (200:400) Surrogate Solution
Lot #. 167802 - 29314
Rec. 8/8/11 MFR exp. 01/09/13

VF 2/25/12

Method 8270 Internal Standard Solution, 2,000 mg/L, 1 ml

110001-02

Lot #	Storage	Expiry
167766	≤-10 Degrees C	4/20/13

Solv: Methylene Chloride

R&D only, not known consump. Made in the USA

Exp 2/25/13

8270 Internal Standard
Lot #: 167766 - 28151
Rec: 1/20/11 MFR exp. 04/20/13

VF 2/25/12

PREP DATE:	02-25-12					
SIM Semivolitile Int. Std. Mix 125 ug/ml						
Exp:	08-25-12					
		Conc.		Date	CODE:	B
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
O2SI	Int. Std.	2000	167766-28151	02/25/12	02-25-13	100
EM Science	MeCl2		47186			1500
						1600

VF 2/25/12

PREP DATE:	02-25-12												
8270 SIM STANDARD CURVE													
						0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
		Conc.		Date	CODE:	A	A	C	D	E	F	G	H
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

UF 2/27/12

PREP DATE:	02-25-12						
SIM 8270 Second Source (5µg/mL)							
Exp:	03-10-12						
				Conc.	Date	CODE:	
Supplier	ID #		Lot #	µg/mL	Code	Exp.Date	µL
	8270D PAH SIM (SS)		170256-28490	200	02/25/12	02-25-13	5
	MeCl2			Lot#47186			195
					Final Volume		200

UF 2/25/12

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
ULTRA 1 mL
For Lab Use Only

UF

exp 2/28/13

UF 2/28/12

PREP DATE:	02-28-12					
SV Tune Mix 50ug/ml						
Exp:	02-28-13					
		Conc.		Date	CODE:	B
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
U. Scientific	GCM-150	1000	CH-2137	02/28/12	07-31-13	1000
EM Science	MeCl2		47080			19000
					Final Vol	20000

UF 2/29/12

UF

PREP DATE:	02-29-12												
8270 SIM STANDARD CURVE													
						0.10	0.20	0.50	1.00	5.00	10.00	50.00	100.00
		Conc.		Date	CODE:	A	A	C	D	E	F	G	H
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		02/29/12		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

UF 2/29/12

UF

PREP DATE:	02-29-12						
SIM 8270 Second Source (5µg/mL)							
Exp:	03-14-12						
				Conc.	Date	CODE:	
Supplier	ID #		Lot #	µg/mL	Code	Exp.Date	µL
	8270D PAH SIM (SS)		170256-28490	200	02/25/12	02-25-13	5
	MeCl2			Lot#47186			195
					Final Volume		200

UF 3/18/12

UF

PREP DATE:	03-18-12												
8270 STANDARD CURVE													
						5	10	20	40	50	60	80	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
	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

UF 3/18/12

PREP DATE:	03-18-12					
8270 Second Source (SS) 50ug/mL						
						50
		Conc.		Date	CODE:	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	8270C SS	200		10/11/11	10-11-12	25
EM Science	Methylene Chloride		47186			75

UF

VF 5/1/12

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 me
ABSOLUTE STANDA

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 042910 - 29081
Rec. 8/4/11 MFR exp. 04/29/13

VF

Exp 4/29/13

VF 5/1/12

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 meth
ABSOLUTE STANDAR

CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 073109 - 29086
Rec: 8/4/11 MFR exp. 07/31/12

VF

Exp 7/31/12

VF 5/1/12

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 meth
ABSOLUTE STANDARI

CLP Semi-Volatiles Toxic Substances #1
Lot #: 101509 - 29091
Rec: 8/4/11 MFR exp. 10/15/14

VF

Exp 10/15/14

VF 5/1/12

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 me
ABSOLUTE STANDA

CLP Semi-Volatiles Toxic Substances #2
Lot #: 121208 - 29097
Rec. 8/4/11 MFR exp. 12/12/13

VF

Exp 12/12/13

VF 5/1/12

Part #: 10006 Laboratory Use Only - See MSDS
Lot #: 071211 Exp: 071214 Storage 4 °C



CLP Semi-Volatiles - Benzidines
2 components
2000 ug/mL in meth
ABSOLUTE STANDAR

CLP Semi-Volatiles - Benzidines
Lot #: 071211 - 29102
Rec: 8/4/11 MFR exp. 07/12/14

VF

Exp 7/12/14

VF 5/1/12

Part #: 10007 Laboratory Use Only - See MSDS
Lot #: 100909 Exp: 100914 Storage 4 °C



CLP Semi-Volatiles - PAH Standard
17 components
2000 ug/mL in meth
ABSOLUTE STANDARI

CLP Semi-Volatiles - PAH Mix
Lot #: 100909 - 29107
Rec. 8/4/11 MFR exp. 10/09/14

VF

Exp 10/9/14

VF 5/1/12

Part #: 10018 Laboratory Use Only - See MSDS
Lot #: 062111 Exp: 062116 Storage 4 °C



EPA Method 8270A - Analytes Mix #8
13 components - PI
2000 ug/mL in meth
ABSOLUTE STANDAR

EPA Method 8270A - Analytes Mix #8
Lot #: 062111 - 29112
Re 1 MFR exp. 06/21/16

VF

Exp 6/21/16

VF 5/1/12

Part #: 70023 Laboratory Use Only - See MSDS
Lot #: 031611 Exp: 031616 Storage 4 °C



Atrazine
1000 ug/mL in ac
ABSOLUTE STANDA

Atrazine
Lot #: 031611 - 29117
Rec: 8/4/11 MFR exp. 03/16/16

VF

Exp 3/16/16

Part #: 82705 Laboratory Use Only - See MSDS
Lot #: 041911 Exp: 041914 Storage 4 °C



EPA Method 8270A
4 components
2000 ug/mL in acet

EPA Method 8270A - Mix #18
Lot #: 041911 - 29122
Rec: 8/4/11 MFR exp. 04/19/14

ABSOLUTE STANDARD

Part #: 94552 Laboratory Use Only - See MSDS
Lot #: 030411 Exp: 030414 Storage 4 °C



Semi-Volatile Standard
11 components
Varied ug/mL in m

Semi-Volatile Standard
Lot #: 030411 - 29127
Rec: 8/4/11 MFR exp. 03/04/14

ABSOLUTE STANDARD

PREP DATE:	05-01-12					
8270C Stock/Spike Standard						
Exp:	07-31-12					
		Conc.		Date	CODE:	P
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
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

PREP DATE:	05-04-12												
8270 STANDARD CURVE													
						5	10	20	40	50	60	80	100
		Conc.		Date									
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL	µL	µL	µL	µL	µL	µL	µL
	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

PREP DATE:	05-04-12					
8270 Second Source (SS) 50ug/mL						50
		Conc.		Date	CODE:	
Supplier	ID #	µg/mL	Lot #	Code	Exp.Date	µL
	8270C SS	200		10/11/11	10-11-12	25
						75
EM Science	Methylene Chloride		47186			
					Final Vol.	100

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 met

CLP Semi-Volatiles Base/Neutrals Mix #1
Lot #: 042910 - 29082
Rec: 8/4/11 MFR exp. 04/29/13

ABSOLUTE STANDARD

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 me

CLP Semi-Volatiles Base Neutrals Mix #2
Lot #: 073109 - 29087
Rec: 8/4/11 MFR exp. 07/31/12

ABSOLUTE STANDARD

_SEP004S

Organic Extraction Worksheet

Method	SIM Separatory Funnel Extra 3510C	Extraction Set	120725A	Extraction Method	SEP004S	Units	mL

Spiked ID 1	SIM Spike 170745-30363		Surrogate ID 1	8270 SIM Surrogate 188684-30653	
Spiked ID 2			Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	07/25/12 12:04	
Spiked ID 8			Ext. End Time:	16:29 7/25/12	
			GC Requires Extract By:	**08/03/12 0:00**	

pH1	2	07/25/12 12:04:00 PM	Water Bath Temp Criteria	76,80 °C
pH2	14	07/25/12 1:20:00 PM		
pH3				

Spiked By: GH **Date** 07/25/12 **Witnessed By:** DRA **Date** 07/25/12

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	120725A Blk				0.025	1	1000	1	2/1	07/25/12 12:04	
						equip	E-WB5,76				
2	120725A LCS-1		0.025	1	0.025	1	1000	1	2/1	07/25/12 12:04	
						equip	E-WB5,76				
3	AY65166	AY65166W07			0.025	1	1050	1	2/1	07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
4	AY65167 MS-1	AY65167W10	0.025	1	0.025	1	1050	1	2/1	07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
5	AY65167 MSD-1	AY65167W13	0.025	1	0.025	1	1050	1	2/1	07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
6	AY65167	AY65167W09			0.025	1	1000	1	2/1	07/25/12 12:04	68268-2 WEEK RUSH -- Amber Liter -- Amber Liter
						equip	E-WB6,80				
7	AY65220	AY65220W04			0.025	1	1000	1	2/1	07/25/12 12:04	68284-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				

DRA 7/25/12

Solvent and Lot#	
MC	EMD52104
Na2SO4	2351C512
10N NaOH	07/06/12
1+1 Acid	06/27/12
A. Na2SO4	06/28/12

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	
Date	7/25/12
Time	
Refrigerator	

	Technician's Initials
Scanned By	GH
Sample Preparation	GH
Extraction	JM
Concentration	IC
Modified	07/25/12 4:11:30 PM

Reviewed By: DRA **Date** 07/25/12

Injection Log

Directory: M:\LINUS\DATA\L120613\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0613L001.D	1	SVTUNE 2-28-12		13 Jun 12 13:07
2	3	0613L003.D	1	0.1ug/ml PAH 06-13-12		13 Jun 12 13:51
3	4	0613L004.D	1	0.2ug/ml PAH		13 Jun 12 14:16
4	5	0613L005.D	1	0.5ug/ml PAH		13 Jun 12 14:41
5	6	0613L006.D	1	1.0ug/ml PAH		13 Jun 12 15:07
6	7	0613L007.D	1	5.0ug/ml PAH		13 Jun 12 15:33
7	8	0613L008.D	1	10ug/ml PAH		13 Jun 12 15:59
8	9	0613L009.D	1	50ug/ml PAH		13 Jun 12 16:25
9	10	0613L010.D	1	100ug/ml PAH		13 Jun 12 16:51
10	11	0613L011.D	1	5.0ug/ml SS PAH 06-13-12		13 Jun 12 17:17
11	1	0725L001.D	1	SVTUNE 2-28-12		25 Jul 12 18:12
12	2	0725L002.D	1	5.0ug/ml PAH 06-13-12		25 Jul 12 18:31
13	3	0725L003.D	1	120725A BLK 1/1000		25 Jul 12 18:57
14	4	0725L004.D	1	120725A LCS-1 1/1000		25 Jul 12 19:23
15	9	0725L009.D	1	AY65220W04 1/1000		25 Jul 12 21:33

EPA 8015B
Total Petroleum Hydrocarbons

APPL, INC.

EPA 8015B
Total Petroleum Hydrocarbons -

QC Summary

APPL, INC.

Method Blank
TPH Diesel Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169638**
Batch ID: #TPETD-120726A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL FUEL	80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
BLANK	SURROGATE: OCTACOSANE (S)	64.4	28-142			%	07/26/12	08/01/12
BLANK	SURROGATE: ORTHO-TERPHEN	78.3	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731039
Instrument: Apollo
Sequence: 120731
Initials: SD

Printed: 08/02/12 5:54:46 PM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68284

Case No: 68284 Date Analyzed: 08/01/12

Matrix: WATER Instrument: Apollo

APPL ID.	Client Sample No.	SURROGATE: OCTACOSANE (S)			SURROGATE: ORTHO-TERPHENYL (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120726A-BLK	Blank	28-142	64.4		57-132	78.3	
120726A-LCS	Lab Control Spike	28-142	59.4		57-132	89.3	
AY65220	ES088	28-142	63.8		57-132	80.0	

Comments: Batch: #TPETD-120726A

Laboratory Control Spike Recovery
TPH Diesel Water

APPL ID: **120726W-65167 LCS - 169638**
Batch ID: #TPETD-120726A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL FUEL	2000	1370	68.5	61-143
SURROGATE: OCTACOSANE (S)	150	89.1	59.4	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	134	89.3	57-132

Comments: _____

Primary	SPK
Quant Method :	TPH0719.M
Extraction Date :	07/26/12
Analysis Date :	08/01/12
Instrument :	Apollo
Run :	731040
Initials :	SD

Printed: 08/02/12 5:54:36 PM
APPL Standard LCS

EPA 8015B-e

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68284

Case No: 68284 Date Analyzed: 08/01/12

Matrix: WATER Instrument: Apollo

Blank ID: 120726A-BLK Time Analyzed: 0111

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120726A-BLK	Blank	731039	08/01/12 0111
120726A-LCS	Lab Control Spike	731040	08/01/12 0135
AY65220	ES088	731056	08/01/12 0802

Comments: Batch: #TPETD-120726A

EPA 8015B
Total Petroleum Hydrocarbons -

Sample Data

APPL, INC.

TPH Diesel Water

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

Attn: Max Solmssen

Project: LTM Red Hill /1022-024

Sample ID: ES088

Sample Collection Date: 07/20/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68284

APPL ID: AY65220

QCG: #TPETD-120726A-169638

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8015B-	DIESEL FUEL	80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
EPA 8015B-	SURROGATE: OCTACOSANE (S)	63.8	28-142			%	07/26/12	08/01/12
EPA 8015B-	SURROGATE: ORTHO-TERPHENYL (S	80.0	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731056
Instrument: Apollo
Sequence: 120731
Dilution Factor: 1
Initials: SD

Printed: 08/02/12 5:54:39 PM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731056.D Vial: 56
Acq On : 8-1-12 8:02:08 Operator: LAC
Sample : AY65220W07 5/1040 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:47 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

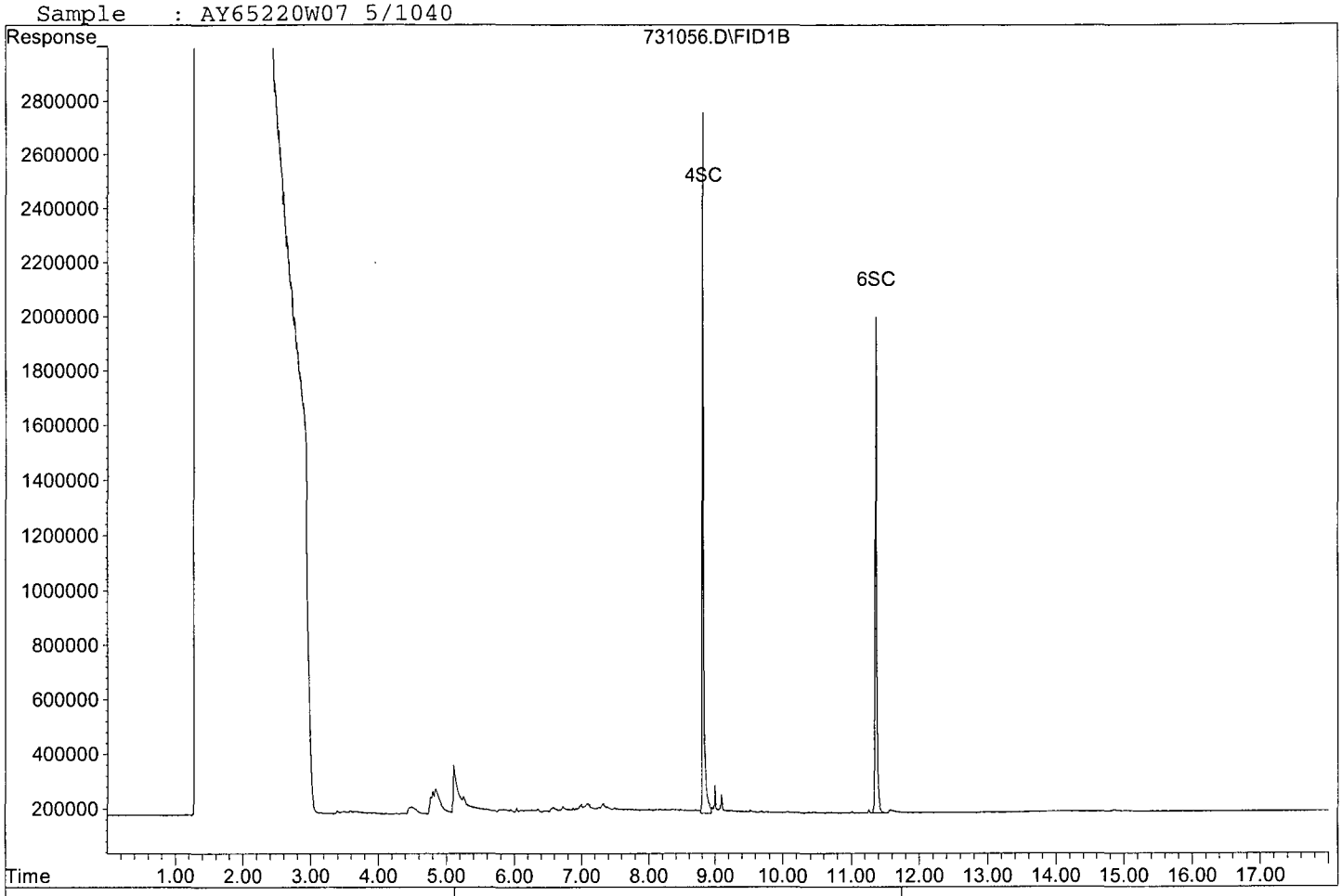
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

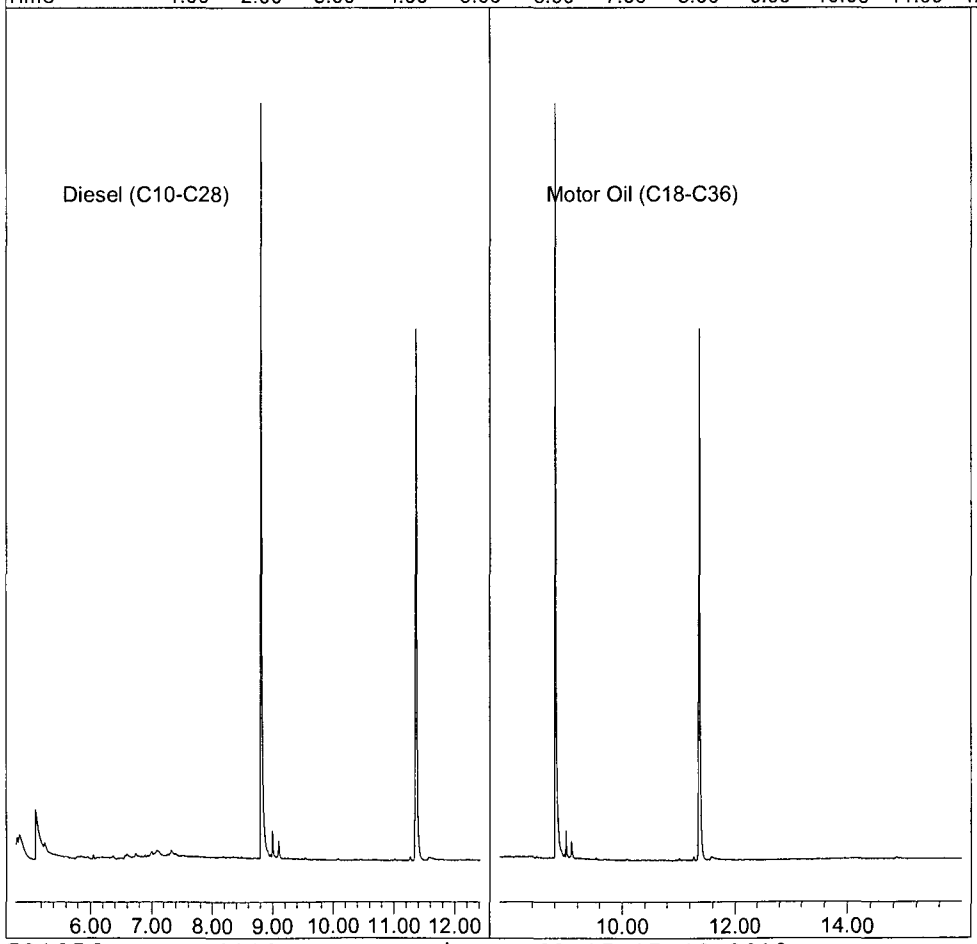
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	33818161	114.269 ppb
Surrogate Spike 142.857		Recovery =	79.99%
6) SC Octacosane(S)	11.36	28861950	91.190 ppb
Surrogate Spike 142.857		Recovery =	63.83%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731056.D
Sample : AY65220W07 5/1040





EPA 8015B
Total Petroleum Hydrocarbons -

Calibration Data

APPL, INC.

TPH Extractables
TPH0719

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68284
Case No: Initial Cal. Date: 06/22/2012 and 7/19/12
Matrix: 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													
6													
7													
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33													

* Not Used

0.475552

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622004.D Vial: 4
Acq On : 6-22-12 18:22:29 Operator: LAC
Sample : TCH SURROGATE 100/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

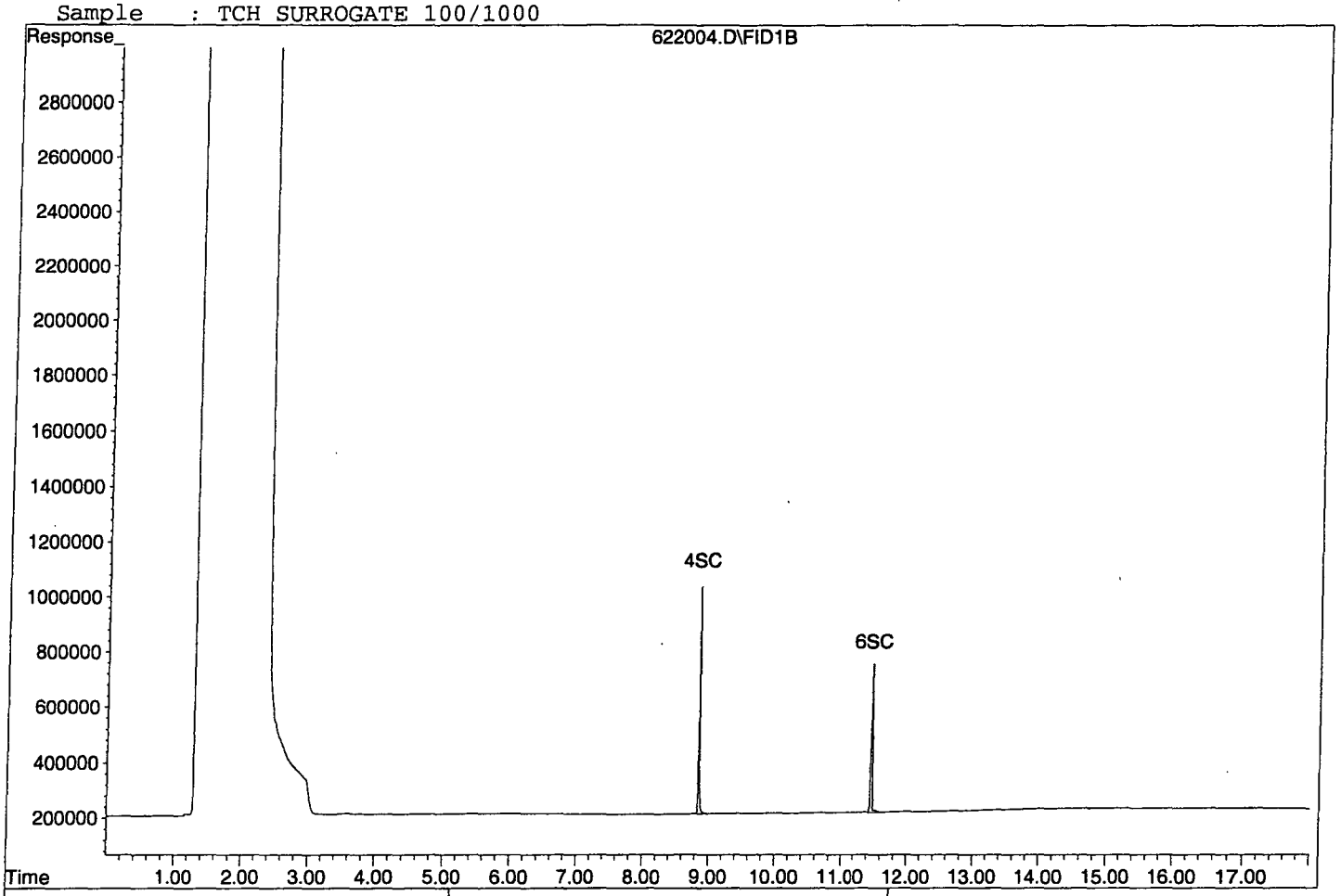
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

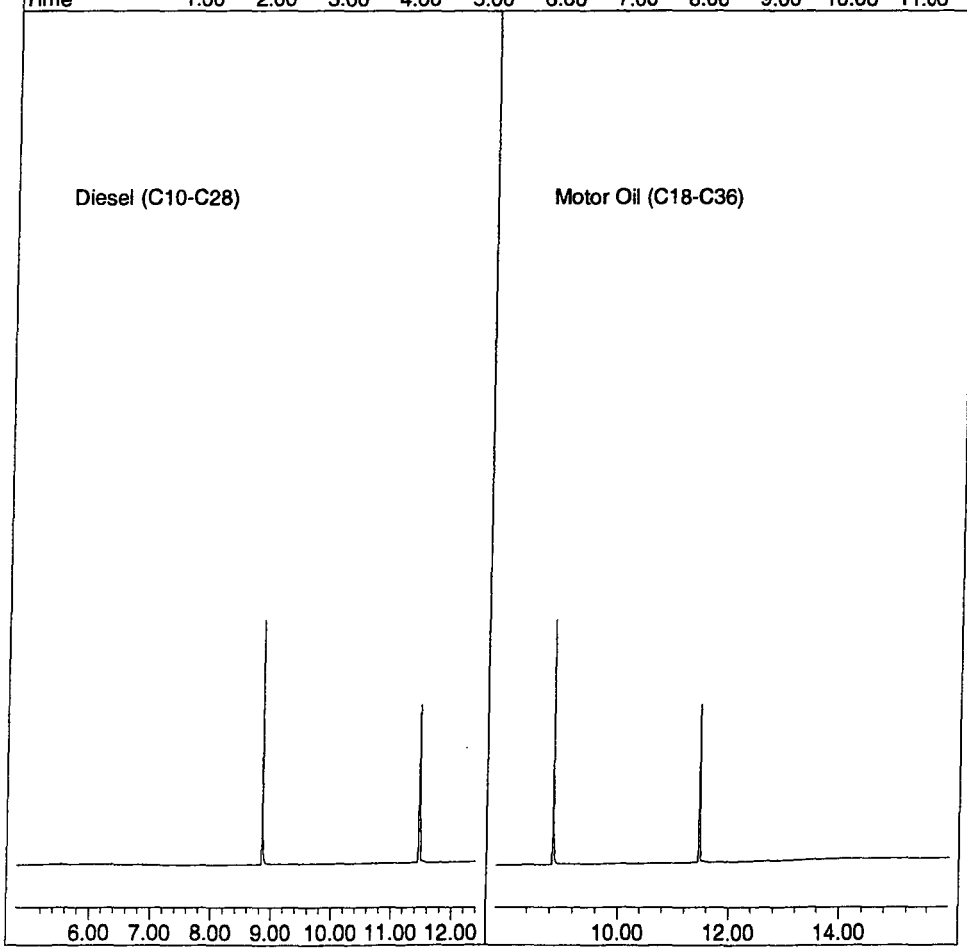
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc	Units
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				

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120622\622004.D
Sample : TCH SURROGATE 100/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622005.D Vial: 5
Acq On : 6-22-12 18:46:55 Operator: LAC
Sample : TCH SURROGATE 400/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

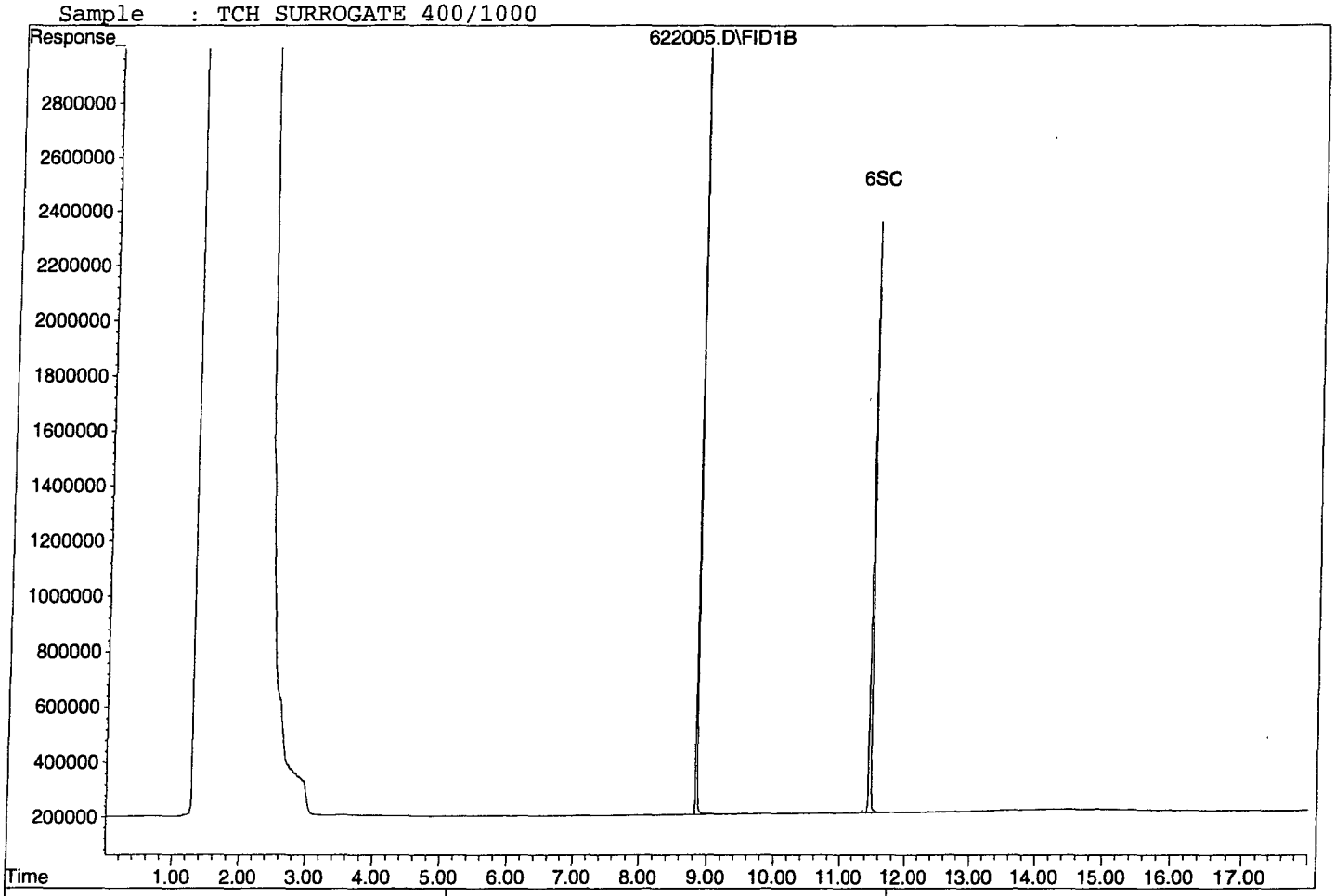
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

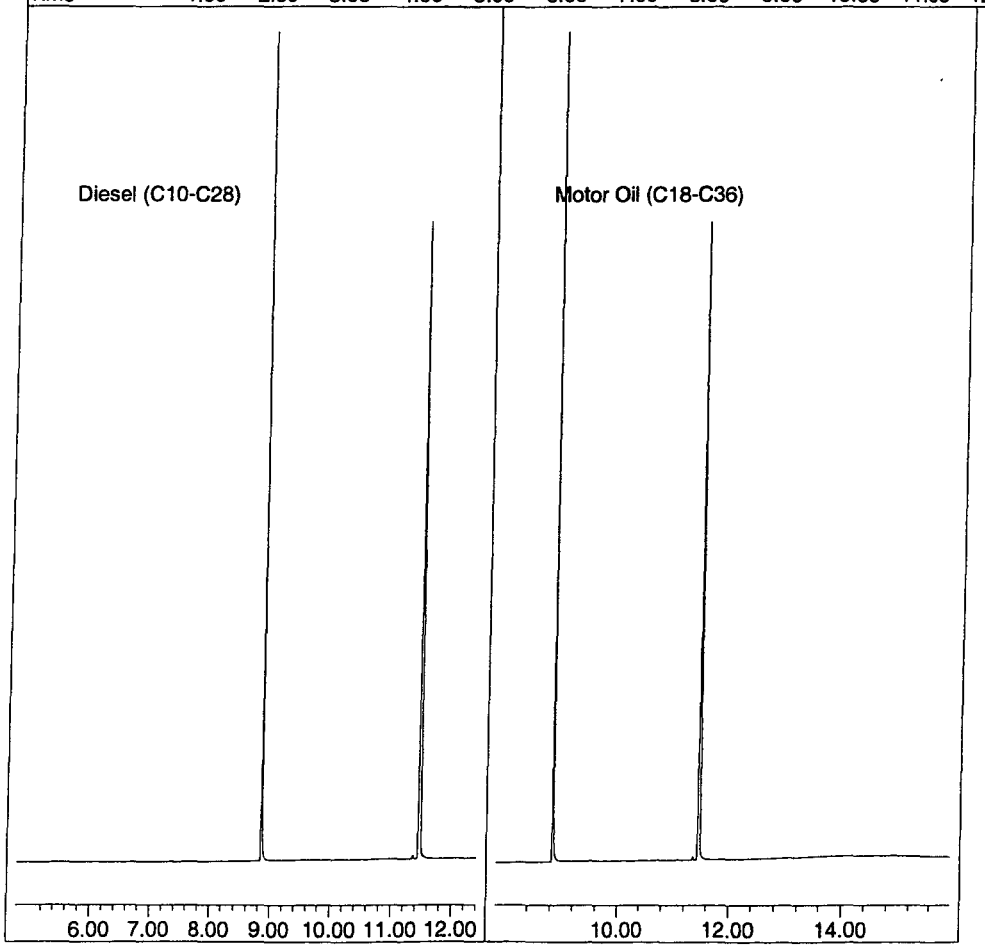
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.84	28202647	10.113 ppb
Surrogate Spike 30.000		Recovery =	33.71%
6) SC Octacosane(S)	11.47	30015782	12.394 ppb
Surrogate Spike 30.000		Recovery =	41.31%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120622\622005.D
Sample : TCH SURROGATE 400/1000





Quantitation Report (QT Reviewed)

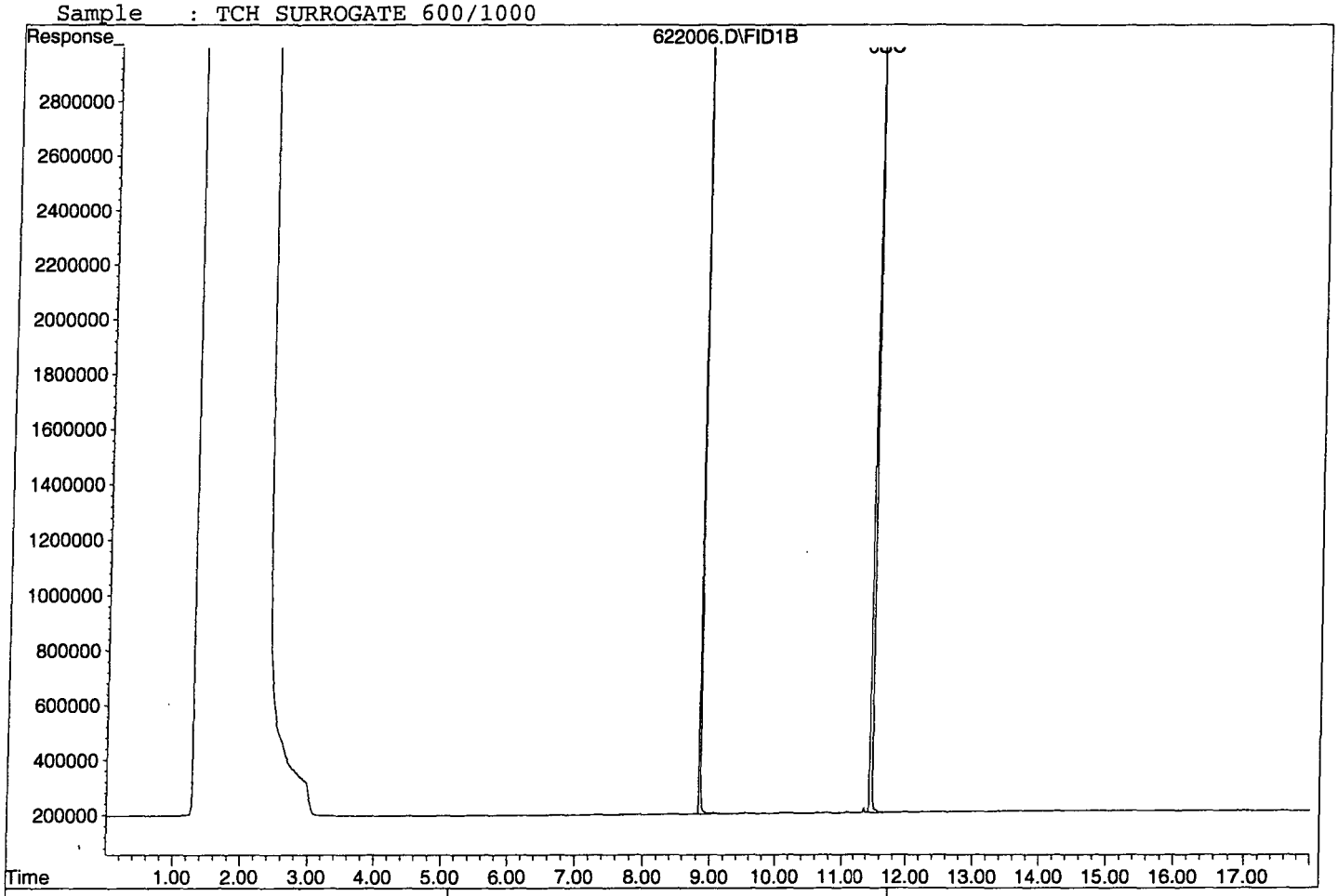
Data File : G:\APOLLO\DATA\120622\622006.D Vial: 6
Acq On : 6-22-12 19:10:46 Operator: LAC
Sample : TCH SURROGATE 600/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

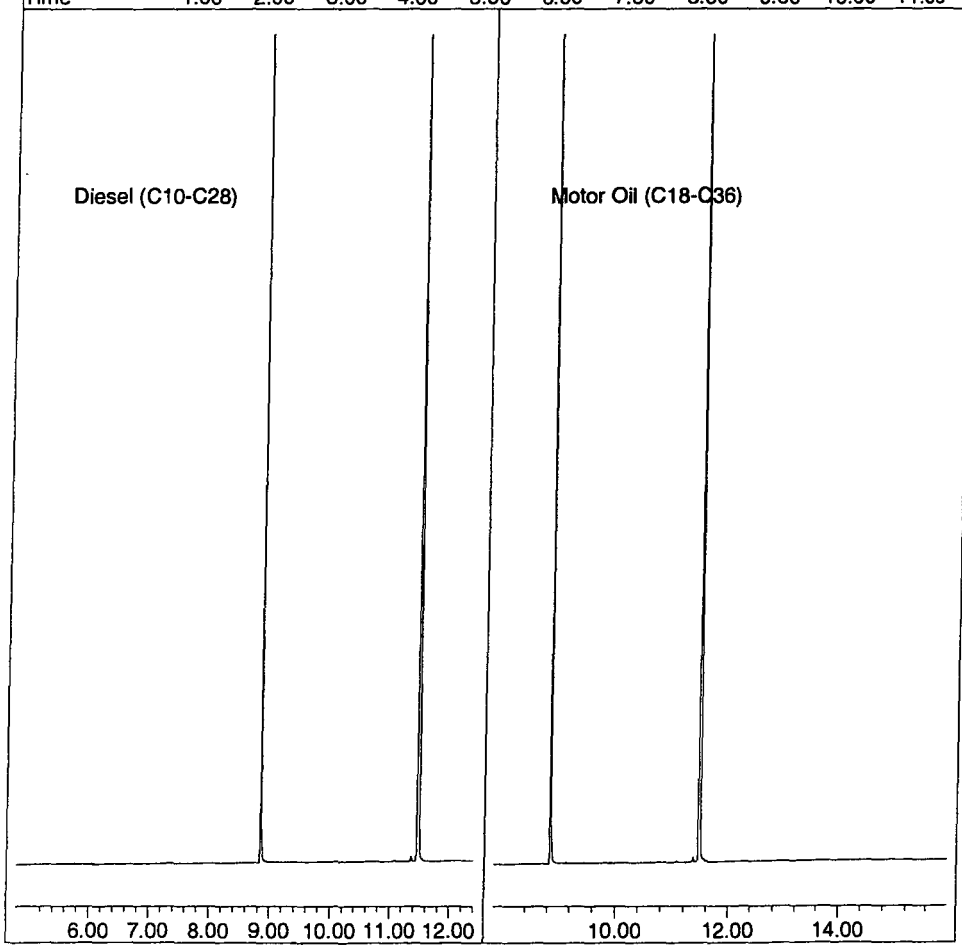
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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			

Data File: G:\APOLLO\DATA\120622\622006.D
Sample : TCH SURROGATE 600/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622007.D Vial: 7
Acq On : 6-22-12 19:34:47 Operator: LAC
Sample : TCH SURROGATE 800/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:38 2012 Quant Results File: TPH0622.RES

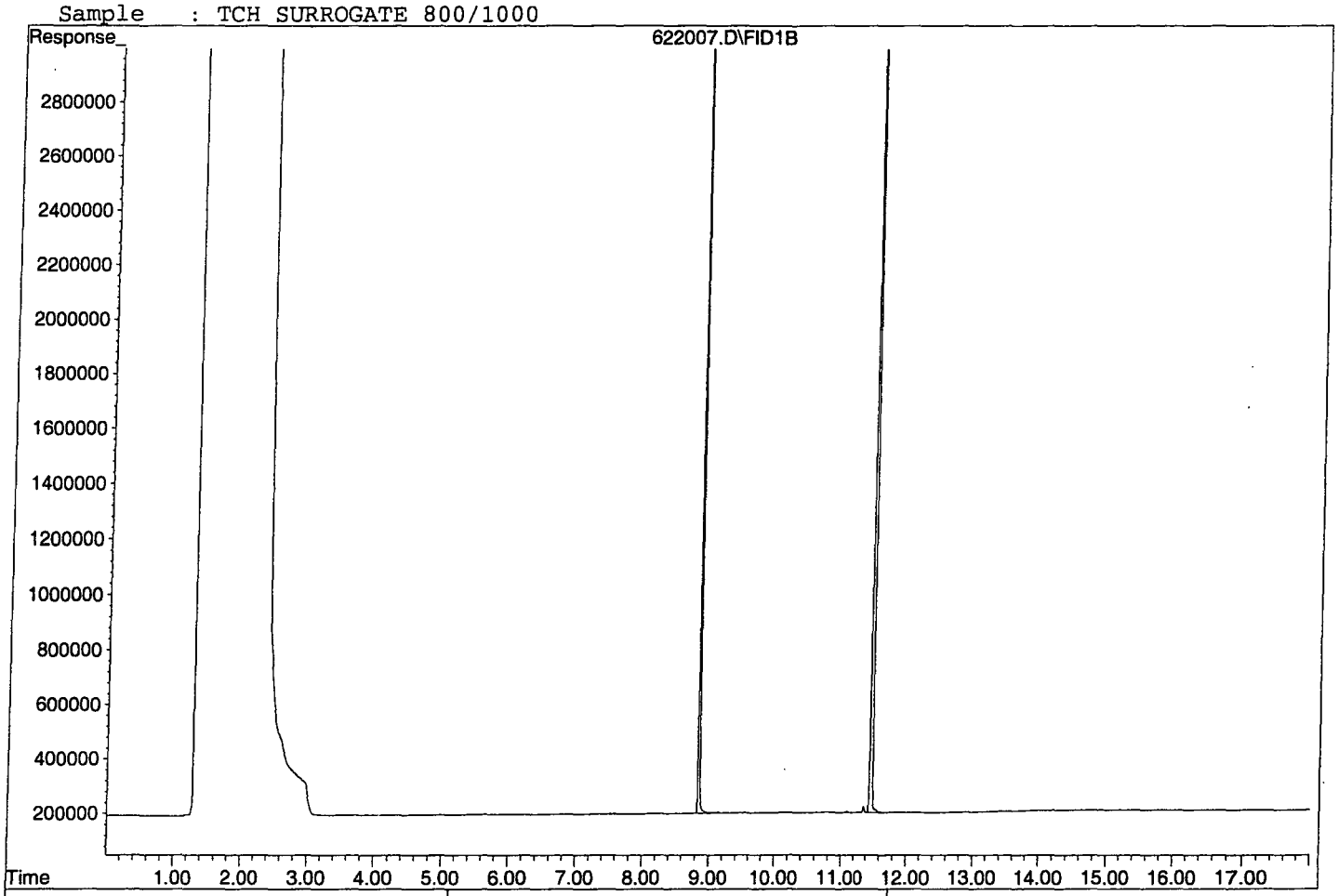
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

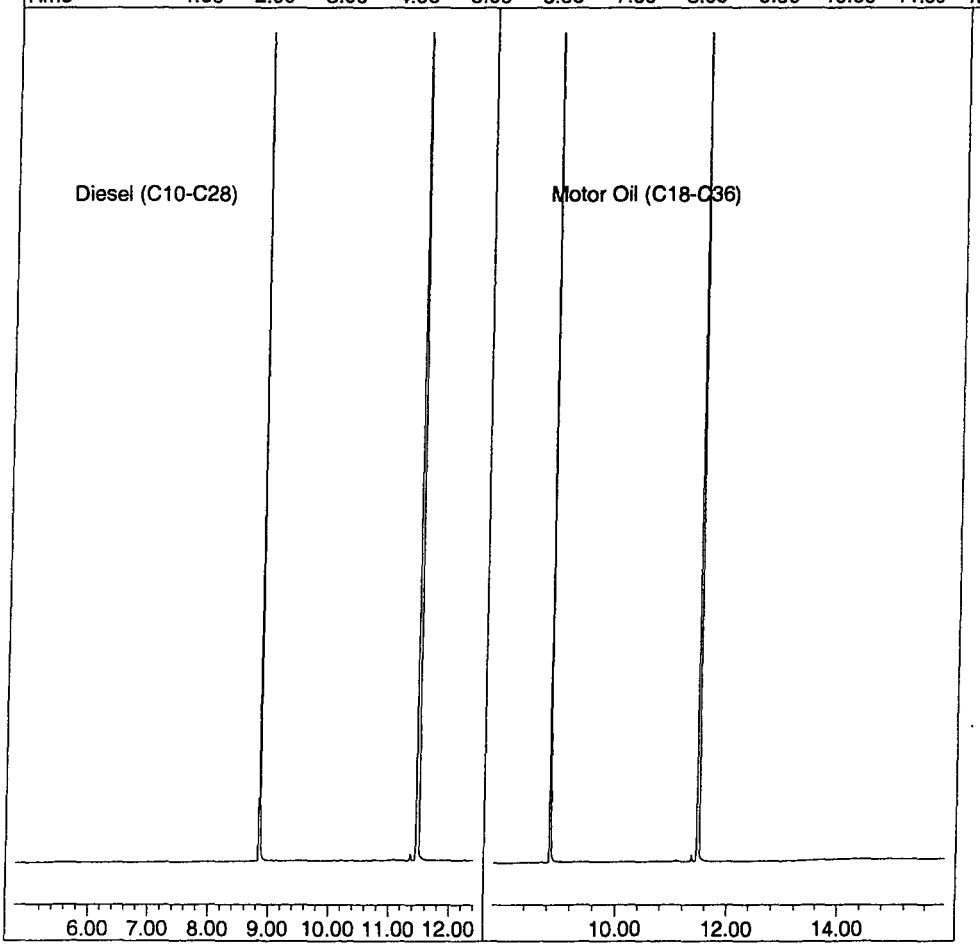
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120622\622007.D
Sample : TCH SURROGATE 800/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622008.D Vial: 8
Acq On : 6-22-12 19:58:49 Operator: LAC
Sample : TCH SURROGATE 1000/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:39 2012 Quant Results File: TPH0622.RES

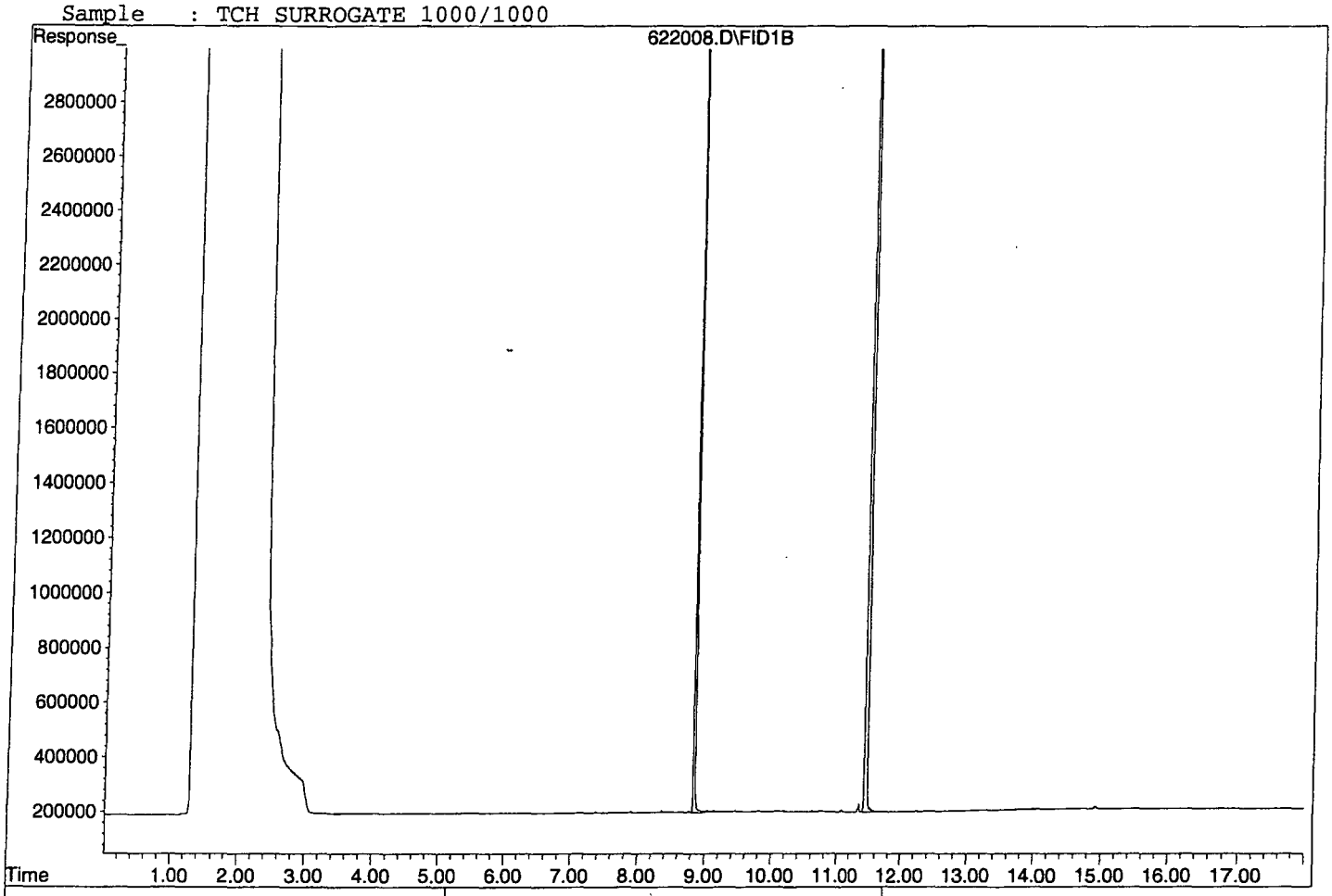
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

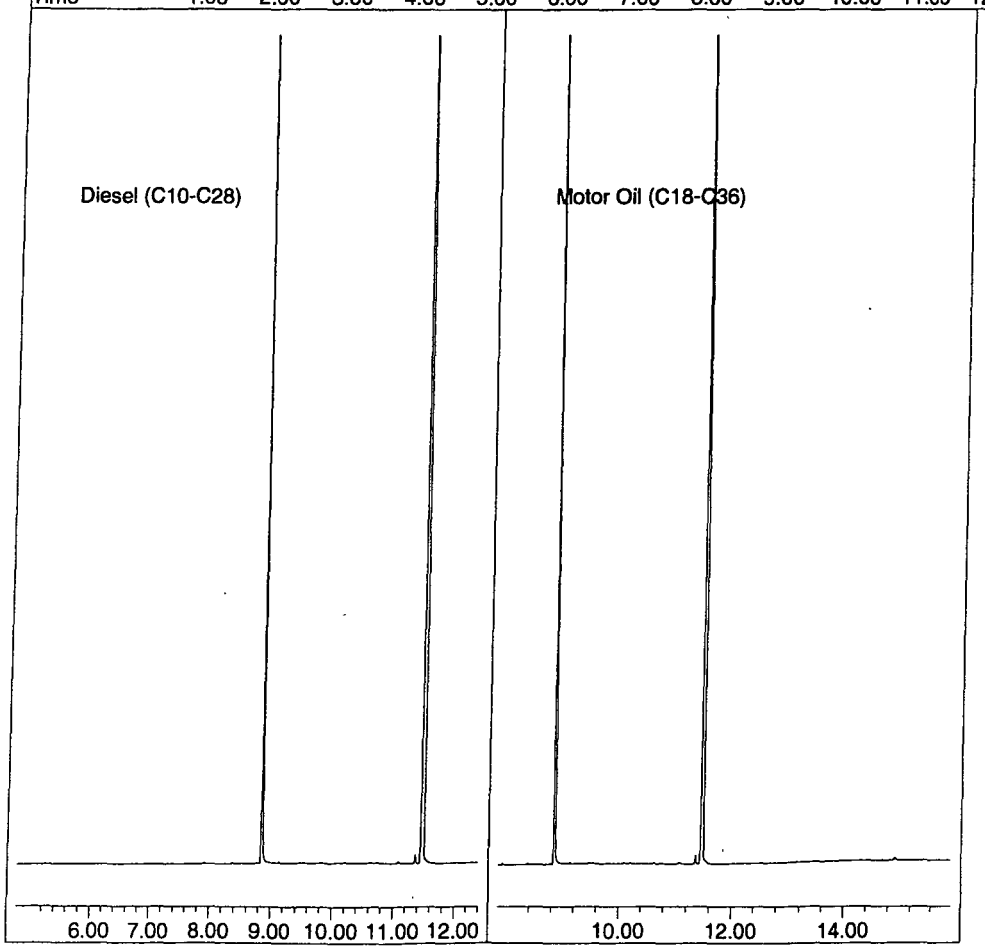
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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			

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120622\622008.D
Sample : TCH SURROGATE 1000/1000





Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622009.D Vial: 9
Acq On : 6-22-12 20:22:56 Operator: LAC
Sample : DIESEL 10/1000 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:08 2012 Quant Results File: TPH0622.RES

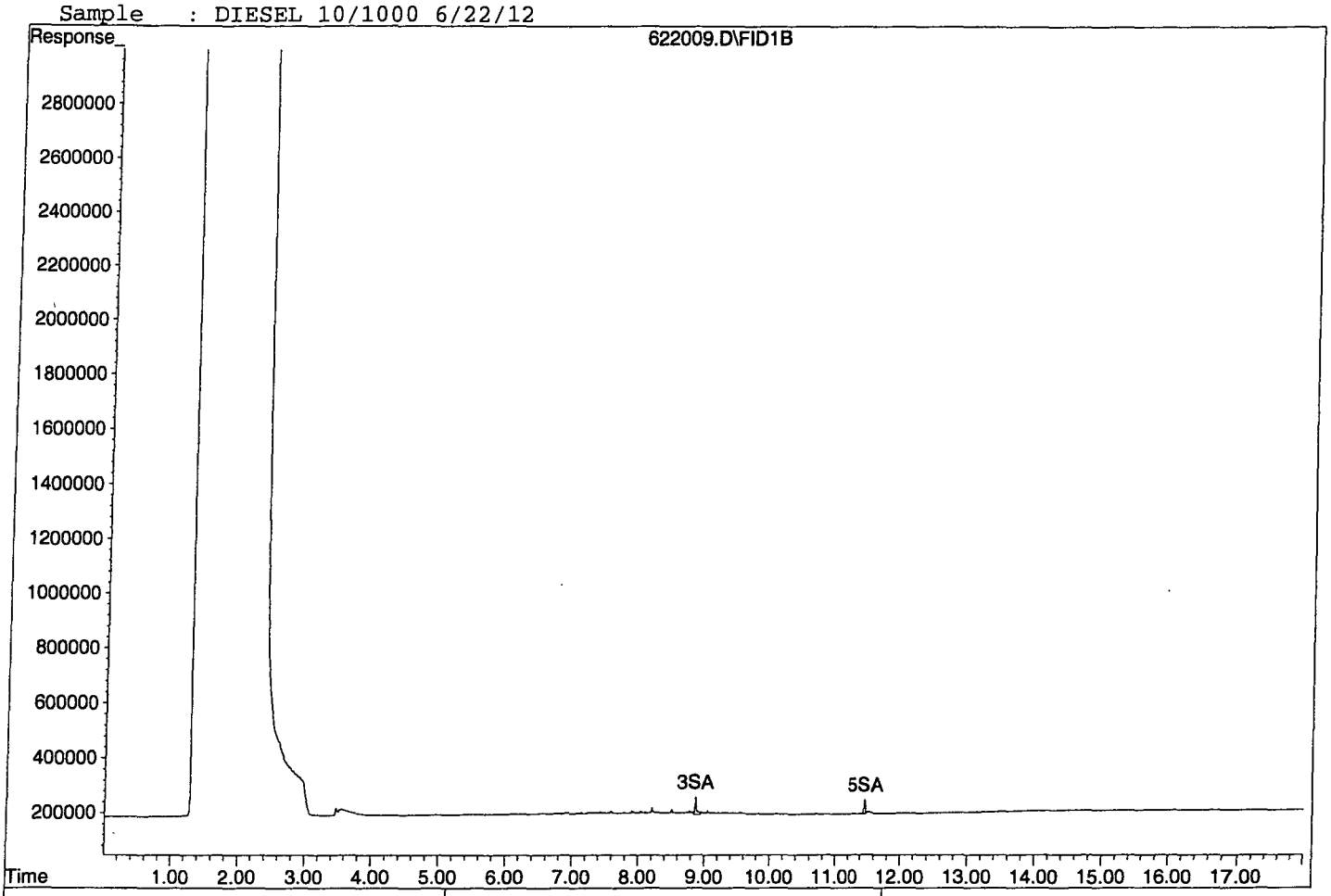
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

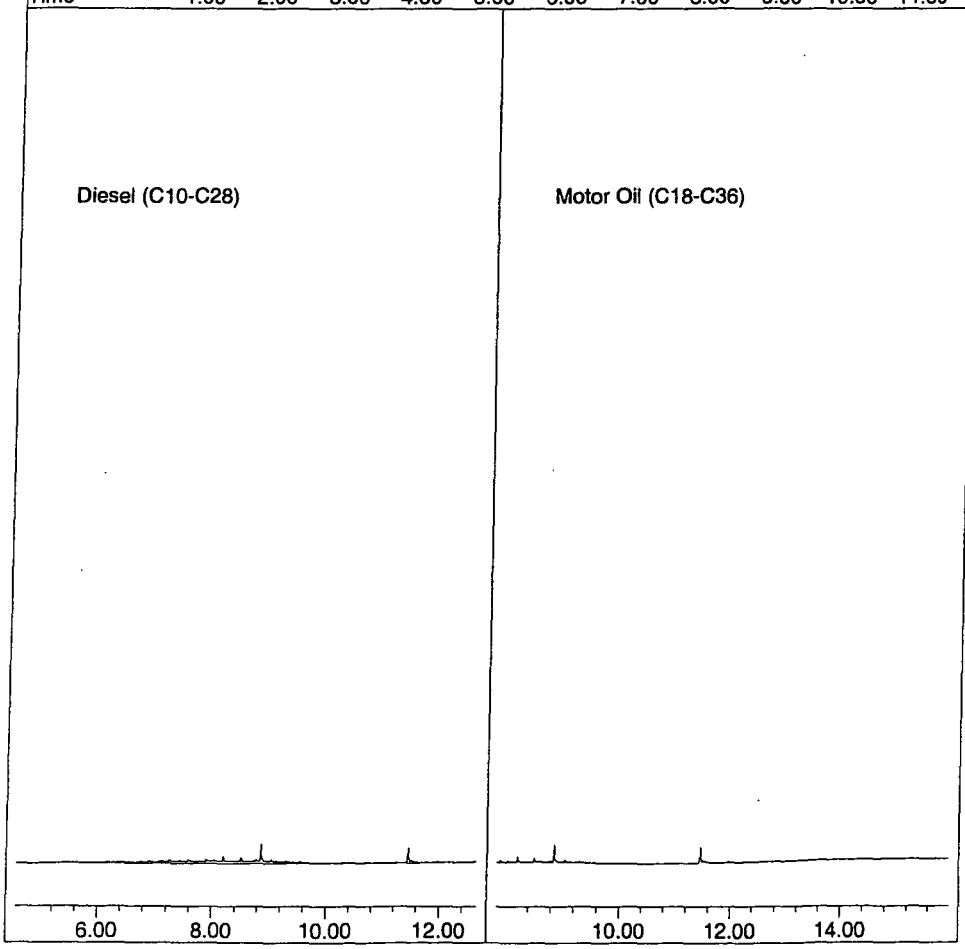
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120622\622009.D
Sample : DIESEL 10/1000 6/22/12





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622010.D Vial: 10
Acq On : 6-22-12 20:47:06 Operator: LAC
Sample : DIESEL 100/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

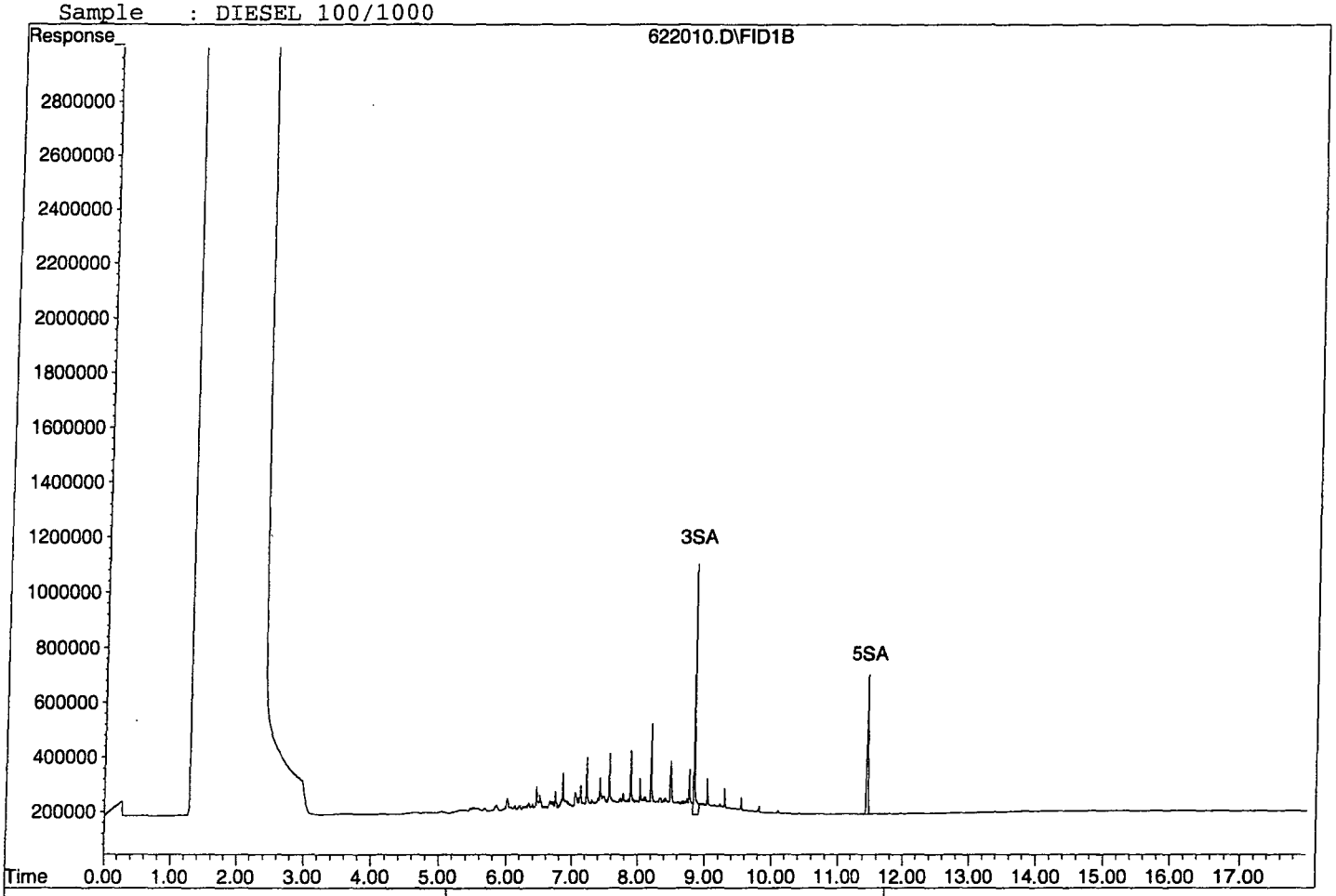
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

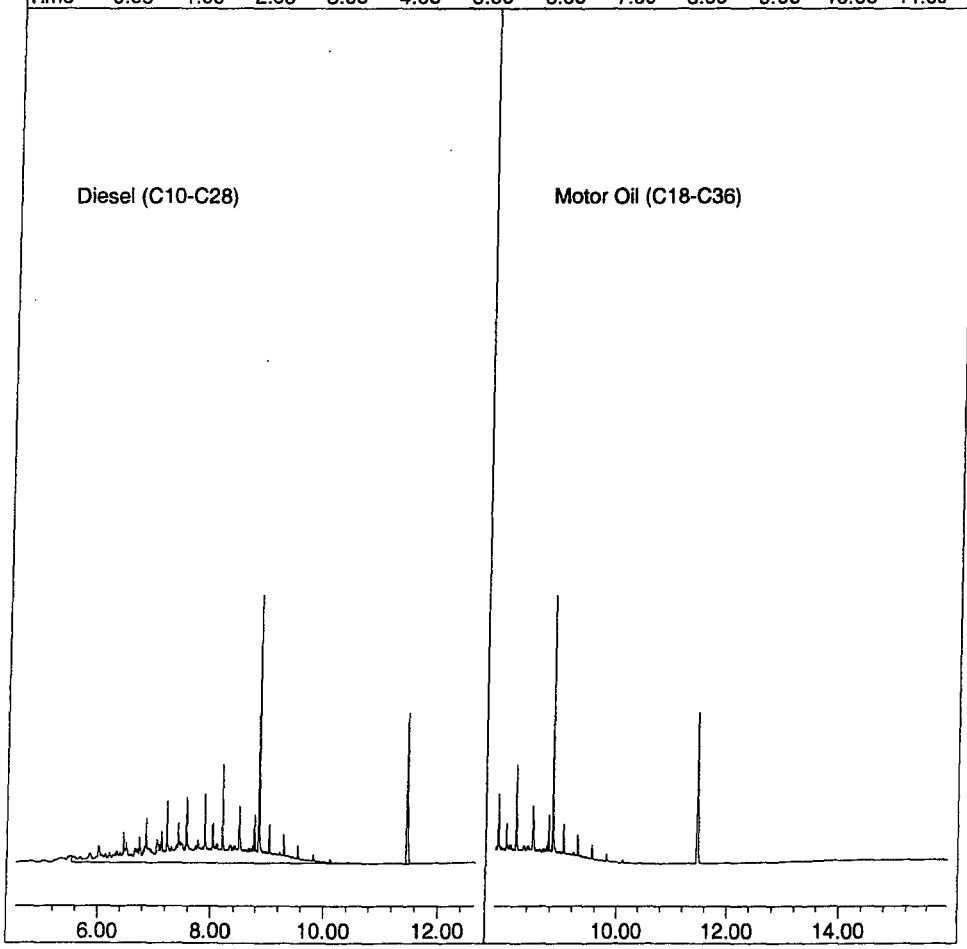
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120622\622010.D
Sample : DIESEL 100/1000





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622011.D Vial: 11
Acq On : 6-22-12 21:11:13 Operator: LAC
Sample : DIESEL 400/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

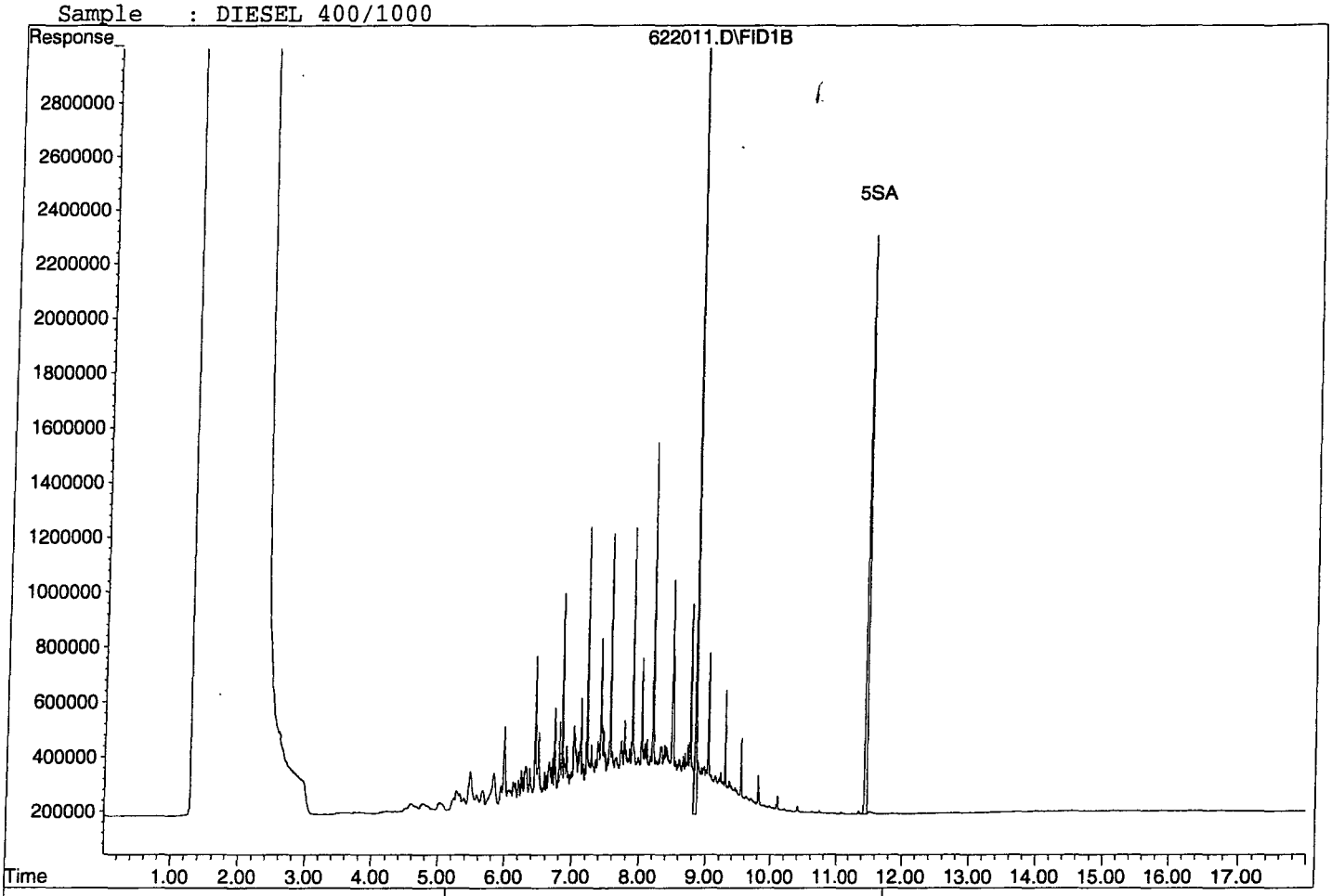
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

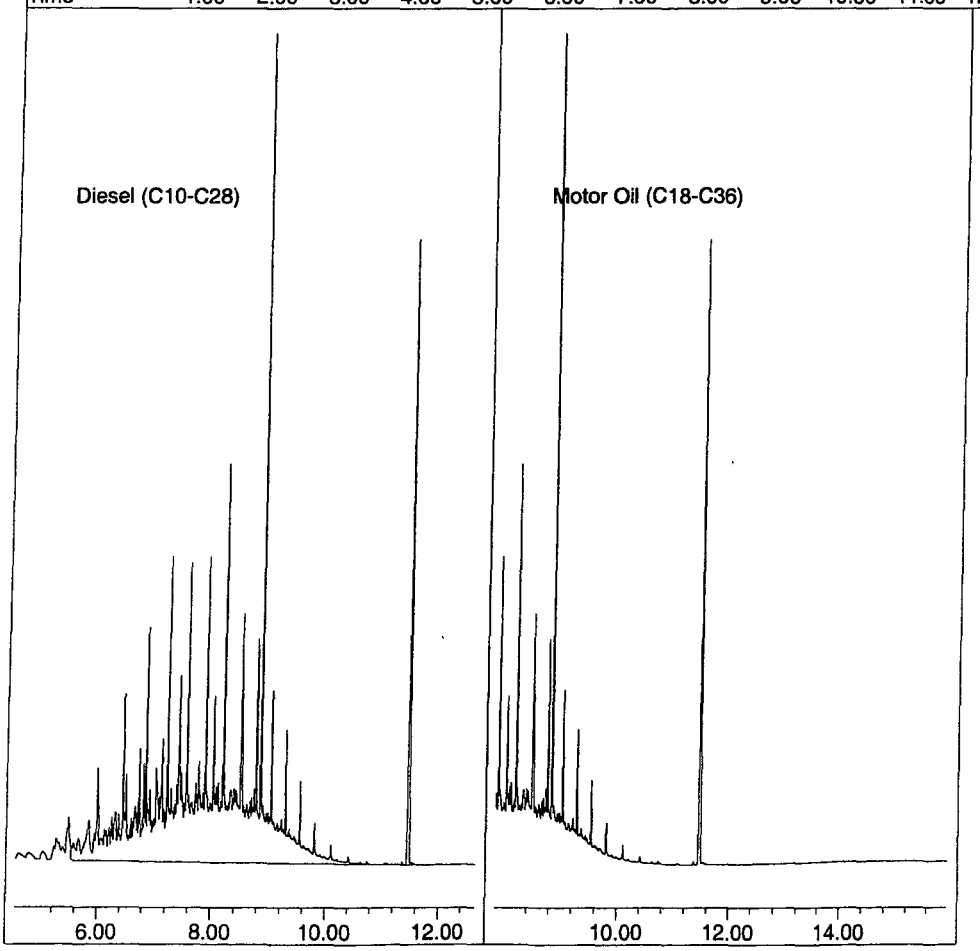
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120622\622011.D
Sample : DIESEL 400/1000





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622012.D Vial: 12
Acq On : 6-22-12 21:35:18 Operator: LAC
Sample : DIESEL 600/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

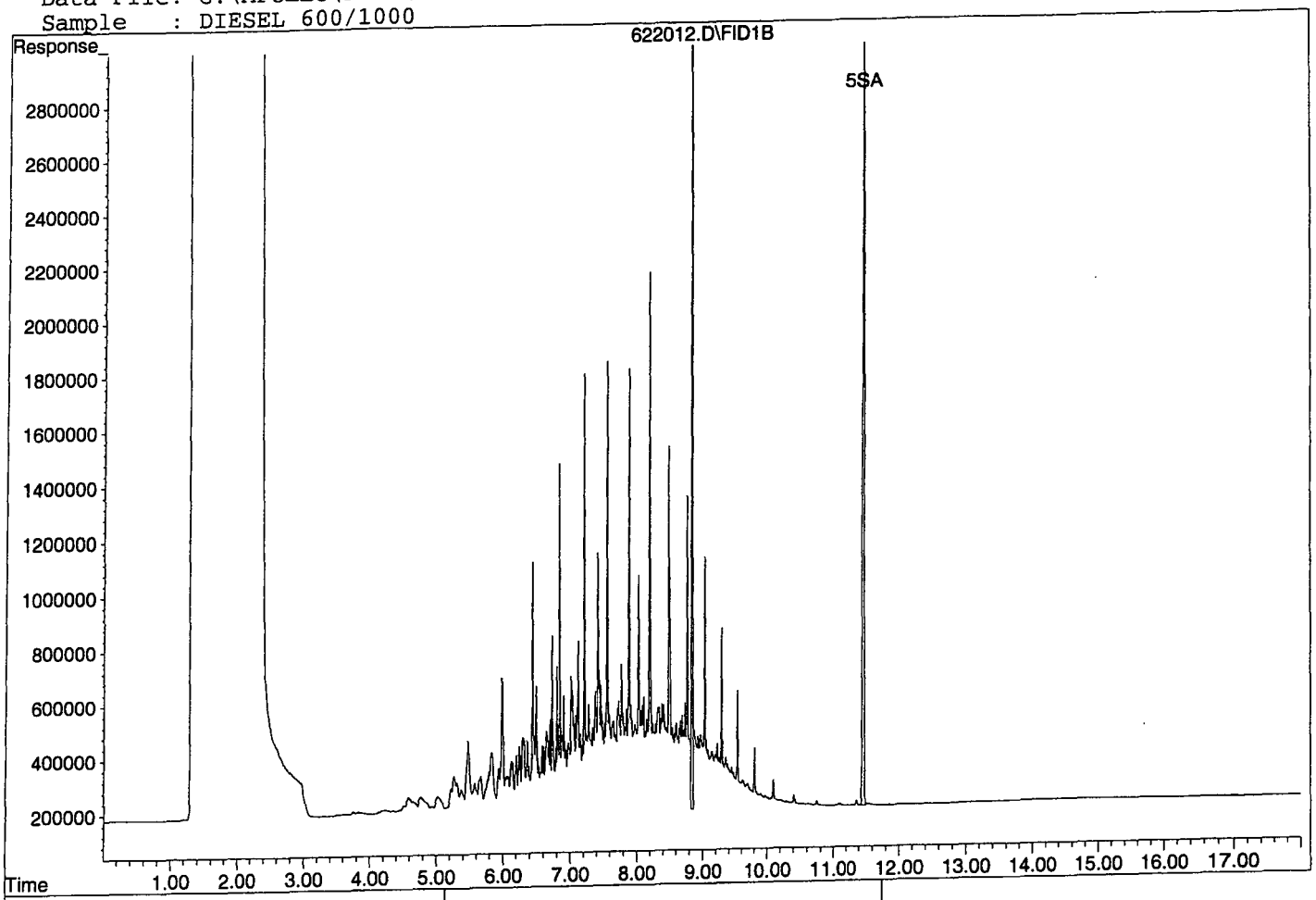
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

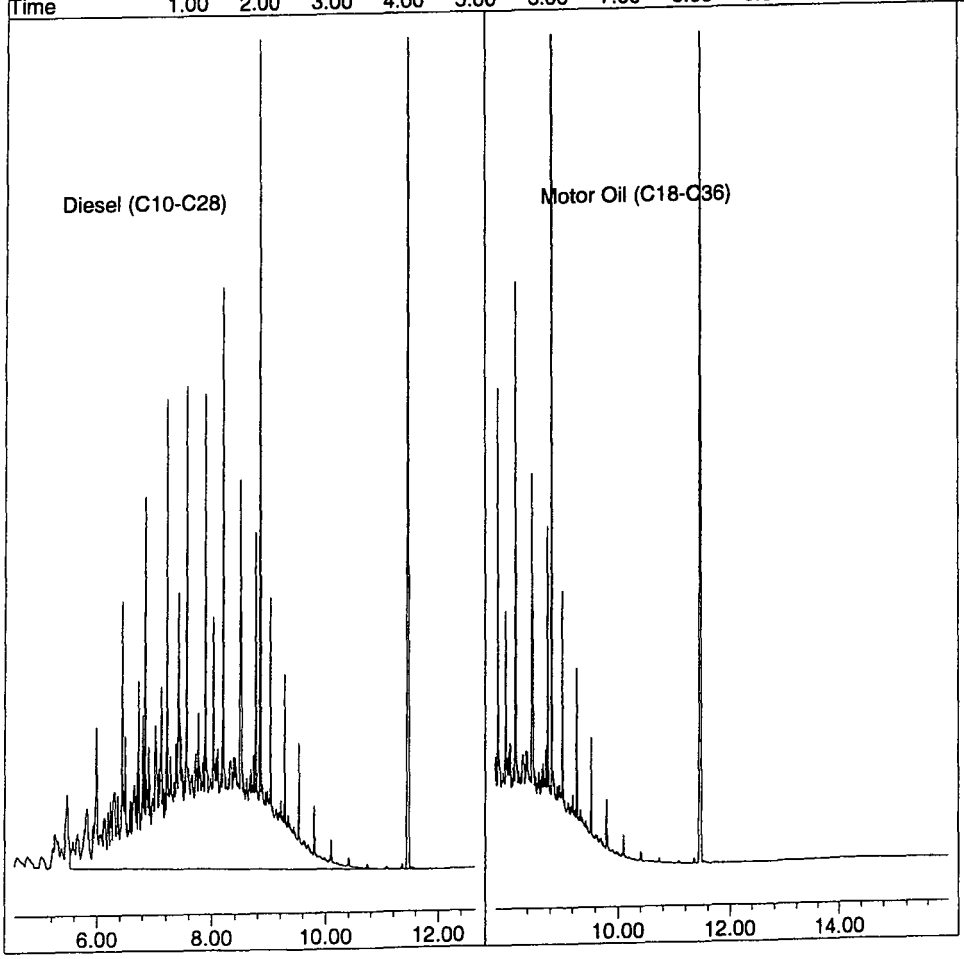
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120622\622012.D
Sample : DIESEL 600/1000





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622013.D Vial: 13
Acq On : 6-22-12 21:59:20 Operator: LAC
Sample : DIESEL 800/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

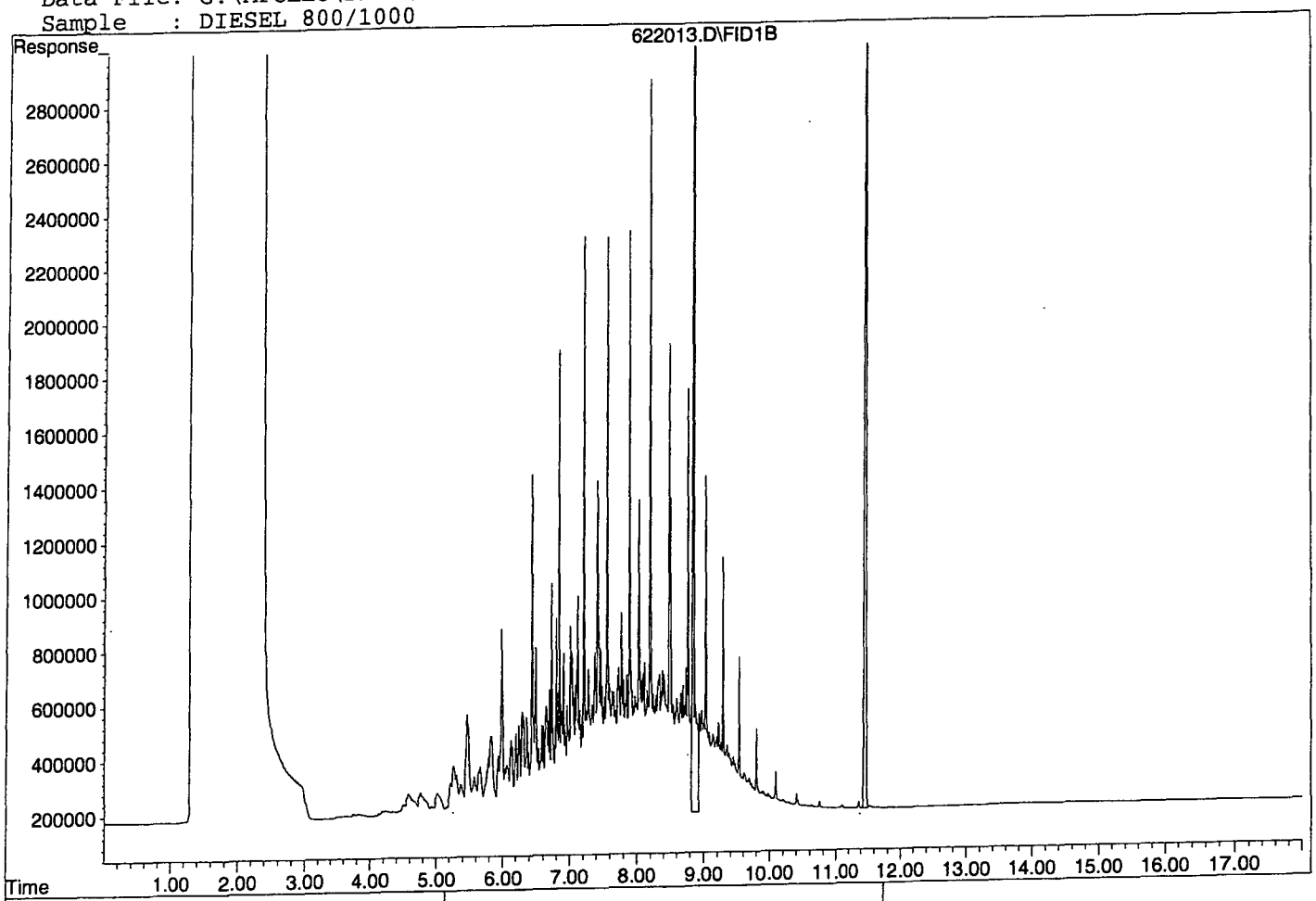
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

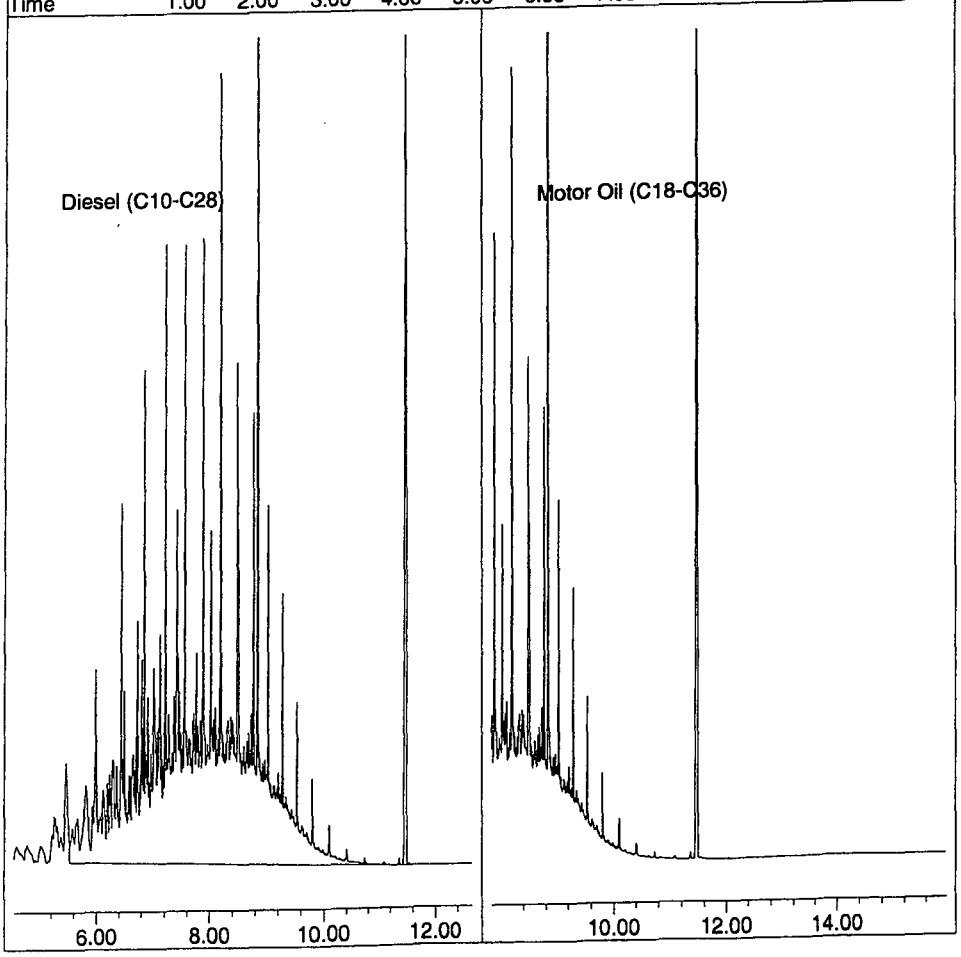
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120622\622013.D
Sample : DIESEL 800/1000





Quantitation Report (Not Reviewed)

Data File : G:\APOLLO\DATA\120622\622014.D Vial: 14
Acq On : 6-22-12 22:23:21 Operator: LAC
Sample : DIESEL 1000/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

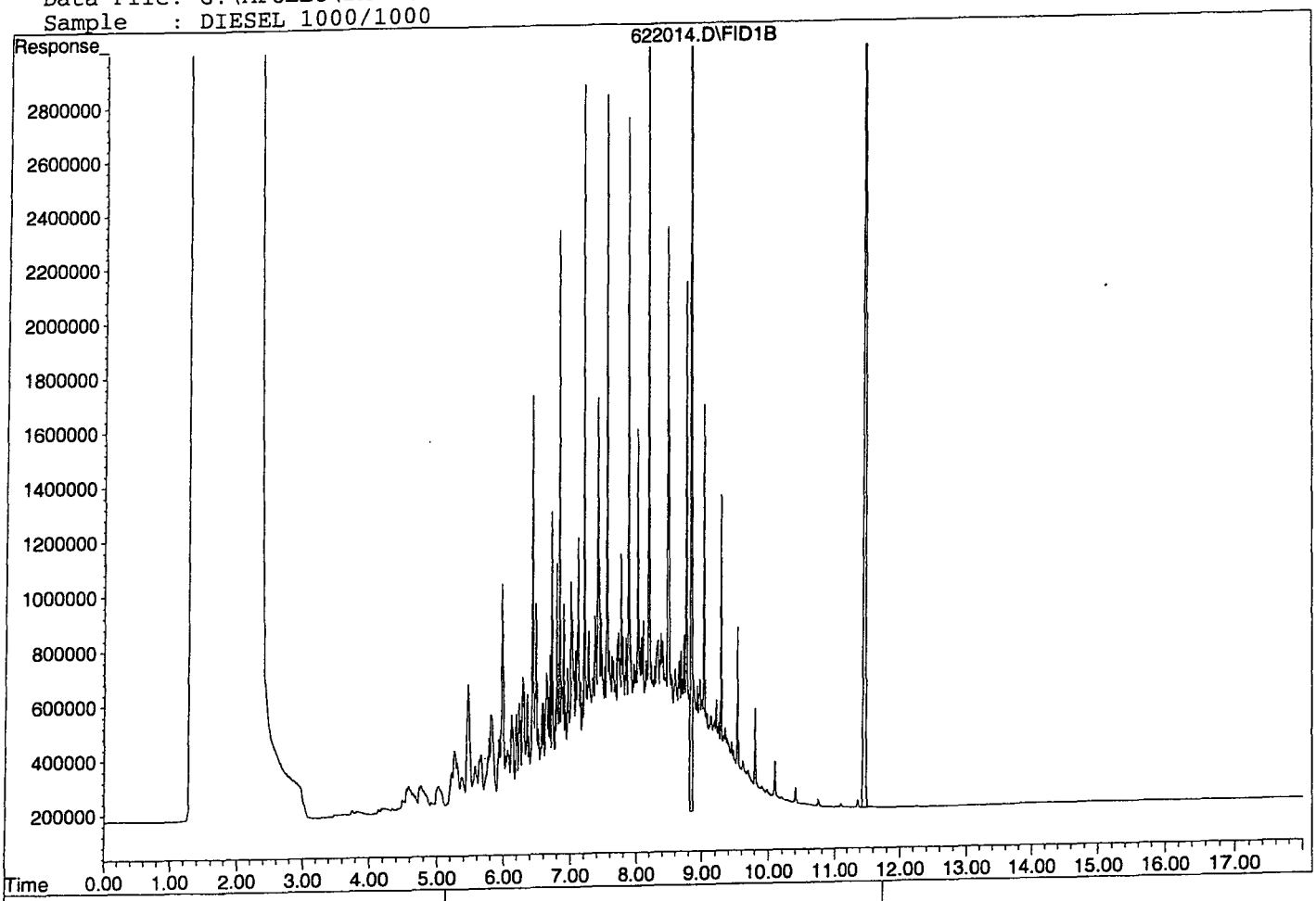
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

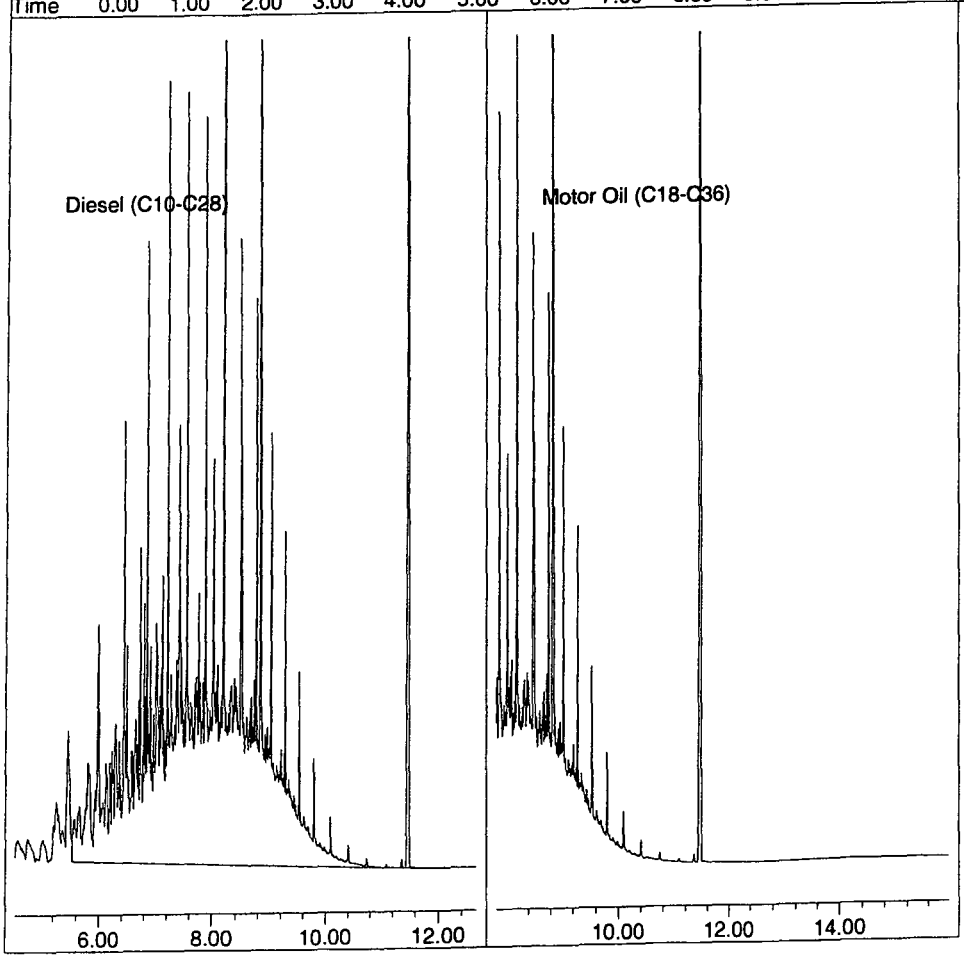
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
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

(f)=RT Delta > 1/2 Window (m)=manual int.

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: 68284
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							
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39							
40							
		Average			6.0		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120622\622015.D Vial: 15
Acq On : 6-22-12 22:47:20 Operator: LAC
Sample : DIESEL 2ND SRC 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:28 2012 Quant Results File: TPH0622.RES

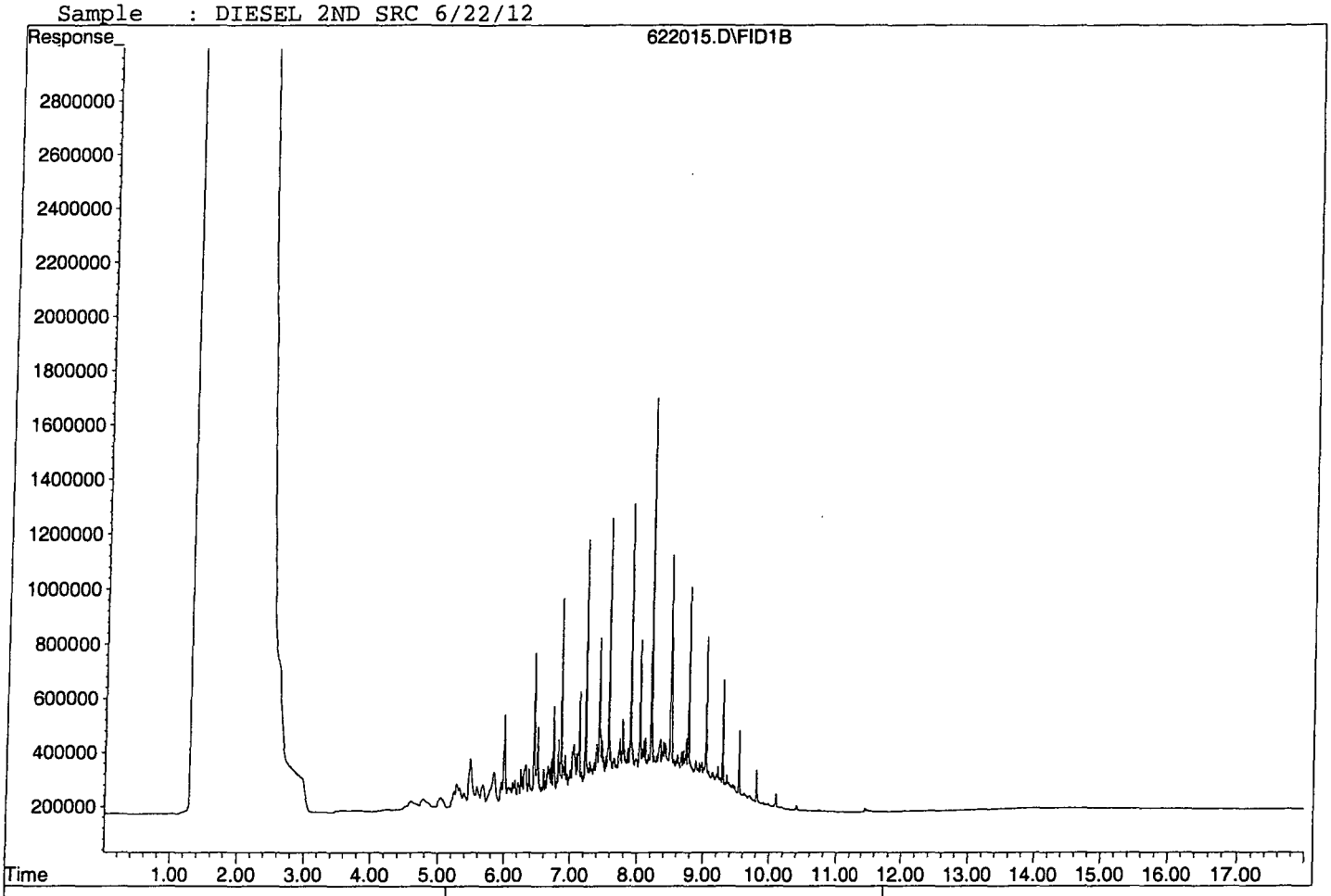
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

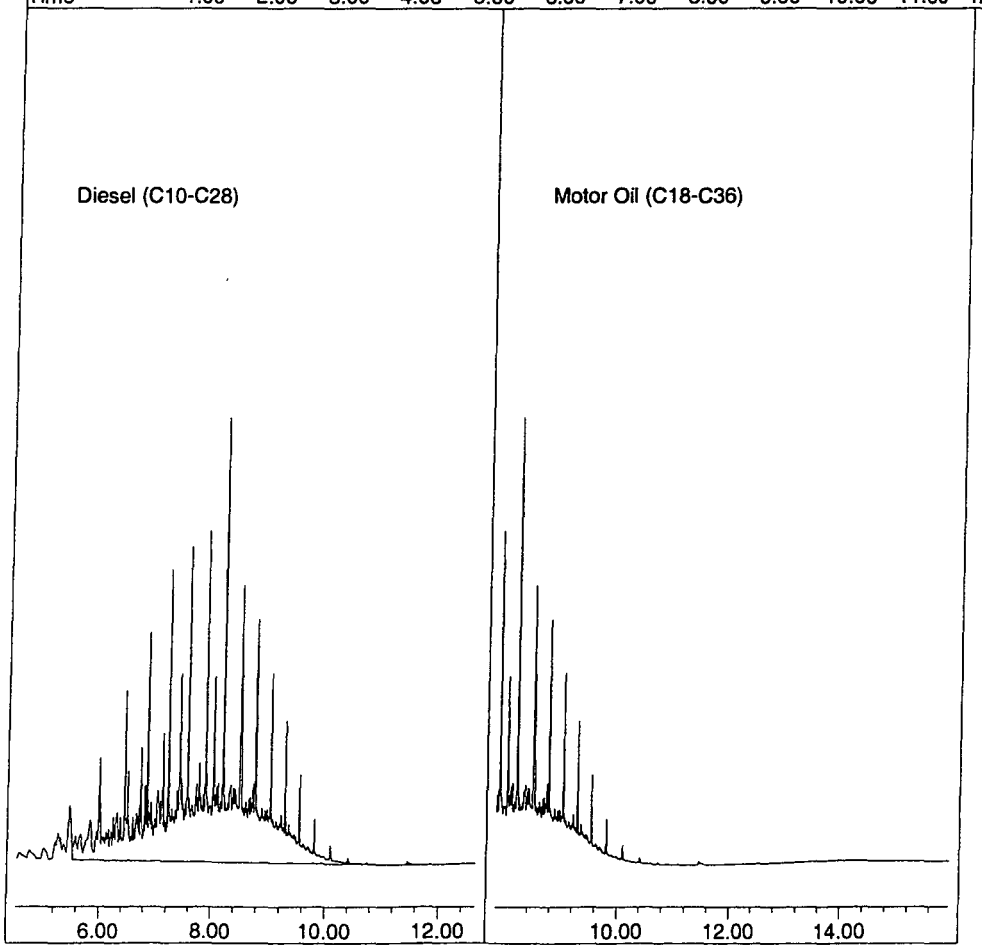
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	413291584	376.067 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120622\622015.D
Sample : DIESEL 2ND SRC 6/22/12





TPH Extractables
TPH0719

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix:

SDG No: 68284
Date Analyzed: 07/31/12
Instrument: Apollo
Initial Cal. Date: 07/31/12
Data File: 731032.D, 033.d

		Compound	MEAN	CCRF	%D	%Drift	
1	HATM	Diesel (C10-C28)	549491	522051	5.0	HATM	
2	HBTM	Motor Oil (C18-C36)	432503	356513	18	HBTM	
3							
4							
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40							
		Average			11.5		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731032.D Vial: 32
Acq On : 7-31-12 22:20:07 Operator: LAC
Sample : DIESEL 400ppm 7/30/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 2 17:35 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

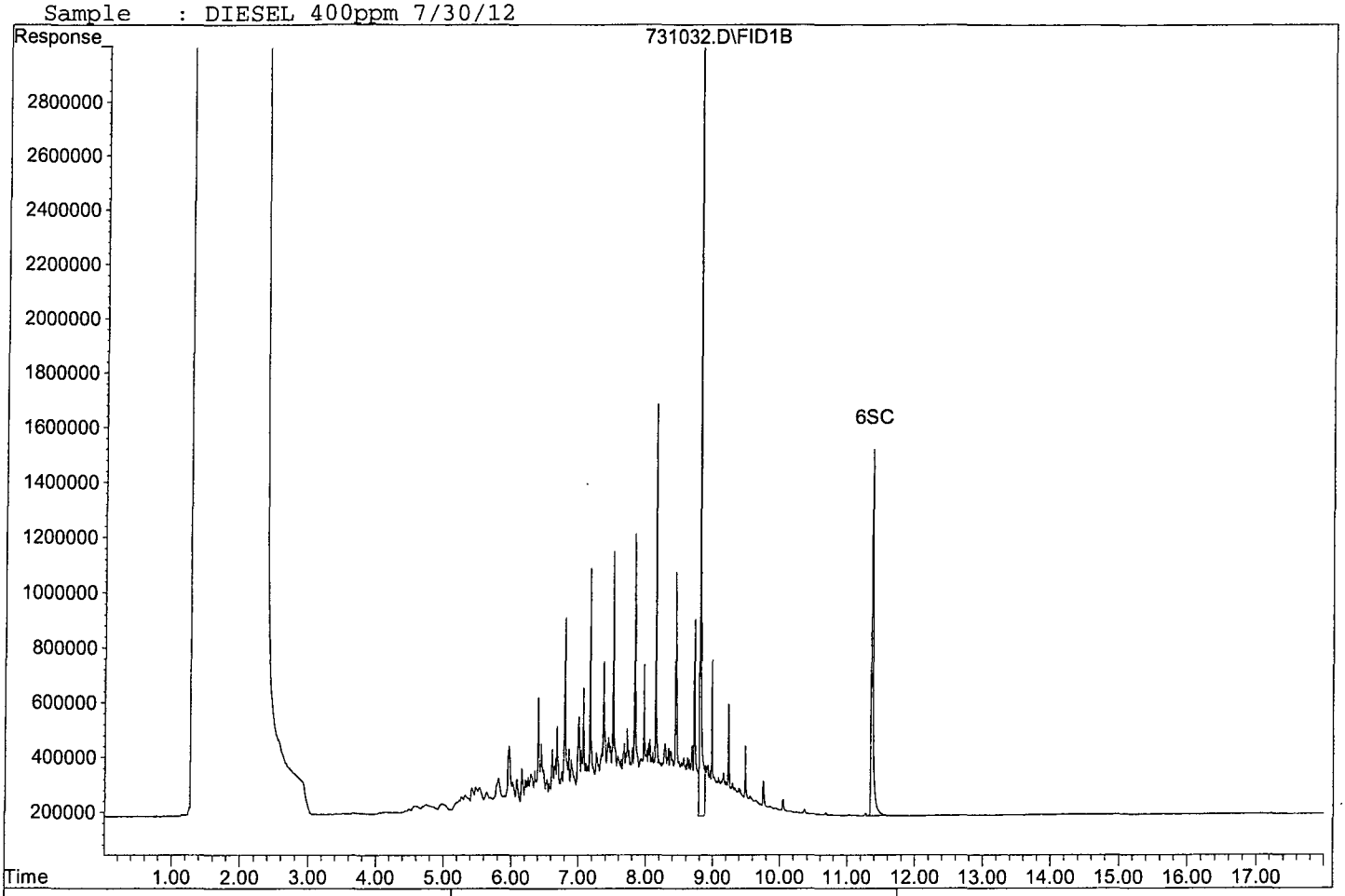
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

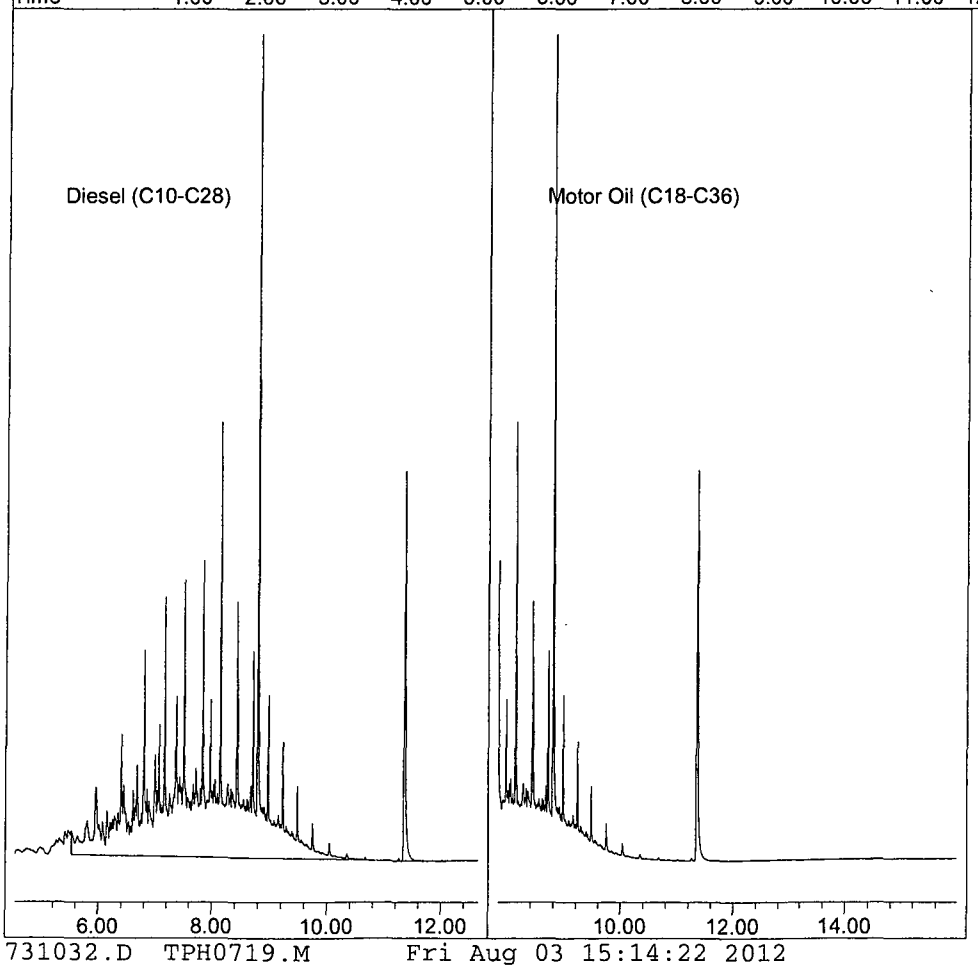
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	36556809	25.940 ppb
Surrogate Spike 30.000	Recovery =		86.47%
6) SC Octacosane(S)	11.36	23773019	15.773 ppb
Surrogate Spike 30.000	Recovery =		52.58%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	417641191	380.025 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731032.D
Sample : DIESEL 400ppm 7/30/12





TPH Extractables
TPH0719

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68284
Date Analyzed: 08/01/12
Instrument: Apollo
Initial Cal. Date: 07/31/12
Data File: 731047.D, 048.d

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C28)	549491	522769	4.9	HATM	
2	HBTM	Motor Oil (C18-C36)	432503	396846	8.2	HBTM	
3							
4							
5							
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37							
38							
39							
40							
		Average			6.6		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731047.D Vial: 47
Acq On : 8-1-12 4:24:28 Operator: LAC
Sample : DIESEL 400ppm 7/31/12 Inst : Apollo
Misc : Water Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 2 17:36 2012 Quant Results File: TPH0719.RES

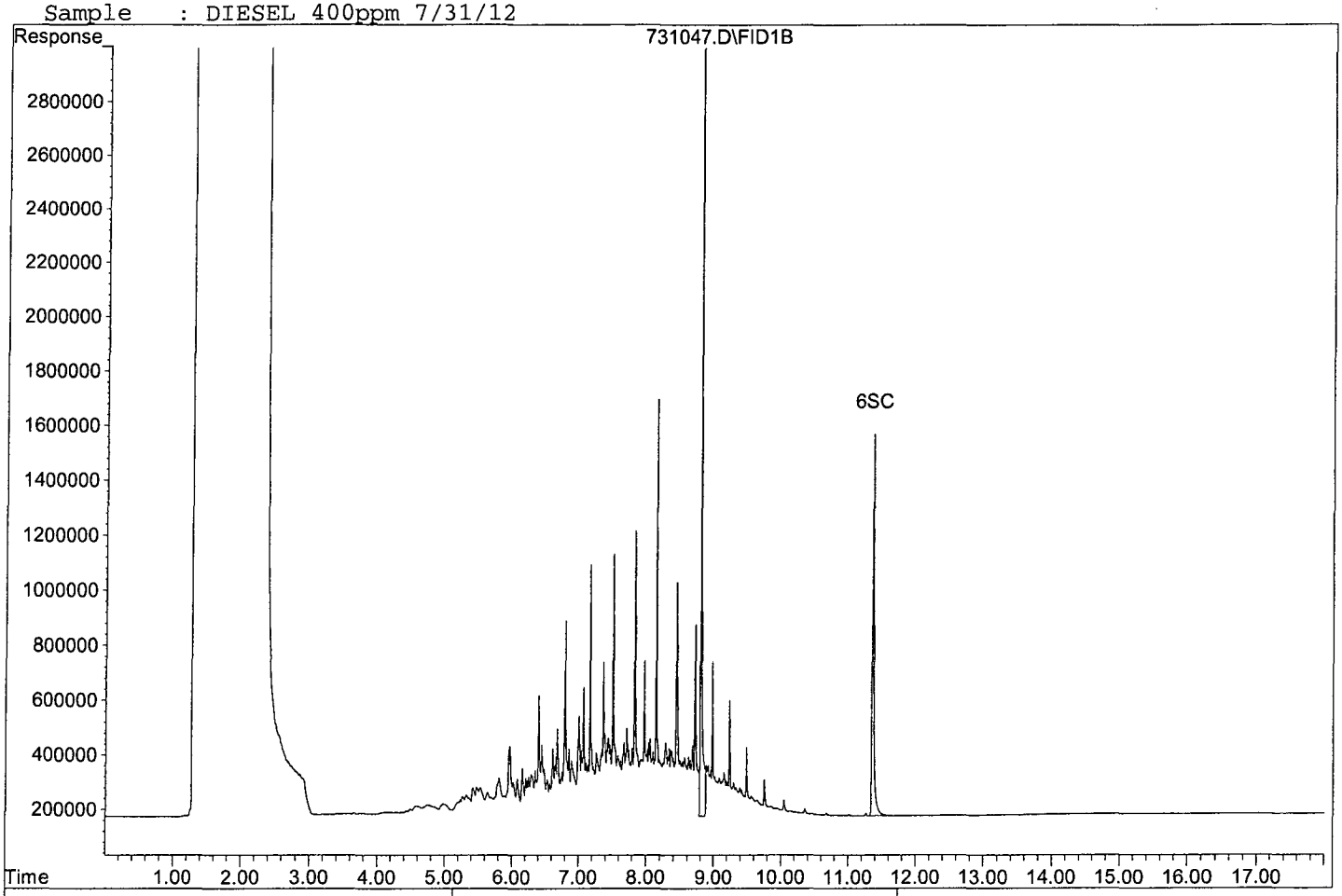
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

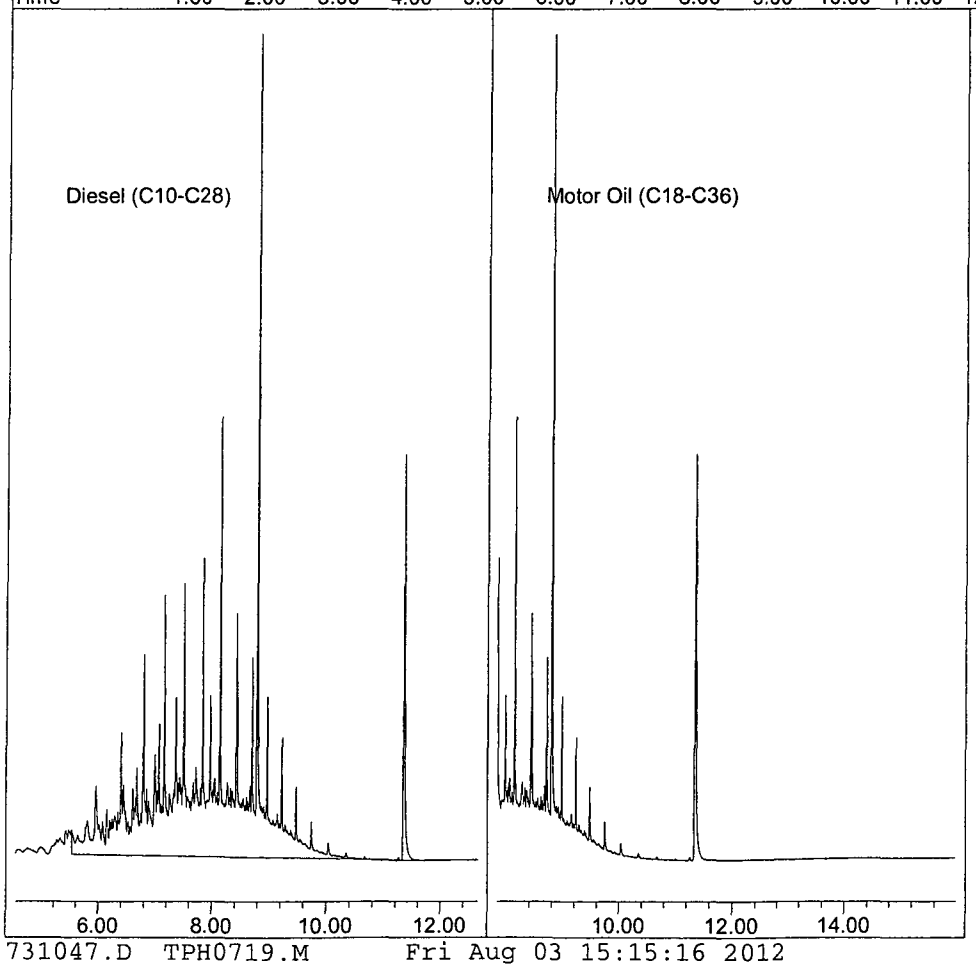
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	36659238	26.013 ppb
Surrogate Spike 30.000	Recovery =		86.71%
6) SC Octacosane(S)	11.36	24520491	16.269 ppb
Surrogate Spike 30.000	Recovery =		54.23%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	418214967	380.547 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Data File: G:\APOLLO\DATA\120731\731047.D
Sample : DIESEL 400ppm 7/31/12





TPH Extractables
TPH0719

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68284
Date Analyzed: 08/01/12
Instrument: Apollo
Initial Cal. Date: 07/31/12
Data File: 731059.D, 060.d

		Compound	MEAN	CCRF	%D		%Drift
1	HATM	Diesel (C10-C28)	549491	519526	5.5	HATM	
2	HBTM	Motor Oil (C18-C36)	432503	372831	14	HBTM	
3							
4							
5							
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36							
37							
38							
39							
40							
		Average			9.8		

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731059.D Vial: 59
Acq On : 8-1-12 9:14:22 Operator: LAC
Sample : DIESEL 400ppm 7/31/12 Inst : Apollo
Misc : Water Multiplr: 1.00
IntFile : events.e
Quant Time: Aug 2 17:38 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

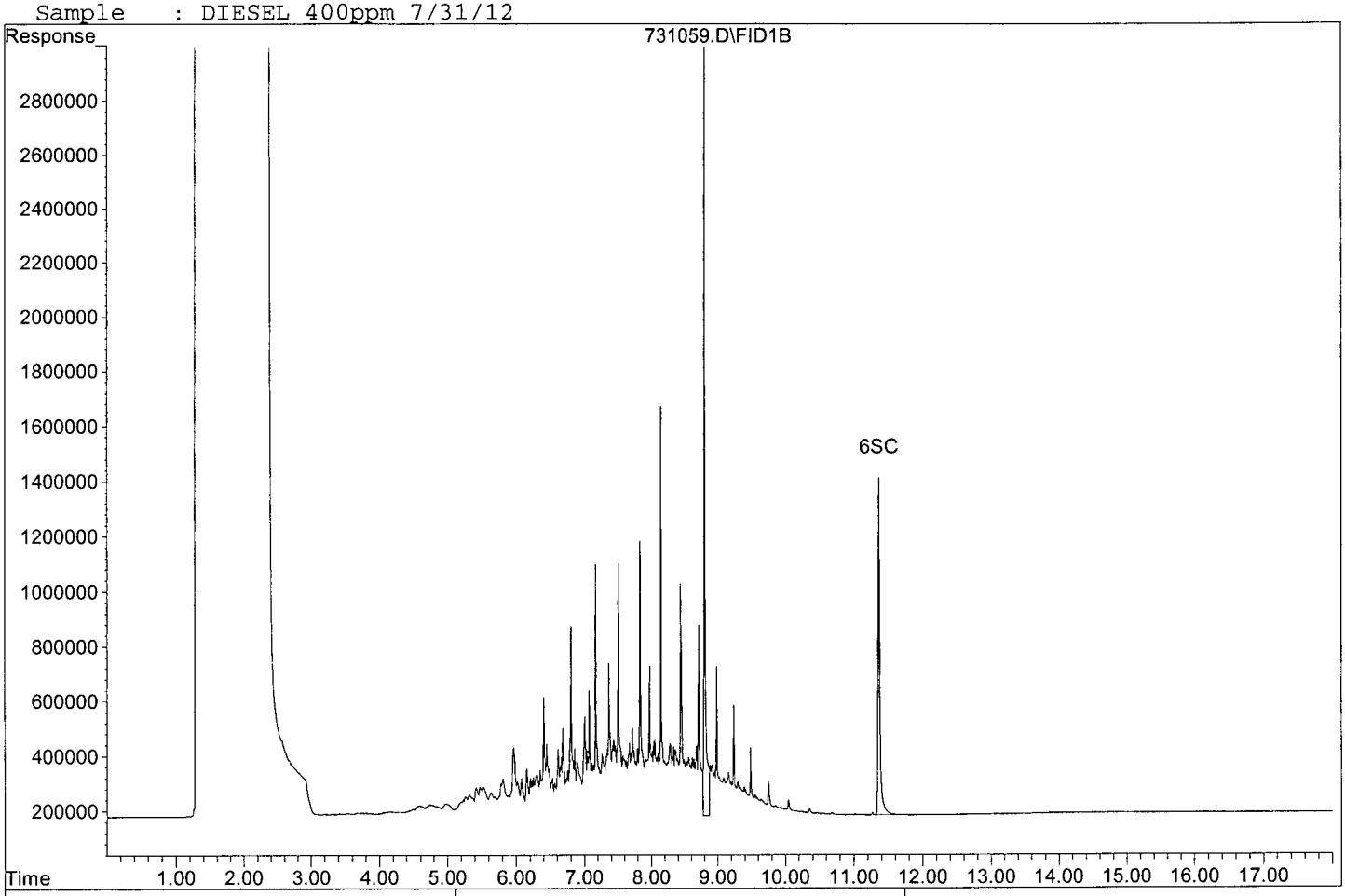
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

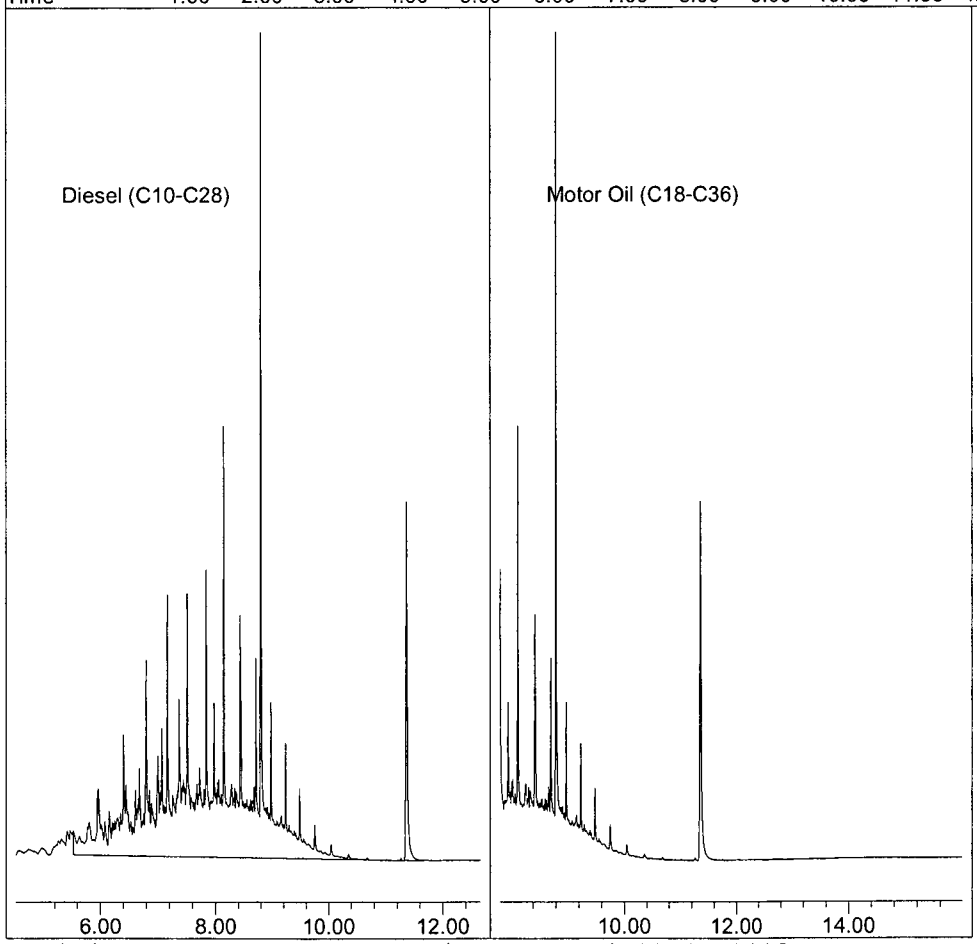
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	36220827	25.701 ppb
Surrogate Spike 30.000		Recovery =	85.67%
6) SC Octacosane(S)	11.36	22677011	15.046 ppb
Surrogate Spike 30.000		Recovery =	50.15%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	415621168	378.187 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731059.D
Sample : DIESEL 400ppm 7/31/12





EPA 8015B
Total Petroleum Hydrocarbons -

Raw Data

APPL, INC.

Method Blank
TPH Diesel Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169638**
Batch ID: #TPETD-120726A

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	DIESEL FUEL	80.8 U	150	80.8	40.4	ug/L	07/26/12	08/01/12
BLANK	SURROGATE: OCTACOSANE (S)	64.4	28-142			%	07/26/12	08/01/12
BLANK	SURROGATE: ORTHO-TERPHEN	78.3	57-132			%	07/26/12	08/01/12

Quant Method: TPH0719.M
Run #: 731039
Instrument: Apollo
Sequence: 120731
Initials: SD

Printed: 08/02/12 5:54:46 PM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731039.D Vial: 39
Acq On : 8-1-12 1:11:25 Operator: LAC
Sample : 120726A BLK 5/1000 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

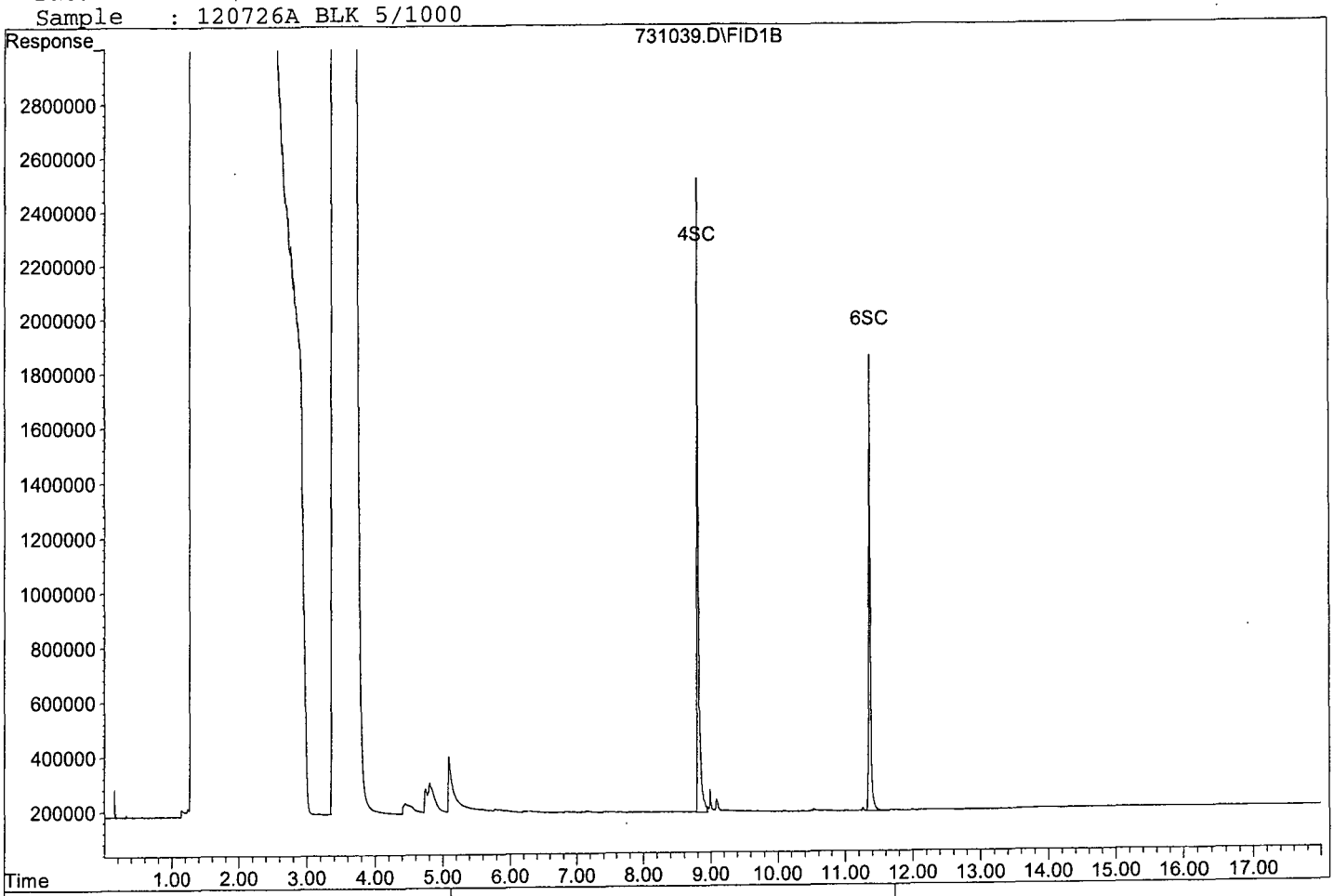
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

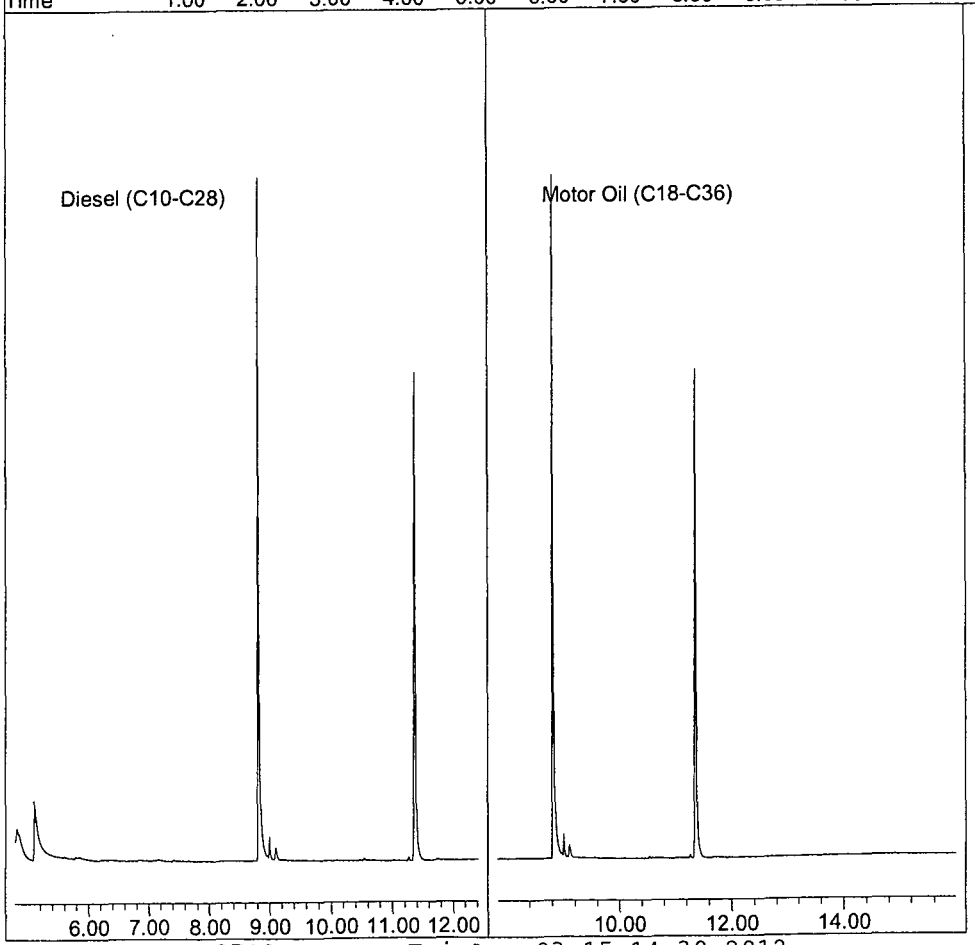
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	33091847	111.815 ppb
Surrogate Spike 142.857		Recovery =	78.27%
6) SC Octacosane(S)	11.36	29130667	92.039 ppb
Surrogate Spike 142.857		Recovery =	64.43%
Target Compounds			

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731039.D
Sample : 120726A BLK 5/1000





731039.D TPH0719.M Fri Aug 03 15:14:30 2012

Laboratory Control Spike Recovery
TPH Diesel Water

APPL ID: **120726W-65167 LCS - 169638**
Batch ID: #TPETD-120726A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
DIESEL FUEL	2000	1370	68.5	61-143
SURROGATE: OCTACOSANE (S)	150	89.1	59.4	28-142
SURROGATE: ORTHO-TERPHENYL (S)	150	134	89.3	57-132

Comments: _____

Primary	SPK
Quant Method :	TPH0719.M
Extraction Date :	07/26/12
Analysis Date :	08/01/12
Instrument :	Apollo
Run :	731040
Initials :	SD

Printed: 08/02/12 5:55:00 PM
APPL Standard LCS

Quantitation Report (QT Reviewed)

Data File : G:\APOLLO\DATA\120731\731040.D Vial: 40
Acq On : 8-1-12 1:35:46 Operator: LAC
Sample : 120726A LCS-1 5/1000 Inst : Apollo
Misc : Water Multiplr: 4.76
IntFile : events.e
Quant Time: Aug 2 17:45 2012 Quant Results File: TPH0719.RES

Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

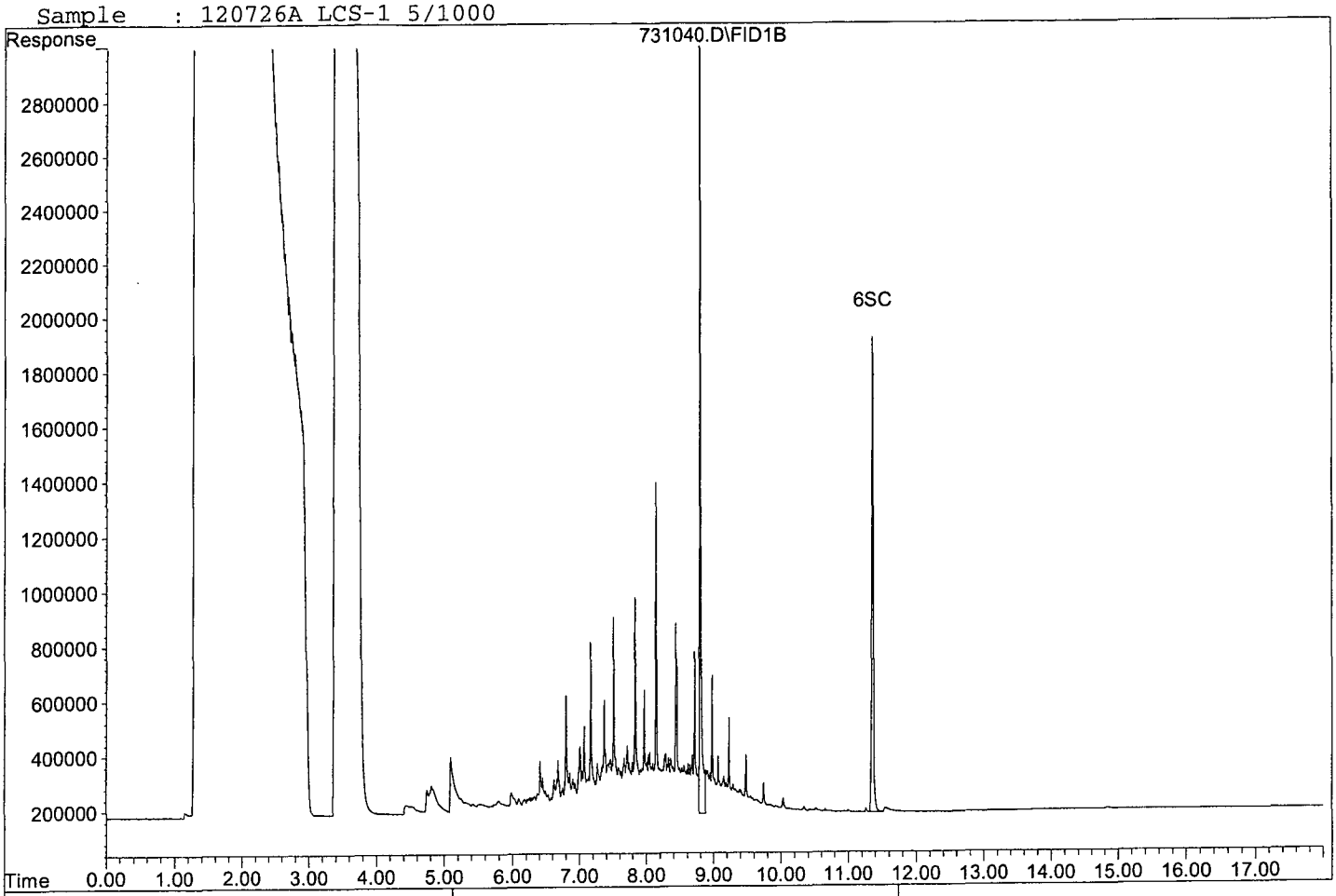
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

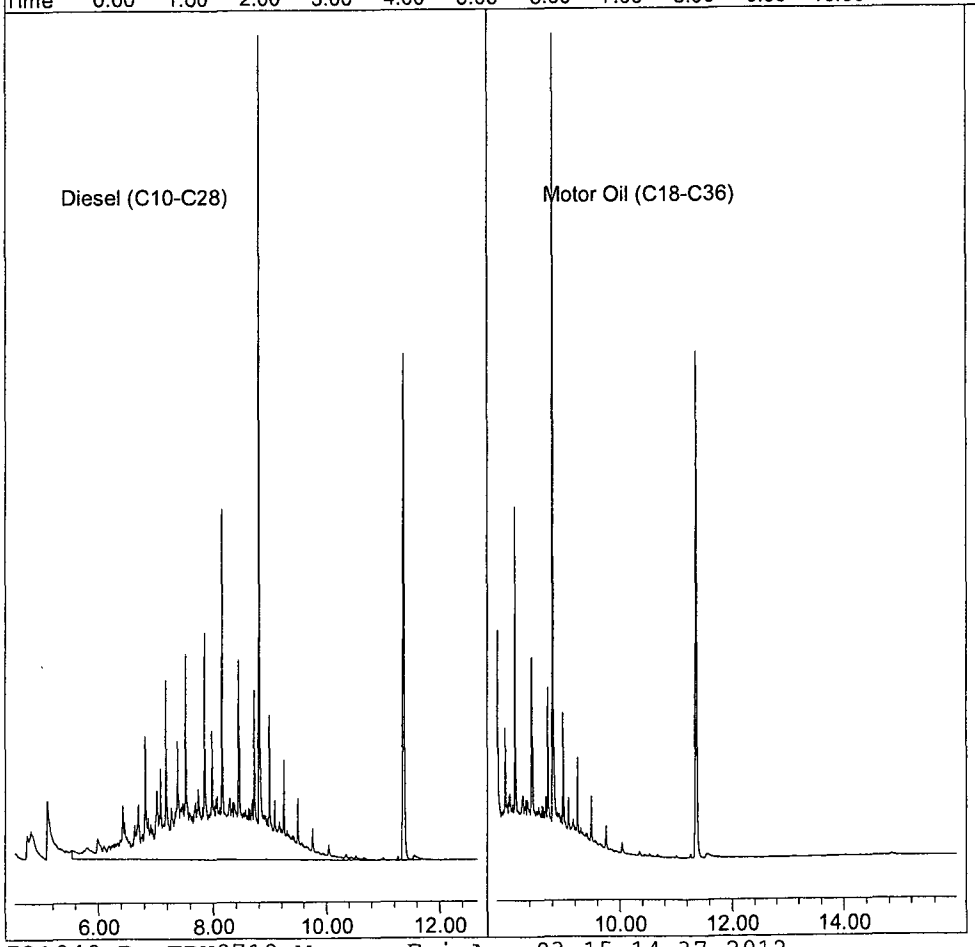
Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
4) SC Ortho-Terphenyl(S)	8.80	39608240	133.833 ppb
Surrogate Spike 142.857		Recovery =	93.68%
6) SC Octacosane(S)	11.36	28208107	89.124 ppb
Surrogate Spike 142.857		Recovery =	62.39%
Target Compounds			
1) HATM Diesel (C10-C28)	8.60	315722567	1368.028 ppb

(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File: G:\APOLLO\DATA\120731\731040.D
Sample : 120726A LCS-1 5/1000





731040.D TPH0719.M Fri Aug 03 15:14:37 2012

STANDARD	CONC	DATE	ALIQUOT	VOLUME	CONC	LOT#	INITIALS
~~STANDARD~~	~~GCMS STANDARD PREP LOG~~						

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOL'VENT LOT#	INITIALS
~~STANDARD~~							

005

PCB Soil Spike

AR1016	1,000 mg/L	02SI	1250 mL	25mL	50 mg/mL	Acetone	CM
AR1260						#022912B	6-21-12
							ex. 9-21-12

Aroclor 1016 + 1260 Solution, 1,000 mg/L, 1 ml
130011-03
Lot # 163759 | Storage ≤ Ambient | Expiry 9/14/13
Solv: Hexane
R&D only, not for human consumption. Made in the USA
Aroclor 1016 + 1260 op. 6-21-12
Lot #: 163759 - 29969 ex. 6-21-13
Rec: 11/10/11 MFR exp. 09/14/13
CM 6-21-12

AND LOT: 163759-29971
163759 op. 2-14-12
CM 6-21-12 ex. 2-14-13

OCL Soil Surrogate

DECA	5,000 mg/mL	02SI	1mL	250 mL	20 mg/mL	Acetone	CM
DBC						#022912B	6-21-12
TCMX							ex 9-21-12

Pesticide Surrogate Solution, 5,000 mg/L, 1 ml
O2SI
Cat. No: 130070-02
Lot No: 154164
Pesticide Surr. Soln, 5000mg/L
Lot #: 154164 - 29418
Rec: 8/26/11 MFR exp. 12/19/12
CM 6-21-12
Exp: 12/19/2012
Storage: </= Ambient
Solvent: Tol.:Hex. 1:1
ption For Research Use Only
Opened: 6-21-12
ex. 6-21-13

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
011598-03
Lot # 183767 | Storage ≤ -10 Degrees C | Expiry 2/11/16
Solv: Methylene Chloride
R&D only, not for human consumption. Made in the USA
Diesel Fuel #2 Composite op. 6-22-12
Lot #: 183767 - 30909 ex. 6-22-13
Rec: 5/30/12 MFR exp. 02/11/16
CM 6-22-12

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	200uL	10mL	1000ug/mL	MC #51306

CM 6-22-12
ex. 12-22-12

CM 6-22-12

GC/MS STANDARD PREP LOG# _____ PAGE _____

006

STANDARD | INITIAL CONC | SOURCE DATE | ALIQUOT | FINAL VOLUME | FINAL CONC | SOL'VENT LOT# | DATE/ INITIALS

MOTOR OIL CAL STD

STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT / LOT#
MOTOR OIL	50,000 ug/mL	Motor Oil Composite, 50,000 mg/L, 1 ml; 116390-02; Lot # 183768; Storage ≤ -10 Degrees C; Expiry 1/8/15; Soln: Methylene Chloride; R&D only, not for human consump; Made in the USA	1mL	50mL	1000ug/mL	MC LOT# 51306

Motor oil composite op. 6-22-12
Lot #: 183768 - 30232 ck. 6-22-13 CM
Rec: 1/10/12 MFR exp. 01/08/15
CM 6-22-12

CM 6-22-12 ck. 12-22-12

CM 6-22-12

THC SURR CAL STD

STD.	INITIAL CONC.	SOURCE DATE	ALIQUOT	FINAL VOL	FINAL CONC.	SOLVENT LOT#
O-TERPHENYL OCTACOSANE	600 ug/mL	O2SI CAT#110316-05 LOT#183766-30661 OP:6/12/12 EXP:6/12/13	834 µL	10mL	50ug/mL	MC LOT# 51306

CM 6-22-12

CM 6-22-12 ck. 12-22-12

CM 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	1000

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	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	1000

DIESEL 2ND SOURCE

STD	Init. Conc	Source	Aliquot	Final Vol.	Final Conc.	Solvent
DIESEL 2ND SRC	1000µg/ml	O2SI	400µL	1 mL	400 µg/mL	MC
	Prep:	06/22/12				51306
	Exp:	12/22/12				

CM 6-22-12

GC/MS STANDARD PREP LOG# _____ Page# _____

039

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	OCL EN.? LOT #	DATE? INITIALS
			MOTOR OIL CCV 500ppm				
MOTOR OIL STD	2000 ug/mL	0725E M.O. STD prep. 7-19-12	250uL ↓	1mL ↓	500 ug/mL ↓	MC # 51306	CM 7-31-12 ex. 1-19-13
			DIESEL CCV 400ppm				
DIESEL STD	1000 ug/mL	Diesel STD prep. 6-22-12	400uL ↓	1mL ↓	400 ug/mL ↓	MC #51306	CM 7-31-12 ex. 1-19-13

OCL Second Source

Compounds	OCL Second Source Conc in mix	Conc in stock	Aliquot	Source stock	Final Vol
a-BHC	.10 ug/mL	100 ~~10~~ 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~~	~~# 8011909B~~
g-BHC			Prep:	~~7~~ 7/30/12 12/12/12	082610B
aldrin					
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					

OCL Second Source

LH 8/1/12

exp: 12/12/12

LH 8/1/12

LH 8/1/12

OCL CALIBRATION CURVE

Compound	Conc. In Mix	Conc. Of Stock	Aliquot	stock source	Final Vol.
Various Analytes	1A: 0.0025 ug/ml	10 ug/ml	2.5 ul	OCL Stock	10 mL
	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	7/30/13	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: ~~2/13/12~~	8/1/12
		082610B		exp: ~~8/13/12~~	2/1/13
Solvent:	Hexane	Lot: ~~040711A~~	LH 8/3/12		LH 8/3/12

OCL Curve

LH 8/1/12

exp 2/1/13

LC/MS STANDARD PREP LOG# _____ PAGE _____

020

STANDARD	INITIAL CONC	SOURCE DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT #	DATE/ INITIALS

AR 1248 CALIBRATION CURVE

AR1248 Prep:3/26/12
Exp: 9/26/12

7/18/12 DMZ

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

DMZ
OP: 7/18/12
EX: 7/18/13

Diesel Fuel #2 Composite,
50,000 mg/L, 1 ml

011598-03

Lot #	Storage	Expiry
183767	≤ -10 Degrees C	2/11/16

Solv: Methylene Chloride

For R&D only, not for human consump. Made in the USA

Diesel Fuel #2 Composite
Lot #: 183767 - 30901
Rec: 5/30/12 MFR exp. 02/11/16

7/17/12

DATE / INITIALS	STANDARD	INITIAL CONC	SOURCE	DATE	ALIQUOT	FINAL VOLUME	FINAL CONC	SOLVENT LOT#	DATE / INITIALS

THC Surrogate (Gave to Extractions)

CM 7-6-12	O-Terphenyl Octacosane	600 mg/L	025E	N/A	25 mL	600 mg/mL	N/A	CM 7-9-12
7-12-12			CAT: 110316-05					ex. 7-9-13
			LOT: 188683-30664 thru 668					
			Op. 7-9-12					
			ex. 7-9-13					

MSE002 Surrogate

CM 7-6-12	1,3-DBP	100 mg/mL	1,3 DBP STK	35 mL	10 mL	Methanol 0.35 mg/mL	CM 7-9-12
ex. 7-28-12			prep. 5-14-12				ex. 10-9-12
			ex. 5-14-13				

CM 7-6-12 ex. 7-20-12

OP FAMPHUR CURVE												
PREP:	07/09/12	EXP:	07/28/12			IA	1	2	3	4	5	6
SUPPLIER	ID#	[µg/mL]	LOT #	DATE	EXP. DATE	µL	µL	µL	µL	µL	µL	µL
	OP/FAMPHUR 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

CM 7-9-12 ex. 7-28-12

PREP DATE:	07/09/12										
OPC CURVE											
EXP:	10/06/12										
						1	2	3	4	5	6
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	500	700	1000
	Hexane		082610B			990	950	800	500	300	NA
					Final VOL.	1000	1000	1000	1000	1000	1000

CM 7-9-12

CM 7-9-12 ex. 10-6-12

_SEP011

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	120726A	Extraction Method	SEP011	Units	mL

Spiked ID 1	Diesel Ampule 183767-30901		Surrogate ID 1	THC Surrogate 183766-30665	
Spiked ID 2	Motor Oil Ampule 183768-30234		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	07/26/12 15:45	
Spiked ID 8			Ext. End Time:	07/27/12 10:36	
			GC Requires Extract By:	**08/03/12 0:00**	

pH1			Water Bath Temp Criteria	78,76,80 °
pH2				
pH3				

Spiked By: DL **Date** 07/26/12 **Witnessed By:** JM **Date** 07/26/12

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
1	120726A Blk				0.250	1 equip	1000 E-WB7,78	5	7	07/26/12 15:45	
2	120726A LCS-1		0.040	1	0.250	1 equip	1000 E-WB7,78	5	7	07/26/12 15:45	
3	120726A LCS-2		0.040	2	0.250	1 equip	1000 E-WB7,78	5	7	07/26/12 15:45	
4	AY65166	AY65166W04			0.250	1 equip	1040 E-WB7,78	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
5	AY65167 MS-1	AY65167W14	0.040	1	0.250	1 equip	1070 E-WB7,78	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
6	AY65167 MSD-1	AY65167W12	0.040	1	0.250	1 equip	1070 E-WB7,78	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
7	AY65167	AY65167W11			0.250	1 equip	1050 E-WB7,78	5	7	07/26/12 15:45	68268-2 WEEK RUSH -- Amber Liter
8	AY65211	AY65211W02			0.250	1 equip	1070 E-WB7,78	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
9	AY65212	AY65212W02			0.250	1 equip	1070 E-WB7,78	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
10	AY65213	AY65213W02			0.250	1 equip	1070 E-WB7,78	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
11	AY65214	AY65214W02			0.250	1 equip	1070 E-WB5,76	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
12	AY65215	AY65215W02			0.250	1 equip	1070 E-WB5,76	5	7	07/26/12 15:45	68281-2 WEEK RUSH -- Amber Liter
13	AY65216	AY65216W05			0.250	1 equip	1070 E-WB5,76	5	7	07/26/12 15:45	68283-2 WEEK RUSH -- Amber Liter

Ivent and Lot#	
ɔ	EMD52104
2SO4	2351C512

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/GH
Concentration	IC

Modified	07/27/12 10:47:48 AM

Reviewed By: DRA **Date** 07/27/12

Organic Extraction Worksheet

Method	THC Separatory Funnel Extraction 3510C	Extraction Set	120726A	Extraction Method	SEP011	Units	mL

Spiked ID 1	Diesel Ampule 183767-30901		Surrogate ID 1	THC Surrogate 183766-30665	
Spiked ID 2	Motor Oil Ampule 183768-30234		Surrogate ID 2		
Spiked ID 3			Surrogate ID 3		
Spiked ID 4			Surrogate ID 4		
Spiked ID 5			Surrogate ID 5		
Spiked ID 6			Sufficient Vol for Matrix QC:	YES	
Spiked ID 7			Ext. Start Time:	07/26/12 15:45	
Spiked ID 8			Ext. End Time:	07/27/12 10:36	
			GC Requires Extract By:	**08/03/12 0:00**	

pH1			Water Bath Temp Criteria	78,76,80 °
pH2				
pH3				

Spiked By: DL **Date** 07/26/12 **Witnessed By:** JM **Date** 07/26/12

	Sample	Sample Container	Spike Amount	Spike ID	Surrogate Amount	Surrogate ID	Extract Amount	Final Volume	pH	Extract Date/Time	Comments
14	AY65217	AY65217W04			0.250	1	1050	5	7	07/26/12 15:45	68283-2 WEEK RUSH -- Amber Liter
						equip	E-WB5,76				
15	AY65218	AY65218W04			0.250	1	1070	5	7	07/26/12 15:45	68283-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				
16	AY65220	AY65220W07			0.250	1	1040	5	7	07/26/12 15:45	68284-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				
17	AY65277	AY65277W03			0.250	1	1070	5	7	07/26/12 15:45	68296-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				
18	AY65278	AY65278W03			0.250	1	1070	5	7	07/26/12 15:45	68296-2 WEEK RUSH -- Amber Liter
						equip	E-WB6,80				
19	AY65395	AY65395W01			0.250	1	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
						equip	E-WB5,76				
20	AY65399	AY65399W01			0.250	1	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
						equip	E-WB5,76				
21	AY65402	AY65402W01			0.250	1	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
						equip	E-WB5,76				
22	AY65416	AY65416W01			0.250	1	1070	5	7	07/26/12 15:45	68300 -- Amber Liter
						equip	E-WB5,76				

DRA 7/27/12

olvent and Lot#	
1C	EMD52104
la2SO4	2351C512

Extraction COC Transfer	
Extraction lab employee Initials	DRA
GC analyst's initials	
Date	
Time	
Refrigerator	

	Technician's Initials
Scanned By	JM
Sample Preparation	JM
Extraction	JM/GH
Concentration	IC

Modified	07/27/12 10:47:48 AM

Reviewed By: DRA **Date** 07/27/12

Injection Log

Directory: G:\APOLLO\DATA\120622\

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	4	622004.D	1	TCH SURROGATE 100/1000	Mix(c)	6-22-12 18:22:29
2	5	622005.D	1	TCH SURROGATE 400/1000	Mix(c)	6-22-12 18:46:55
3	6	622006.D	1	TCH SURROGATE 600/1000	Mix(c)	6-22-12 19:10:46
4	7	622007.D	1	TCH SURROGATE 800/1000	Mix(c)	6-22-12 19:34:47
5	8	622008.D	1	TCH SURROGATE 1000/1000	Mix(c)	6-22-12 19:58:49
6	9	622009.D	1	DIESEL 10/1000 6/22/12	Mix(A)	6-22-12 20:22:56
7	10	622010.D	1	DIESEL 100/1000	Mix(A)	6-22-12 20:47:06
8	11	622011.D	1	DIESEL 400/1000	Mix(A)	6-22-12 21:11:13
9	12	622012.D	1	DIESEL 600/1000	Mix(A)	6-22-12 21:35:18
10	13	622013.D	1	DIESEL 800/1000	Mix(A)	6-22-12 21:59:20
11	14	622014.D	1	DIESEL 1000/1000	Mix(A)	6-22-12 22:23:21
12	15	622015.D	1	DIESEL 2ND SRC 6/22/12	Mix(A)	6-22-12 22:47:20
13	32	731032.D	1	DIESEL 400ppm 7/30/12	Mix(A)	7-31-12 22:20:07
14	39	731039.D	4.7619	120726A BLK 5/1000	Water	8-1-12 1:11:25
15	40	731040.D	4.7619	120726A LCS-1 5/1000	Water	8-1-12 1:35:46
16	47	731047.D	1	DIESEL 400ppm 7/31/12	Water	8-1-12 4:24:28
17	56	731056.D	4.7619	AY65220W07 5/1040	Water	8-1-12 8:02:08
18	59	731059.D	1	DIESEL 400ppm 7/31/12	Water	8-1-12 9:14:22

EPA METHOD 8260B
Volatile Organic Compounds

APPL, INC.

EPA METHOD 8260B
Volatile Organic Compounds
QC Summary

APPL, INC.

Method Blank

EPA 8260B VOCs + Gas Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
BLANK	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
BLANK	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
BLANK	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMO-3-CHLOROPROPA	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
BLANK	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
BLANK	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
BLANK	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
BLANK	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
BLANK	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
BLANK	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
BLANK	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 10:06:15 AM
GC SC-Blank-REG MDLs

Method Blank

EPA 8260B VOCs + Gas Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
BLANK	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	SURROGATE: 1,2-DICHLOROET	102	70-120			%	07/26/12	07/26/12
BLANK	SURROGATE: 4-BROMOFLUORO	101	75-120			%	07/26/12	07/26/12
BLANK	SURROGATE: DIBROMOFLUOR	102	85-115			%	07/26/12	07/26/12
BLANK	SURROGATE: TOLUENE-D8 (S)	101	85-120			%	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 10:06:15 AM
GC SC-Blank-REG MDLs

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68284

Case No: 68284 Date Analyzed: 07/26/12

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: 1,2-DICHLOROETHANE-D4 (S)			SURROGATE: 4-BROMOFLUOROBENZENE (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120726AT-LCS	Lab Control Spike	70-120	102		75-120	104	
120726AT-BLK	Blank	70-120	102		75-120	101	
AY65219	ES087-TRIP BLANK	70-120	102		75-120	98.7	
AY65220	ES088	70-120	100		75-120	100	

Comments: Batch: #86RHB-120726AT

Form 2 & 8

Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68284

Case No: 68284 Date Analyzed: 07/26/12

Matrix: WATER Instrument: Thor

APPL ID.	Client Sample No.	SURROGATE: DIBROMOFLUOROMETHANE (S)			SURROGATE: TOLUENE-D8 (S)		
		Limits	Result	Qualifier	Limits	Result	Qualifier
120726AT-LCS	Lab Control Spike	85-115	102		85-120	99.6	
120726AT-BLK	Blank	85-115	102		85-120	101	
AY65219	ES087-TRIP BLANK	85-115	101		85-120	100	
AY65220	ES088	85-115	99.6		85-120	98.5	

Comments: Batch: #86RHB-120726AT

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 LCS - 169444**
Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,1,1,2-TETRACHLOROETHANE	10.00	10.3	103	80-130
1,1,1-TRICHLOROETHANE	10.00	9.87	98.7	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.84	98.4	65-130
1,1,2-TRICHLOROETHANE	10.00	9.86	98.6	75-125
1,1-DICHLOROETHANE	10.00	10.4	104	70-135
1,1-DICHLOROETHENE	10.00	9.96	99.6	70-130
1,2,3-TRICHLOROPROPANE	10.00	10.3	103	75-125
1,2,4-TRICHLOROBENZENE	10.00	10.4	104	65-135
1,2-DIBROMO-3-CHLOROPROPANE	10.00	10.8	108	50-130
1,2-DIBROMOETHANE	10.00	9.82	98.2	70-130
1,2-DICHLOROBENZENE	10.00	9.95	99.5	70-120
1,2-DICHLOROETHANE	10.00	9.83	98.3	70-130
1,2-DICHLOROPROPANE	10.00	10.0	100	75-125
1,3-DICHLOROBENZENE	10.00	10.2	102	75-125
1,3-DICHLOROPROPENE, TOTAL	20.0	20.3	102	70-130
1,4-DICHLOROBENZENE	10.00	9.71	97.1	75-125
2-BUTANONE	10.00	9.66	96.6	30-150
4-METHYL-2-PENTANONE	10.00	9.27	92.7	60-135
ACETONE	10.00	10.9	109	40-140
BENZENE	10.00	9.55	95.5	80-120
BROMODICHLOROMETHANE	10.00	10.1	101	75-120
BROMOFORM	10.00	10.2	102	70-130
BROMOMETHANE	10.00	9.13	91.3	30-145
CARBON TETRACHLORIDE	10.00	10.3	103	65-140
CHLOROBENZENE	10.00	10.1	101	80-120
CHLORODIBROMOMETHANE	10.00	10.2	102	60-135
CHLOROETHANE	10.00	9.65	96.5	60-135
CHLOROFORM	10.00	9.96	99.6	65-135
CHLOROMETHANE	10.00	8.45	84.5	40-125
CIS-1,2-DICHLOROETHENE	10.00	10.3	103	70-125
ETHYLBENZENE	10.00	10.3	103	75-125

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Comments: _____

Printed: 07/31/12 10:06:06 AM

APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 LCS - 169444**
Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE	300	285	95.0	75-125
HEXACHLOROBUTADIENE	10.00	10.4	104	50-140
METHYL TERT-BUTYL ETHER	10.00	9.83	98.3	65-125
METHYLENE CHLORIDE	10.00	9.48	94.8	55-140
STYRENE	10.00	10.6	106	65-135
TETRACHLOROETHENE	10.00	10.3	103	45-150
TOLUENE	10.00	10.2	102	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.17	91.7	60-140
TRICHLOROETHENE	10.00	9.73	97.3	70-125
VINYL CHLORIDE	10.00	9.58	95.8	50-145
XYLENES (TOTAL)	30.0	31.5	105	80-120
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	34.2	102	70-120
SURROGATE: 4-BROMOFLUOROBENZE	29.5	30.7	104	75-120
SURROGATE: DIBROMOFLUOROMETH	31.9	32.5	102	85-115
SURROGATE: TOLUENE-D8 (S)	37.3	37.2	99.6	85-120

Comments: _____

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Printed: 07/31/12 10:06:06 AM
APPL Standard LCS

EPA 8260B

Form 4

Blank Summary

Lab Name: APPL, Inc. SDG No: 68284

Case No: 68284 Date Analyzed: 07/26/12

Matrix: WATER Instrument: Thor

Blank ID: 120726AT-BLK Time Analyzed: 1400

APPL ID.	Client Sample No.	File ID.	Date Analyzed
120726AT-LCS	Lab Control Spike	0726T05	07/26/12 1113
120726AT-BLK	Blank	0726T11	07/26/12 1400
AY65219	ES087-TRIP BLANK	0726T13	07/26/12 1455
AY65220	ES088	0726T19	07/26/12 1741

Comments: Batch: #86RHB-120726AT

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 0726T01.D
Matrix: Water
ID: 5-ng BFB Std 07-16-12B

SDG No: 68284
Date Analyzed: 07/26/12
Instrument: Thor
Time Analyzed: 9:22

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		10ug/L Vol Std 07-26	0726T04.D	07/26/12 10:46
2	Lab Control Spike	120726A LCS-1WT	0726T05.D	07/26/12 11:13
3	Blank	120726A BLK-1WT	0726T11.D	07/26/12 14:00
4	ES087-TRIP BLANK	AY65219W01	0726T13.D	07/26/12 14:55
5	ES088	AY65220W01	0726T19.D	07/26/12 17:41
6				
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9				
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15				
16				
17				
18				
19				
20				
21				
22				

m/e		
50	14.9 - 40% of mass 95	17.9
75	30 - 60% of mass 95	47.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.2
173	0 - 2% of mass 174	0.4
174	50 - 100.49% of mass 95	97.3
175	5 - 9% of mass 174	7.9
176	95 - 101.49% of mass 174	97.8
177	5 - 9% of mass 176	6.8

Form 5
Tune Summary

Lab Name: APPL Inc.
Case No: 0726T01.D
Matrix: Water
ID: 5-ng BFB Std 07-16-12B

SDG No: 68284
Date Analyzed: 07/26/12
Instrument: Thor
Time Analyzed: 9:22

	Client Sample No.	APPL ID.	File ID.	Date Analyzed
1		CCV gas 300ug/L	0726T06.D	07/26/12 11:41
2	Lab Control Spike	LCS gas 300ug/L	0726T07.D	07/26/12 12:09
3	Blank	120726A BLK-1WT	0726T11.D	07/26/12 14:00
4	ES087-TRIP BLANK	AY65219W01	0726T13.D	07/26/12 14:55
5	ES088	AY65220W01	0726T19.D	07/26/12 17:41
6				
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19				
20				
21				
22				

m/e		
50	15 - 40% of mass 95	17.9
75	30 - 60% of mass 95	47.7
95	100 - 100% of mass 95	100.0
96	5 - 9% of mass 95	7.2
173	0 - 2% of mass 174	0.4
174	50 - 100% of mass 95	97.3
175	5 - 9% of mass 174	7.9
176	95 - 101% of mass 174	97.8
177	5 - 9% of mass 176	6.8

8A
INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: APPL Inc. Contract: Review

Lab Code: _____ SDG No.: 68284

Lab File ID (Standard): 0719T10.D Date Analyzed: 07/19/12

Instrument ID: Thor Time Analyzed: 13:20

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	461760	6.74	382656	9.88	222464	12.20
	UPPER LIMIT	923520	7.24	765312	10.38	444928	12.70
	LOWER LIMIT	230880	6.24	191328	9.38	111232	11.70
	SAMPLE NO.						
01	120719A LCS-1WT (SS)	459584	6.73	371008	9.87	216768	12.20
02	10ug/L Vol Std 07-26-12	398336	6.73	321152	9.87	193728	12.20
03	120726A LCS-1WT	396608	6.73	324736	9.88	196096	12.20
04	120726A BLK-1WT	393664	6.73	315392	9.88	183424	12.20
05	AY65219W01	389888	6.73	314752	9.87	180608	12.20
06	AY65220W01	399808	6.73	323648	9.87	181888	12.20
07							
08							
09							
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12							
13							
14							
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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.: 68284

Lab File ID (Standard): 0725T07.D Date Analyzed: 07/25/12

Instrument ID: Thor Time Analyzed: 12:13

GC Column: _____ ID: Heated Purge: (Y/N) _____

		Fluorobenzene (IS)		Chlorobenzene-D5 (IS)		1,4-Dichlorobenzene-D (IS)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	782981	6.73	897407	9.87	996199	12.20
	UPPER LIMIT	1565962	7.23	1794814	10.37	1992398	12.70
	LOWER LIMIT	391491	6.23	448704	9.37	498100	11.70
	SAMPLE NO.						
01	LCS gas 300ug/L (SS)	788179	6.73	879850	9.88	1024200	12.20
02	CCV gas 300ug/L	818998	6.73	915509	9.87	1060500	12.20
03	LCS gas 300ug/L	811874	6.72	928441	9.87	1044820	12.20
04	120726A BLK-1WT	814291	6.73	903930	9.88	1008830	12.20
05	AY65219W01	802827	6.73	908666	9.87	1000880	12.20
06	AY65220W01	825797	6.73	928980	9.87	1021250	12.20
07							
08							
09							
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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: 68284

APPL ID	Client ID	Method	Analyte	Type	Comment
AY65219	Blank	EPA 8260B	GASOLINE	Blank	(MI1) Integration does not follow baseline.
AY65219	LCS	EPA 8260B	GASOLINE	LCS	(MI1) Integration does not follow baseline.
AY65219	ES087-TRIP BLANK	EPA 8260B	GASOLINE	Parent	(MI1) Integration does not follow baseline.
AY65220	ES088	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

ARF: 68284

Sample ID: ES087-TRIP BLANK

APPL ID: AY65219

Sample Collection Date: 07/20/12

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

J = Estimated value.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T13
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 10:06:10 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

ARF: 68284

Sample ID: ES087-TRIP BLANK

APPL ID: AY65219

Sample Collection Date: 07/20/12

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	METHYLENE CHLORIDE	0.47 J	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	102	70-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	98.7	75-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	101	85-115			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	100	85-120			%	07/26/12	07/26/12

J = Estimated value.
U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T13
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 10:06:10 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T13.D Vial: 38
Acq On : 26 Jul 12 14:55 Operator: DG,RS,HW,ARS,SV
Sample : AY65219W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 8:57 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	389888	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	314752	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	180608	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	197264	32.33183 ppb		0.00
Spiked Amount 31.881			Recovery = 101.414%			
36) 1,2-DCA-D4(S)	6.33	65	194336	34.27343 ppb		0.00
Spiked Amount 33.647			Recovery = 101.861%			
56) Toluene-D8(S)	8.43	98	696128	37.41049 ppb		0.00
Spiked Amount 37.345			Recovery = 100.174%			
64) 4-Bromofluorobenzene(S)	11.05	95	256454	29.14270 ppb		0.00
Spiked Amount 29.515			Recovery = 98.739%			
Target Compounds					Qvalue	
18) Methylene chloride	3.45	84	2016	0.47360 ppb	J	86

< ½ PQL

ARS 7/27/12

(#) = qualifier out of range (m) = manual integration

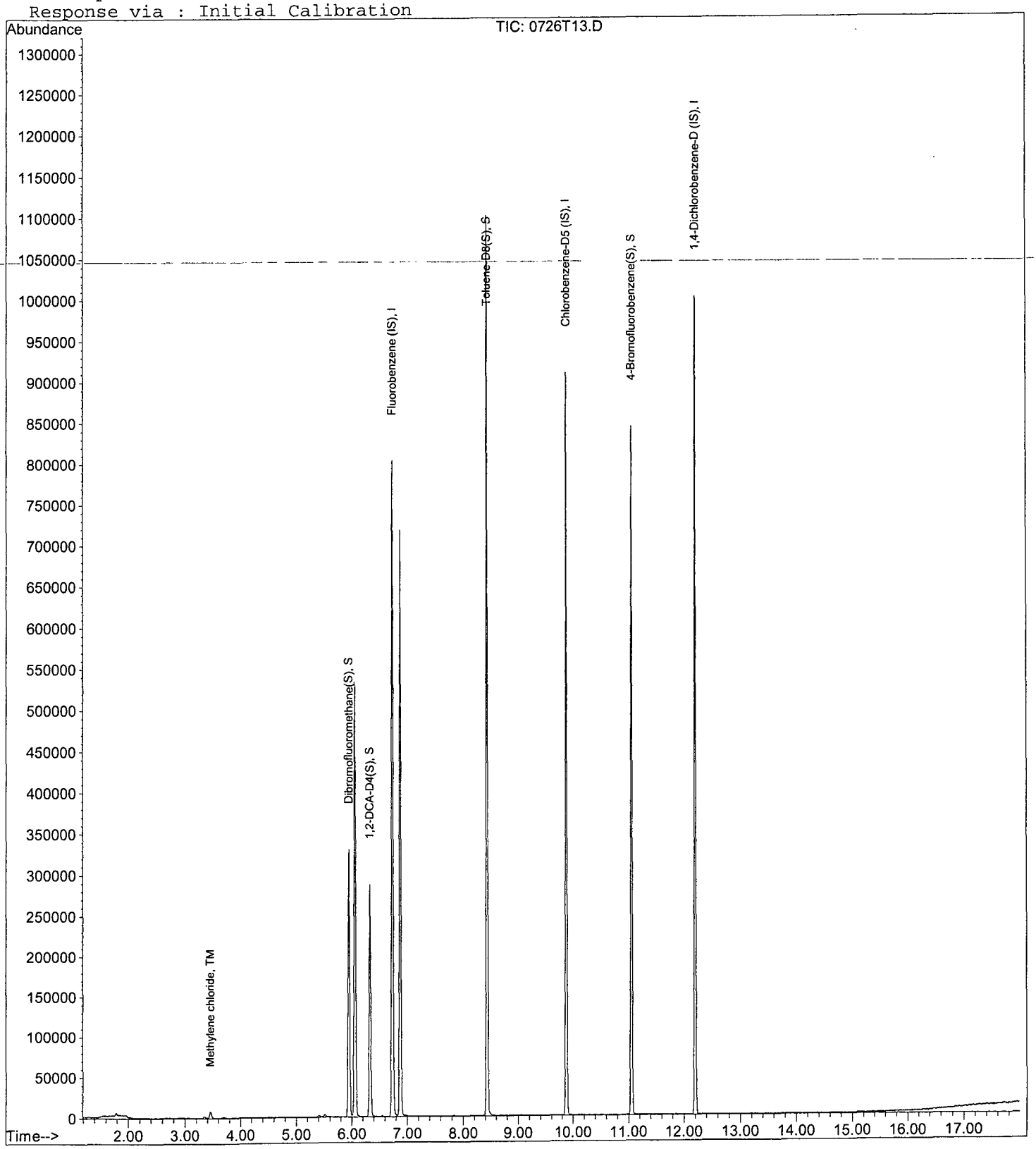
Quantitation Report

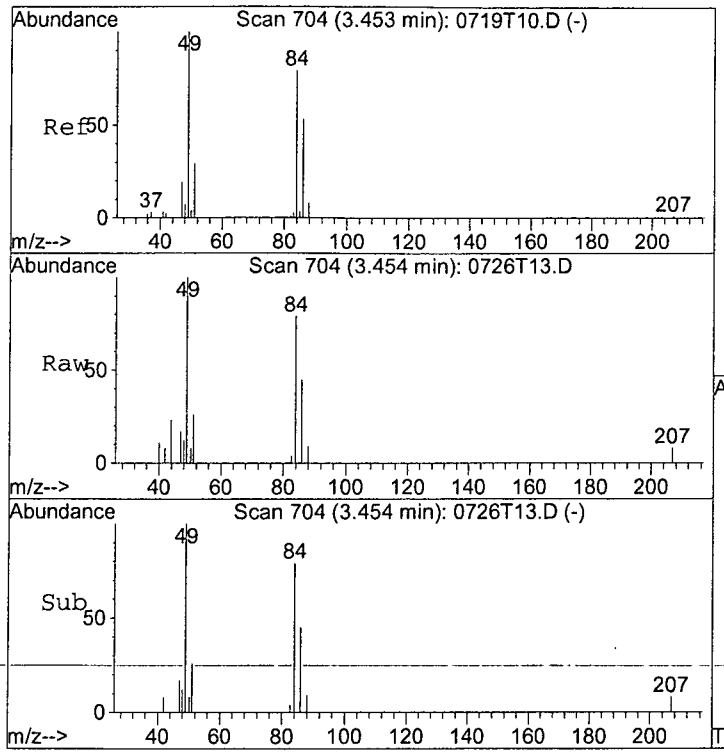
Data File : M:\THOR\DATA\T120725\0726T13.D
Acq On : 26 Jul 12 14:55
Sample : AY65219W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 38
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 8:57 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

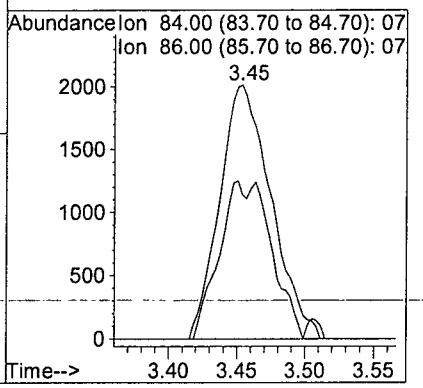




#18
Methylene chloride
Concen: 0.47360 ppb
RT: 3.45 min Scan# 704
Delta R.T. 0.00 min
Lab File: 0726T13.D
Acq: 26 Jul 12 14:55

Tgt Ion: 84 Resp: 2016

Ion	Ratio	Lower	Upper
84	100		
86	56.7	47.5	88.3



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T13.D Vial: 38
Acq On : 26 Jul 12 14:55 Operator: DG,RS,HW,ARS,SV
Sample : AY65219W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 15:18 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	802827	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	908666	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1000884	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	9844090m	2.77917	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

(#) = qualifier out of range (m) = manual integration

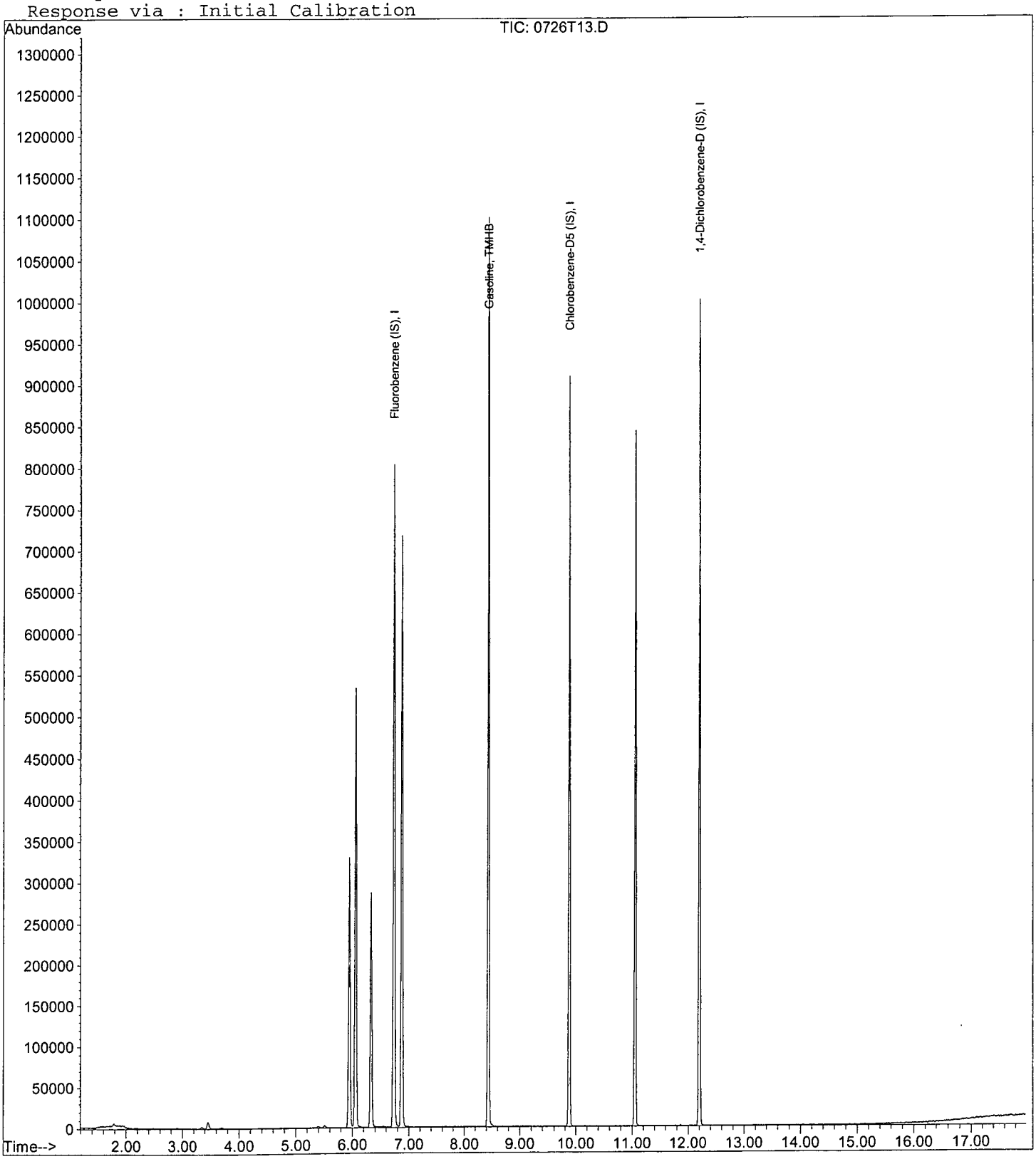
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T13.D
Acq On : 26 Jul 12 14:55
Sample : AY65219W01
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 26 15:18 2012 Quant Results File: TGAS.RES

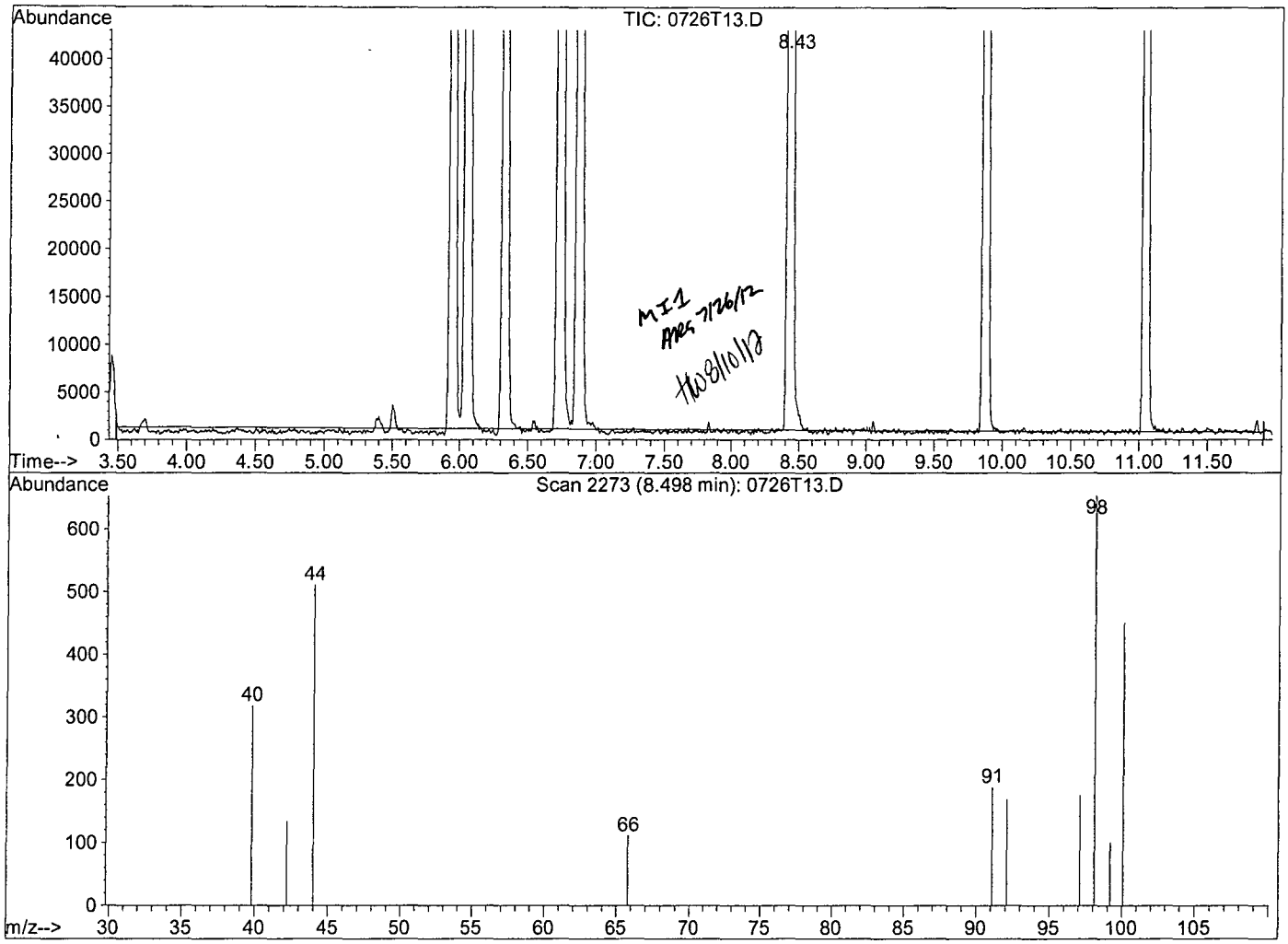
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T13.D Vial: 38
Acq On : 26 Jul 12 14:55 Operator: DG,RS,HW,ARS,SV
Sample : AY65219W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 15:17 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration



TIC: 0726T13.D

(2) Gasoline (TMHB)

8.50min -59.1851ppb m

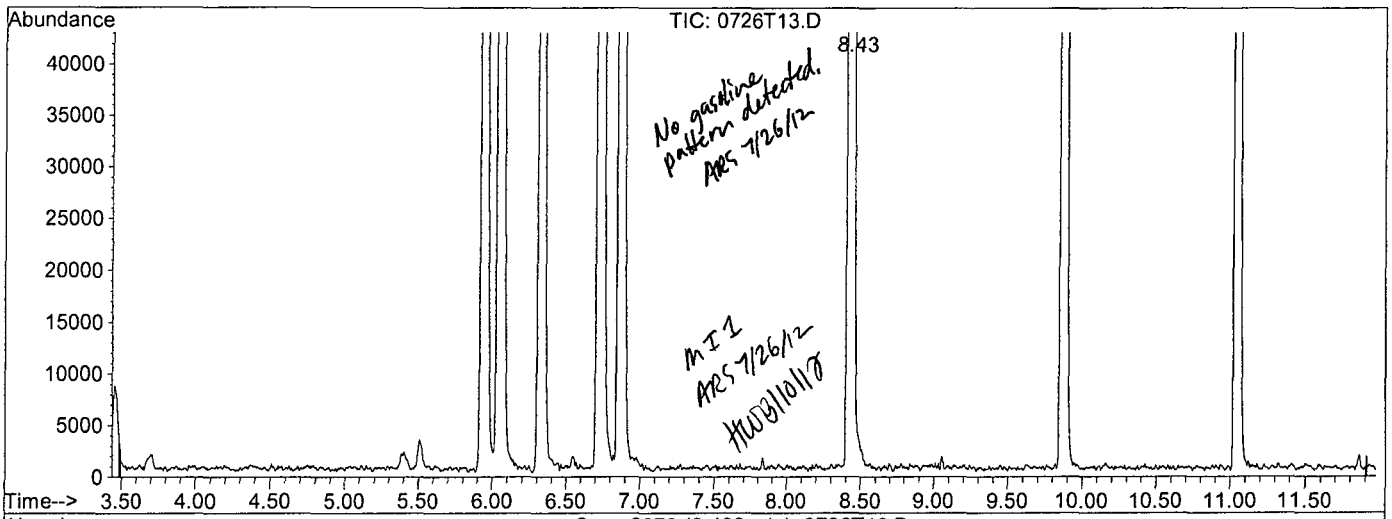
response 7676251

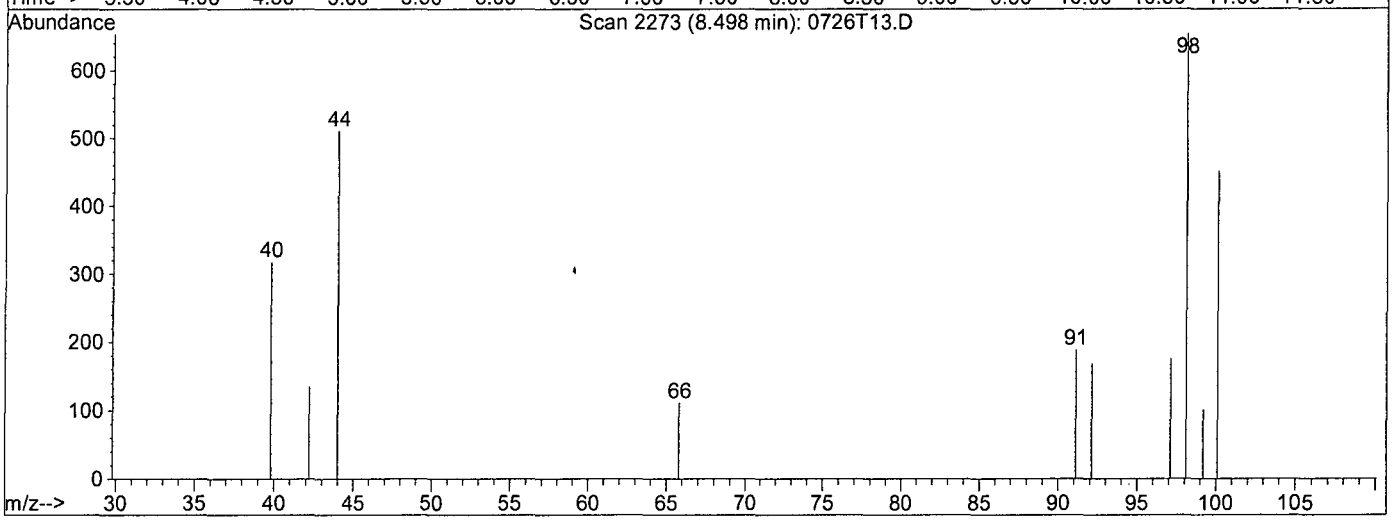
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.25#
0.00	0.00	3.71#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T13.D Vial: 38
Acq On : 26 Jul 12 14:55 Operator: DG,RS,HW,ARS,SV
Sample : AY65219W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 15:18 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T13.D

(2) Gasoline (TMHB)

8.43min 2.7792ppb m

response 9844090

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.98#
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

Attn: Max Solmssen

Project: LTM Red Hill /1022-024

Sample ID: ES088

Sample Collection Date: 07/20/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 68284

APPL ID: AY65220

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
EPA 8260B	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMO-3-CHLOROPROPANE	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
EPA 8260B	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
EPA 8260B	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
EPA 8260B	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
EPA 8260B	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
EPA 8260B	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
EPA 8260B	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
EPA 8260B	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
EPA 8260B	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	GASOLINE	12.12 U MI1	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
EPA 8260B	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T19
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 10:06:10 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

ARF: 68284

Sample ID: ES088

APPL ID: AY65220

Sample Collection Date: 07/20/12

QCG: #86RHB-120726AT-169444

Method	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
EPA 8260B	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
EPA 8260B	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
EPA 8260B	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
EPA 8260B	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
EPA 8260B	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
EPA 8260B	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
EPA 8260B	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
EPA 8260B	SURROGATE: 1,2-DICHLOROETHANE	100	70-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: 4-BROMOFLUOROBEN	100	75-120			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: DIBROMOFLUOROMET	99.6	85-115			%	07/26/12	07/26/12
EPA 8260B	SURROGATE: TOLUENE-D8 (S)	98.5	85-120			%	07/26/12	07/26/12

U = The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
(MI1) Manual integration: Integration does not follow baseline.

Quant Method: TALLW.M
Run #: 0726T19
Instrument: Thor
Sequence: T120725
Dilution Factor: 1
Initials: ARS

Printed: 07/31/12 10:06:10 AM
APPL-F1-SC-NoMC-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T19.D Vial: 44
Acq On : 26 Jul 12 17:41 Operator: DG,RS,HW,ARS,SV
Sample : AY65220W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 9:04 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	399808	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	323648	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	181888	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	198683	31.75642 ppb	0.00
Spiked Amount 31.881			Recovery = 99.607%		
36) 1,2-DCA-D4(S)	6.33	65	195671	33.65264 ppb	0.00
Spiked Amount 33.647			Recovery = 100.019%		
56) Toluene-D8(S)	8.43	98	703929	36.78991 ppb	0.00
Spiked Amount 37.345			Recovery = 98.514%		
64) 4-Bromofluorobenzene(S)	11.05	95	267155	29.52427 ppb	0.00
Spiked Amount 29.515			Recovery = 100.029%		
Target Compounds					Qvalue
81) Tert-Butylbenzene	11.82	119	2715	0.13596 ppb	J, NT 97

< ½ PQL

ARS 7/27/12

(#) = qualifier out of range (m) = manual integration

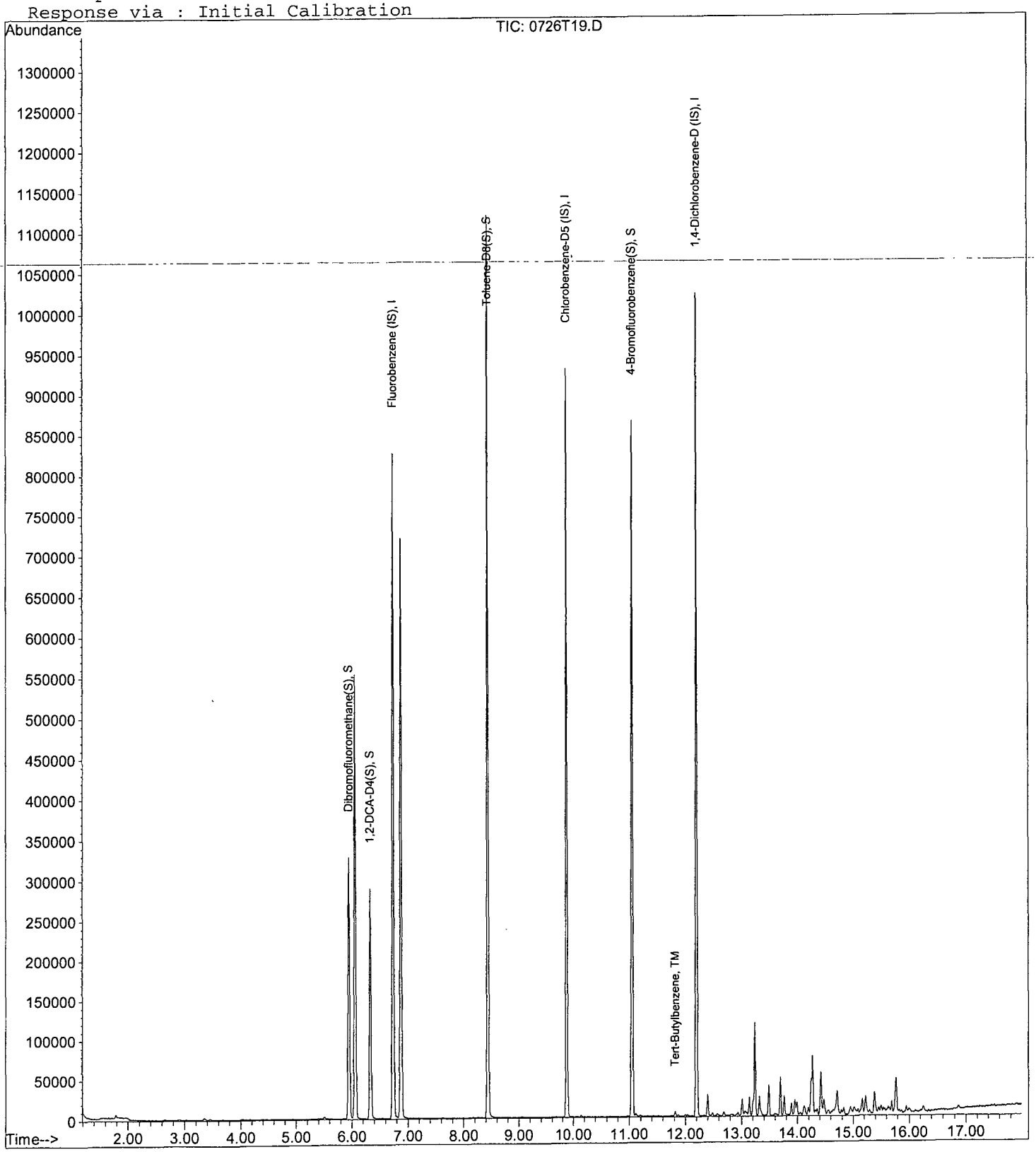
Quantitation Report

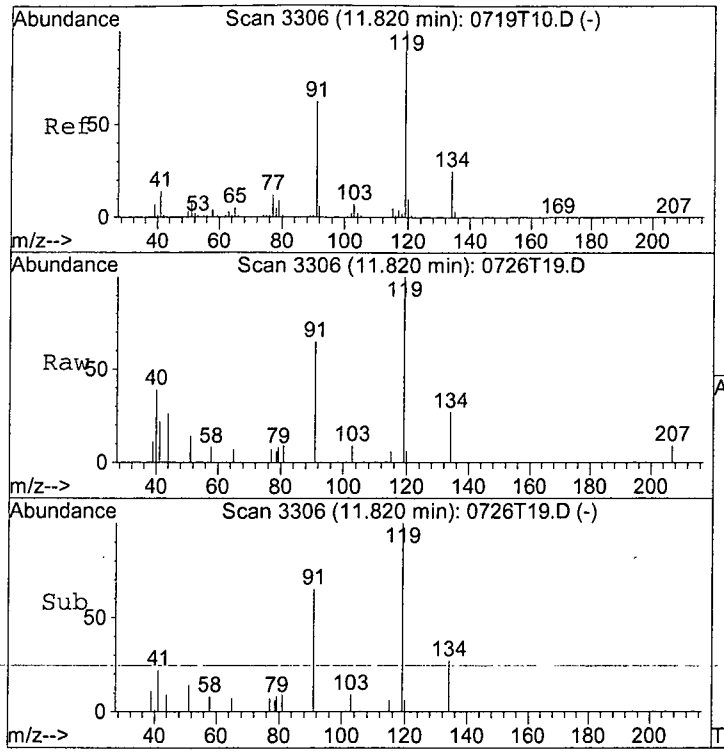
Data File : M:\THOR\DATA\T120725\0726T19.D
Acq On : 26 Jul 12 17:41
Sample : AY65220W01
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 44
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 27 9:04 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

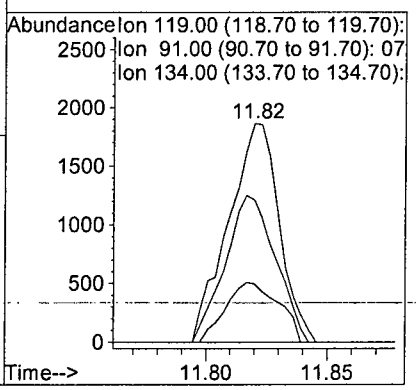




#81
Tert-Butylbenzene
Concen: 0.13596 ppb
RT: 11.82 min Scan# 3306
Delta R.T. 0.00 min
Lab File: 0726T19.D
Acq: 26 Jul 12 17:41

Tgt Ion:119 Resp: 2715

Ion	Ratio	Lower	Upper
119	100		
91	65.0	43.7	81.1
134	26.7	17.6	32.8



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T19.D Vial: 44
Acq On : 26 Jul 12 17:41 Operator: DG,RS,HW,ARS,SV
Sample : AY65220W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 27 7:40 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	825797	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	928980	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1021246	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10235882m	5.83975	ppb	ND 100

No gasoline pattern detected.
ARS 7/27/12

(#) = qualifier out of range (m) = manual integration
0726T19.D TGAS.M Fri Jul 27 07:40:43 2012 Page 1

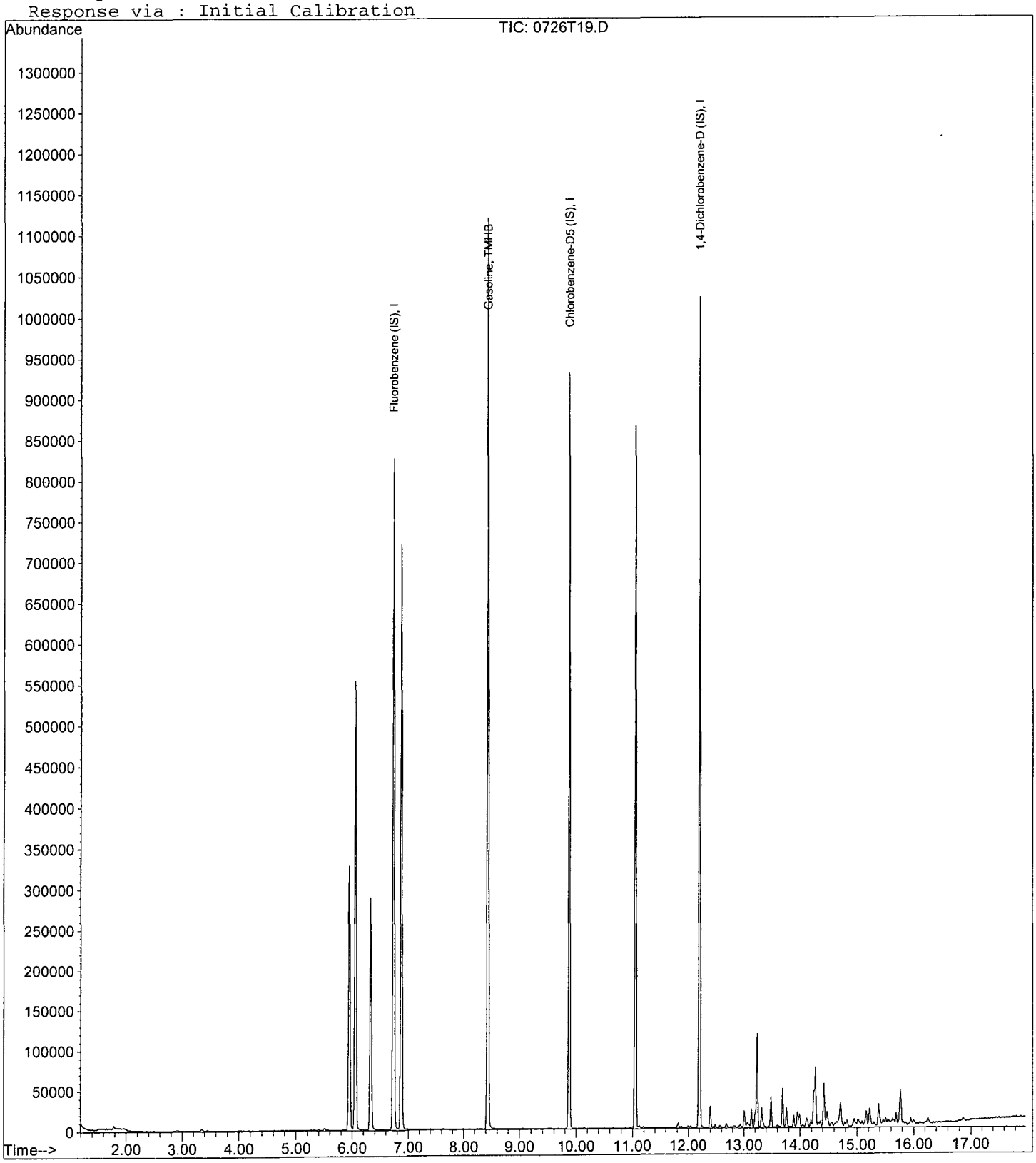
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T19.D
Acq On : 26 Jul 12 17:41
Sample : AY65220W01
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 27 7:40 2012 Quant Results File: TGAS.RES

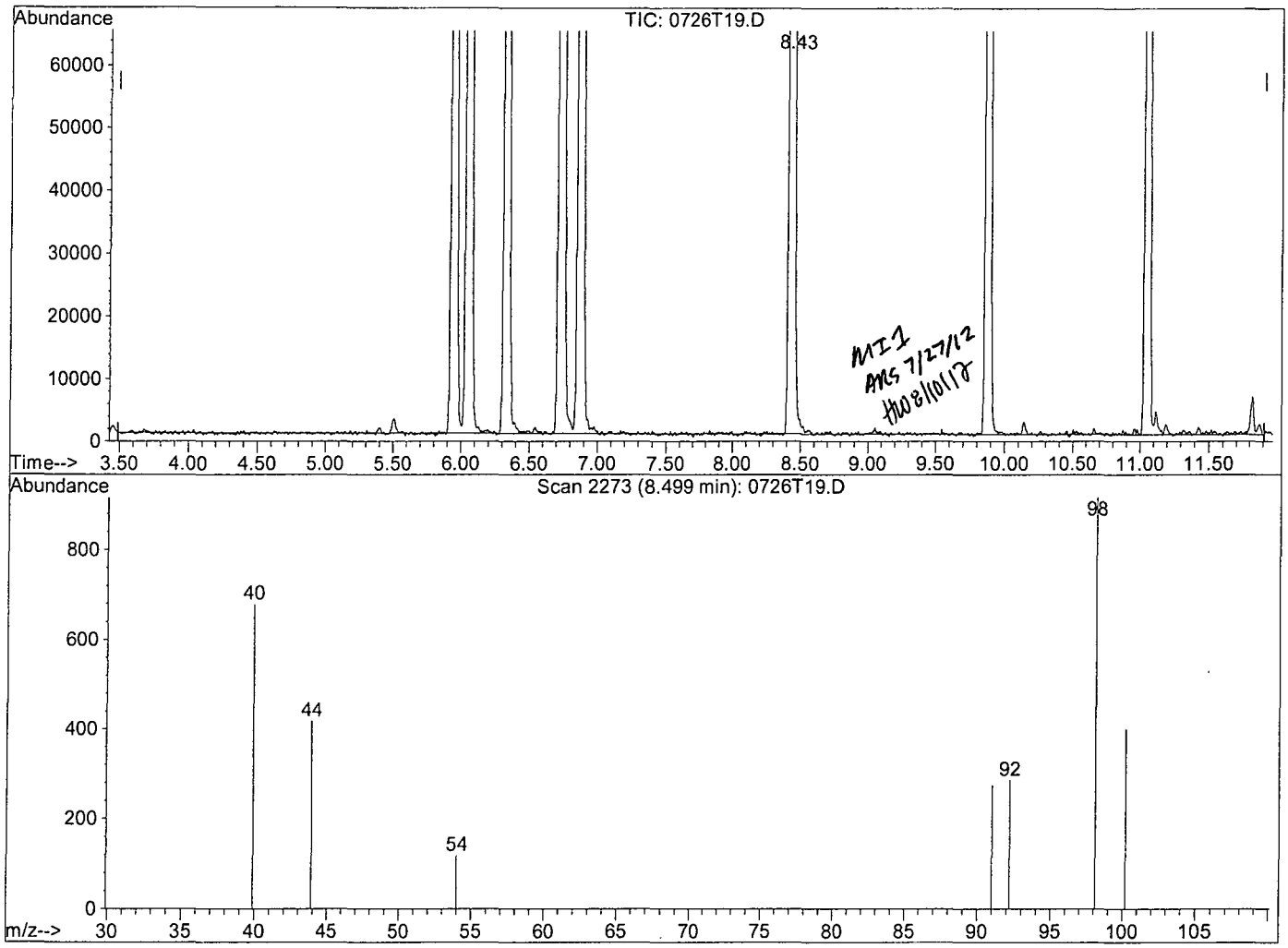
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T19.D Vial: 44
Acq On : 26 Jul 12 17:41 Operator: DG,RS,HW,ARS,SV
Sample : AY65220W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:40 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration



TIC: 0726T19.D

(2) Gasoline (TMHB)

8.50min -61.7298ppb m

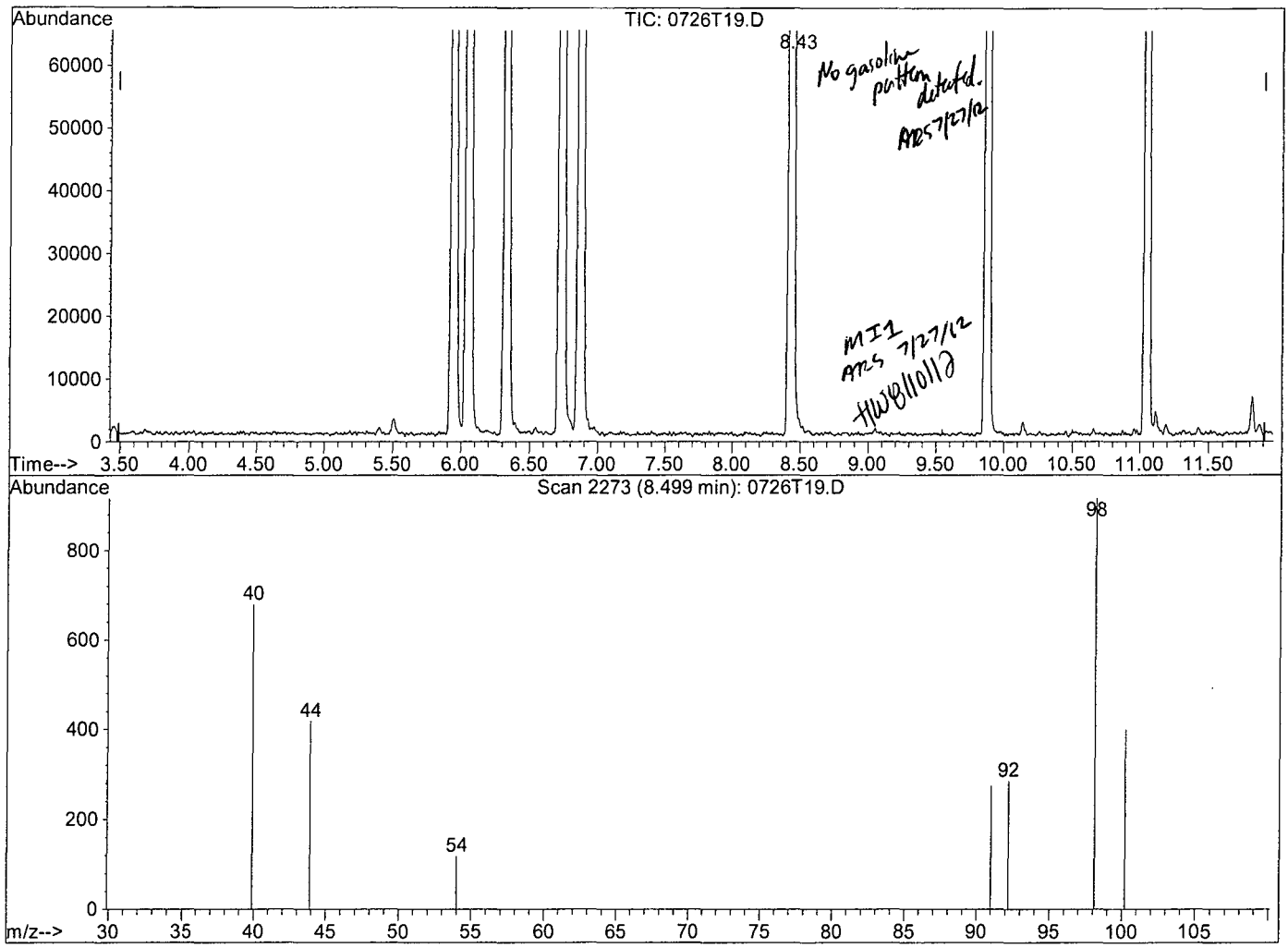
response 7804306

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.26#
0.00	0.00	3.67#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T19.D Vial: 44
Acq On : 26 Jul 12 17:41 Operator: DG,RS,HW,ARS,SV
Sample : AY65220W01 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 27 7:40 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration



TIC: 0726T19.D

(2) Gasoline (TMHB)

8.43min 5.8398ppb m

response 10235882

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.96#
0.00	0.00	2.80#
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. SDG No: 68284
Case No: Initial Cal. Date: 07/19/12
Matrix: Water Instrument: Thor (TALLW.M) Initials:

		Compound	0.3	0.5	1	2	5	10	20	40	100		Avg	%RSD		r2	
			0719T05.D	0719T06.D	0719T07.D	0719T08.D	0719T09.D	0719T10.D	0719T11.D	0719T12.D	0719T13.D						
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		NT
11	TML	Acetone	0.3965	0.2944	0.1679	0.1468	0.1007	0.0866	0.0926	0.0801	0.0821		0.16	70	TML	0.999	
12	TM	Freon-113	0.1778	0.1747	0.1931	0.2265	0.2246	0.2168	0.2084	0.2210	0.2060		0.21	9.5	TM		
13	TM*	1,1-DCE	0.3007	0.2729	0.2644	0.2720	0.2744	0.2696	0.2660	0.2835	0.2775		0.28	4.0	TM*		
14	TM	t-Butanol		0.0075	0.0074	0.0072	0.0076	0.0077	0.0092	0.0102			0.01	14	TM		
15	TML	Methyl Acetate	0.8726	0.6035	0.5101	0.4714	0.2802	0.2330	0.2248	0.2202	0.2132		0.40	57	TML	1.000	
16	TM	Iodomethane	0.2492	0.2575	0.2660	0.2419	0.2622	0.2432	0.2408	0.2414	0.2418		0.25	4.0	TM		
17	TM	Acrylonitrile	0.0874	0.0549	0.0692	0.0728	0.0933	0.0806	0.0840	0.0846	0.0838		0.08	15	TM		
18	TML	Methylene chloride	0.3676	0.2647	0.1440	0.1292	0.1165	0.0964	0.0956	0.0949	0.0918		0.16	62	TML	1.000	
19	TML	Carbon disulfide	0.0466	0.0453	0.0322	0.0318	0.0301	0.0270	0.0292	0.0278	0.0258		0.03	23	TML	0.999	
20	TM	Methyl t-butyl ether (MtBE)	0.6119	0.5783	0.5229	0.5275	0.5662	0.5222	0.5070	0.4911	0.4631		0.53	8.6	TM		
21	TM	Trans-1,2-DCE	0.2297	0.2354	0.1695	0.1842	0.1947	0.1734	0.1779	0.1766	0.1709		0.19	13	TM		
22	TM	Diisopropyl Ether	0.1003	0.1361	0.1126	0.1164	0.1317	0.1212	0.1179	0.1198	0.1168		0.12	8.7	TM		
23	TM**	1,1-DCA	0.5526	0.4780	0.4682	0.4954	0.5506	0.5086	0.4958	0.5067	0.4843		0.50	5.9	TM**		
24	TM	Vinyl Acetate	0.2861	0.3189	0.2551	0.2716	0.3128	0.2787	0.2776	0.2848	0.2788		0.28	6.9	TM		
25	TM	Ethyl tert Butyl Ether	0.7356	0.6599	0.6680	0.6558	0.7593	0.6522	0.6460	0.6381	0.5738		0.67	8.2	TM		
26	TML	MEK (2-Butanone)	0.2041	0.1795	0.1594	0.1391	0.1113	0.1135	0.1203	0.1216	0.1272		0.14	23	TML	1.000	
27	TM	Cis-1,2-DCE	0.3407	0.3327	0.3111	0.3113	0.3441	0.3184	0.3199	0.3183	0.3119		0.32	4.0	TM		
28	TM	2,2-Dichloropropane		0.2047	0.2143	0.2086	0.2158	0.2037	0.1976	0.1966	0.1845		0.20	5.0	TM		
29	TM*	Chloroform	0.7181	0.6349	0.6028	0.6230	0.6647	0.6037	0.5996	0.6037	0.5876		0.63	6.6	TM*		
30	TM	Bromochloromethane	0.1510	0.1457	0.1513	0.1633	0.1810	0.1595	0.1543	0.1538	0.1561		0.16	6.5	TM		
31	S	Dibromofluoromethane(S)	0.5051	0.3961	0.3766	0.3856	0.3635	0.3650	0.3693	0.3784	0.3815		0.39	11	S		
32	TM	1,1,1-TCA	0.4433	0.4047	0.3367	0.3737	0.3876	0.3695	0.3618	0.3671	0.3480		0.38	8.5	TM		
33	TM	Cyclohexane	0.1075	0.0984	0.0973	0.1087	0.1023	0.1026	0.0982	0.1080	0.0976		0.10	4.6	TM		
34	TM	1,1-Dichloropropene	0.2952	0.2623	0.2578	0.2666	0.2963	0.2712	0.2714	0.2756	0.2672		0.27	4.9	TM		
35	TM	2,2,4-Trimethylpentane	0.4193	0.3897	0.3643	0.3992	0.4174	0.3920	0.3860	0.4075	0.3655		0.39	5.1	TM		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68284
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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)														

AMS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 6
Initial Calibration

Lab Name: APPL, Inc. SDG No: 68284
Case No: Initial Cal. Date: 07/19/12
Matrix: Water 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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T05.D Vial: 5
Acq On : 19 Jul 12 11:01 Operator: DG,RS,HW,ARS,SV
Sample : 0.3ug/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)	6.74	96	427072	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	343424	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	202048	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	5177	0.77464 ppb		0.00
Spiked Amount 29.744			Recovery =	2.606%		
36) 1,2-DCA-D4(S)	6.33	65	4744	0.76381 ppb		0.00
Spiked Amount 29.083			Recovery =	2.627%		
56) Toluene-D8(S)	8.43	98	16030	0.78954 ppb		0.00
Spiked Amount 30.231			Recovery =	2.613%		
64) 4-Bromofluorobenzene(S)	11.05	95	7369	0.76748 ppb		0.00
Spiked Amount 28.321			Recovery =	2.708%		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	615	0.27612 ppb		95
3) Freon 114	1.42	85	725	-0.13478 ppb	#	68
4) Chloromethane	1.45	50	2617	0.40957 ppb		87
5) Vinyl chloride	1.56	62	2565	0.30389 ppb		92
6) Bromomethane	1.87	94	2507	0.46469 ppb		98
7) Chloroethane	1.98	64	1408	0.28963 ppb		99
9) Trichlorofluoromethane	2.24	101	407	0.23329 ppb		93
11) Acetone	2.91	43	2032	0.21001 ppb	#	82
12) Freon-113	2.85	101	911	0.25960 ppb	#	62
13) 1,1-DCE	2.82	61	1541	0.32723 ppb	#	78
14) t-Butanol	3.69	59	2213	15.97947 ppb		92
15) Methyl Acetate	3.35	43	4472	-0.20827 ppb	#	84
16) Iodomethane	2.99	142	1277	0.29980 ppb	#	77
17) Acrylonitrile	3.84	52	448	0.33215 ppb	#	42
18) Methylene chloride	3.45	84	1884	0.26546 ppb		79
19) Carbon disulfide	3.07	76	239	-0.34303 ppb	#	65
20) Methyl t-butyl ether (MtBE	3.91	73	3136	0.34491 ppb	#	79
21) Trans-1,2-DCE	3.87	96	1177	0.36216 ppb	#	64
22) Diisopropyl Ether	4.71	59	514	0.25243 ppb	#	40
23) 1,1-DCA	4.51	63	2832	0.32862 ppb	#	79
24) Vinyl Acetate	4.71	87	1466	0.30118 ppb		75
25) Ethyl tert Butyl Ether	5.21	59	3770	0.33165 ppb		100
26) MEK (2-Butanone)	5.40	43	1046	0.82334 ppb		91
27) Cis-1,2-DCE	5.32	96	1746	0.31627 ppb		76
28) 2,2-Dichloropropane	5.32	77	1192	0.74979 ppb		93
29) Chloroform	5.76	83	3680	0.34387 ppb		87
30) Bromochloromethane	5.63	128	774	0.28796 ppb		75
32) 1,1,1-TCA	5.96	97	2272	0.35284 ppb		87
33) Cyclohexane	6.03	41	551	0.31531 ppb	#	6
34) 1,1-Dichloropropene	6.16	75	1513	0.32355 ppb	#	82
35) 2,2,4-Trimethylpentane	6.55	57	2149	0.31975 ppb		81
37) Carbon Tetrachloride	6.16	117	1836	0.30422 ppb		83
38) Tert Amyl Methyl Ether	6.59	73	4153	0.34325 ppb	#	92
39) 1,2-DCA	6.42	62	2269	0.32331 ppb	#	74
40) Benzene	6.40	78	6818	0.35570 ppb		94
41) TCE	7.14	95	1650	0.31670 ppb		90
42) 2-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

Data File : M:\THOR\DATA\T120719\0719T05.D Vial: 5
Acq On : 19 Jul 12 11:01 Operator: DG,RS,HW,ARS,SV
Sample : 0.3ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
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

(#) = qualifier out of range (m) = manual integration

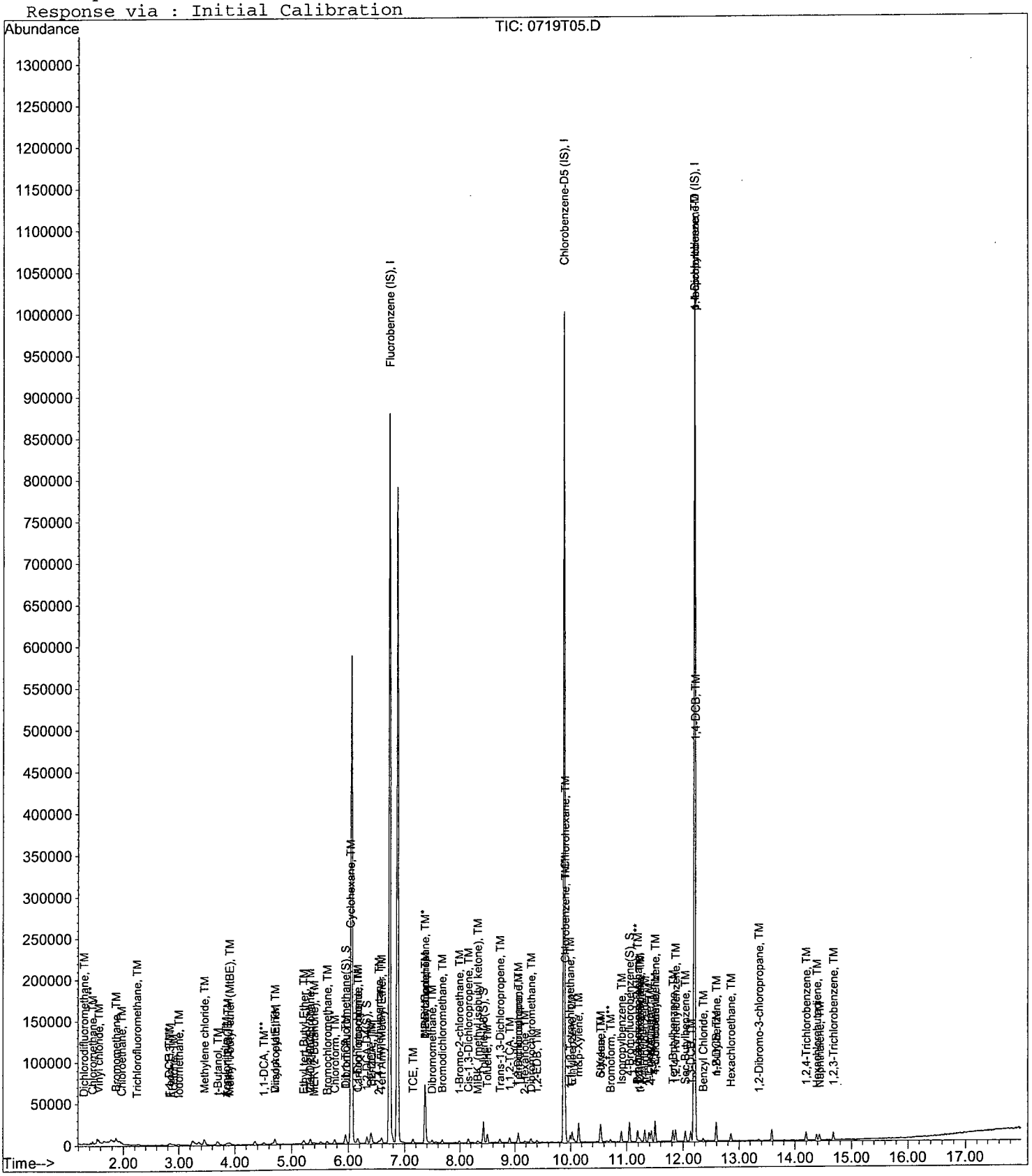
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T05.D
Acq On : 19 Jul 12 11:01
Sample : 0.3ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 5
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T06.D Vial: 6
Acq On : 19 Jul 12 11:29 Operator: DG,RS,HW,ARS,SV
Sample : 0.5ug/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	440576	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	363776	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	205952	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	6980	1.01241 ppb		0.00
Spiked Amount 29.744			Recovery = 3.402%			
36) 1,2-DCA-D4(S)	6.33	65	7179	1.12044 ppb		0.00
Spiked Amount 29.083			Recovery = 3.851%			
56) Toluene-D8(S)	8.43	98	22596	1.05068 ppb		0.00
Spiked Amount 30.231			Recovery = 3.477%			
64) 4-Bromofluorobenzene(S)	11.05	95	10075	0.99060 ppb		0.00
Spiked Amount 28.321			Recovery = 3.499%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	1093	0.47570 ppb		85
3) Freon 114	1.42	85	922	-0.07628 ppb		90
4) Chloromethane	1.45	50	4079	0.61881 ppb		92
5) Vinyl chloride	1.56	62	4275	0.49095 ppb		97
6) Bromomethane	1.87	94	3318	0.59617 ppb		96
7) Chloroethane	1.98	64	2744	0.54714 ppb		97
8) Dichlorofluoromethane	2.18	67	178	0.48209 ppb	#	41
9) Trichlorofluoromethane	2.24	101	742	0.41227 ppb		86
11) Acetone	2.90	43	2594	0.55965 ppb		96
12) Freon-113	2.86	101	1539	0.42512 ppb	#	88
13) 1,1-DCE	2.82	61	2405	0.49505 ppb		96
14) t-Butanol	3.69	59	3316	23.21003 ppb		95
16) Iodomethane	2.98	142	2269	0.51637 ppb	#	76
17) Acrylonitrile	3.82	52	484	0.34784 ppb	#	38
18) Methylene chloride	3.46	84	2332	0.50714 ppb		95
20) Methyl t-butyl ether (MtBE	3.91	73	5096	0.54331 ppb	#	93
21) Trans-1,2-DCE	3.86	96	2074	0.61860 ppb	#	74
22) Diisopropyl Ether	4.70	59	1199	0.57079 ppb	#	86
23) 1,1-DCA	4.51	63	4212	0.47377 ppb	#	92
24) Vinyl Acetate	4.70	87	2810	0.55961 ppb		62
25) Ethyl tert Butyl Ether	5.21	59	5815	0.49588 ppb		97
26) MEK (2-Butanone)	5.39	43	1582	1.04859 ppb	#	79
27) Cis-1,2-DCE	5.33	96	2932	0.51483 ppb		90
28) 2,2-Dichloropropane	5.32	77	1804	1.09997 ppb		93
29) Chloroform	5.76	83	5594	0.50670 ppb		93
30) Bromochloromethane	5.62	128	1284	0.46305 ppb		86
32) 1,1,1-TCA	5.96	97	3566	0.53682 ppb		84
33) Cyclohexane	6.03	41	867	0.48093 ppb	#	20
34) 1,1-Dichloropropene	6.16	75	2311	0.47905 ppb	#	87
35) 2,2,4-Trimethylpentane	6.55	57	3434	0.49528 ppb		94
37) Carbon Tetrachloride	6.17	117	3159	0.50739 ppb		79
38) Tert Amyl Methyl Ether	6.59	73	6331	0.50723 ppb	#	88
39) 1,2-DCA	6.42	62	3515	0.48550 ppb	#	91
40) Benzene	6.40	78	10831	0.54774 ppb		95
41) TCE	7.14	95	2816	0.52393 ppb		86
42) 2-Pentanone	7.36	43	96700	22.83691 ppb		100
43) 1,2-Dichloropropane	7.37	63	3334	0.51674 ppb	#	85
44) Bromodichloromethane	7.68	83	4425	0.49576 ppb	#	92
45) Methyl Cyclohexane	7.36	83	1985	0.51726 ppb		81
46) Dibromomethane	7.50	93	1649	0.46985 ppb		78
48) MIBK (methyl isobutyl ket	8.33	43	1720	0.56481 ppb	#	91

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T06.D Vial: 6
Acq On : 19 Jul 12 11:29 Operator: DG,RS,HW,ARS,SV
Sample : 0.5ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
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

(#) = qualifier out of range (m) = manual integration

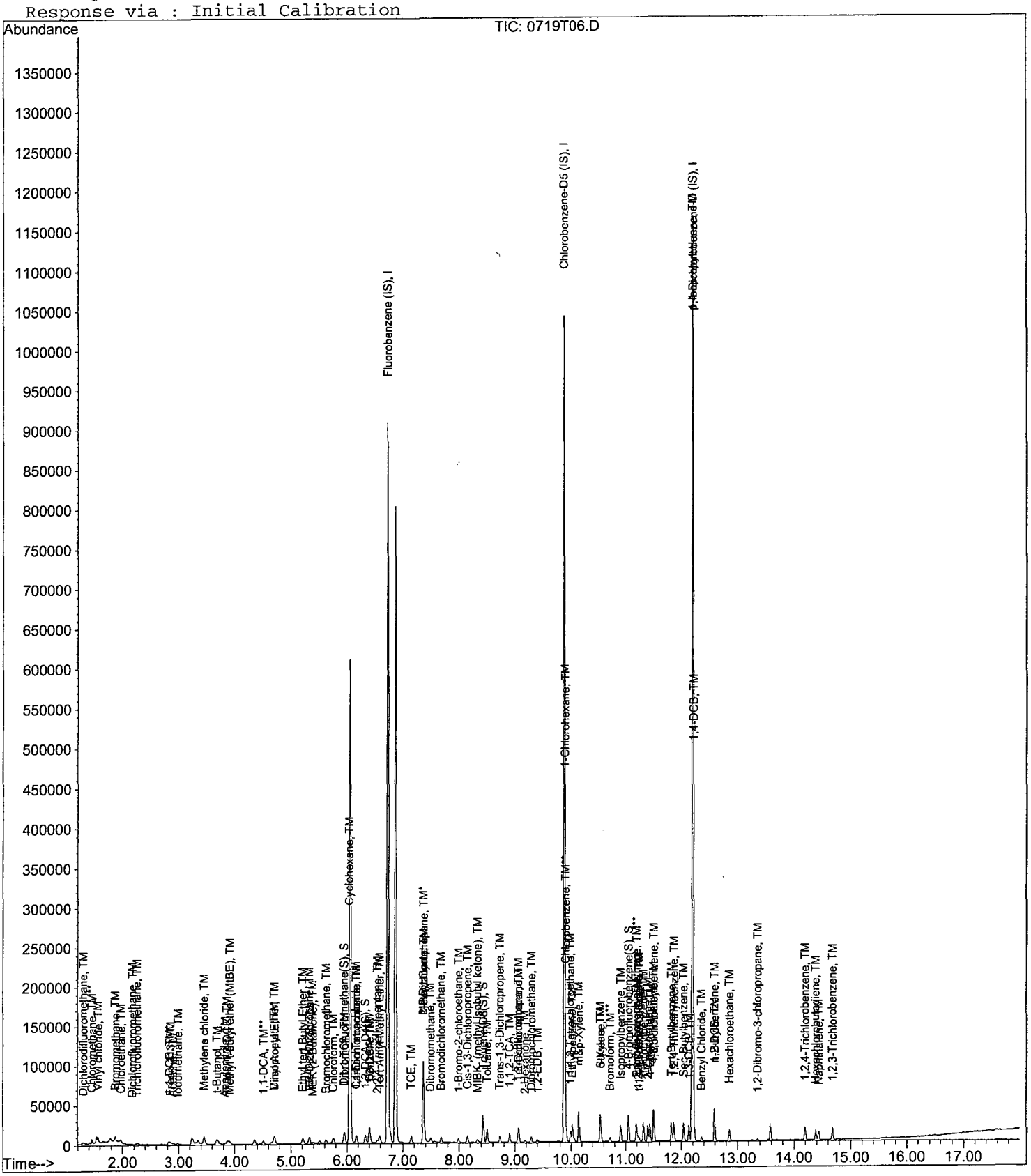
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T06.D
Acq On : 19 Jul 12 11:29
Sample : 0.5ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 6
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T07.D Vial: 7
Acq On : 19 Jul 12 11:57 Operator: DG,RS,HW,ARS,SV
Sample : 1.0ug/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)	6.74	96	442240	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	361536	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	203840	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	13324	1.92530 ppb		0.00
Spiked Amount 29.744			Recovery = 6.472%			
36) 1,2-DCA-D4(S)	6.33	65	12530	1.94822 ppb		0.00
Spiked Amount 29.083			Recovery = 6.698%			
56) Toluene-D8(S)	8.43	98	40197	1.88068 ppb		0.00
Spiked Amount 30.231			Recovery = 6.222%			
64) 4-Bromofluorobenzene(S)	11.05	95	19479	1.92710 ppb		0.00
Spiked Amount 28.321			Recovery = 6.804%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.31	85	2509	1.08786 ppb		90
3) Freon 114	1.42	85	2408	0.42008 ppb		95
4) Chloromethane	1.45	50	7357	1.11191 ppb		88
5) Vinyl chloride	1.56	62	8016	0.91712 ppb		91
6) Bromomethane	1.87	94	6361	1.13863 ppb		87
7) Chloroethane	1.98	64	5042	1.00157 ppb		95
8) Dichlorofluoromethane	2.18	67	223	0.65944 ppb	#	41
9) Trichlorofluoromethane	2.24	101	1709	0.94597 ppb		98
11) Acetone	2.90	43	2970	0.81592 ppb		89
12) Freon-113	2.86	101	3415	0.93978 ppb	#	73
13) 1,1-DCE	2.83	61	4677	0.95909 ppb		93
14) t-Butanol	3.69	59	6579	45.87583 ppb		98
15) Methyl Acetate	3.35	43	9023	0.97185 ppb		97
16) Iodomethane	2.98	142	4706	1.06694 ppb		95
17) Acrylonitrile	3.83	52	1224	0.87635 ppb	#	55
18) Methylene chloride	3.46	84	2548	0.63556 ppb		95
19) Carbon disulfide	3.07	76	570	0.36158 ppb	#	65
20) Methyl t-butyl ether (MtBE	3.91	73	9249	0.98236 ppb	#	88
21) Trans-1,2-DCE	3.87	96	2998	0.89083 ppb		94
22) Diisopropyl Ether	4.70	59	1992	0.94474 ppb		97
23) 1,1-DCA	4.51	63	8283	0.92818 ppb	#	90
24) Vinyl Acetate	4.70	87	4513	0.89537 ppb		98
25) Ethyl tert Butyl Ether	5.21	59	11816	1.00382 ppb		97
26) MEK (2-Butanone)	5.39	43	2819	1.59789 ppb		87
27) Cis-1,2-DCE	5.33	96	5504	0.96281 ppb		89
28) 2,2-Dichloropropane	5.32	77	3790	2.30222 ppb		89
29) Chloroform	5.76	83	10664	0.96229 ppb		98
30) Bromochloromethane	5.62	128	2677	0.96179 ppb		97
32) 1,1,1-TCA	5.96	97	5956	0.89324 ppb		87
33) Cyclohexane	6.03	41	1722	0.95160 ppb	#	36
34) 1,1-Dichloropropene	6.17	75	4561	0.94189 ppb		89
35) 2,2,4-Trimethylpentane	6.56	57	6445	0.92606 ppb		83
37) Carbon Tetrachloride	6.16	117	5937	0.95000 ppb		98
38) Tert Amyl Methyl Ether	6.59	73	12173	0.97161 ppb	#	90
39) 1,2-DCA	6.42	62	7205	0.99143 ppb		93
40) Benzene	6.40	78	18340	0.92399 ppb		97
41) TCE	7.15	95	5307	0.98367 ppb		92
42) 2-Pentanone	7.36	43	207854	48.90262 ppb		98
43) 1,2-Dichloropropane	7.37	63	6147	0.94914 ppb		99
44) Bromodichloromethane	7.68	83	8505	0.94929 ppb		94
45) Methyl Cyclohexane	7.36	83	3516	0.91277 ppb	#	49

(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120719\0719T07.D Vial: 7
Acq On : 19 Jul 12 11:57 Operator: DG,RS,HW,ARS,SV
Sample : 1.0ug/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

	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

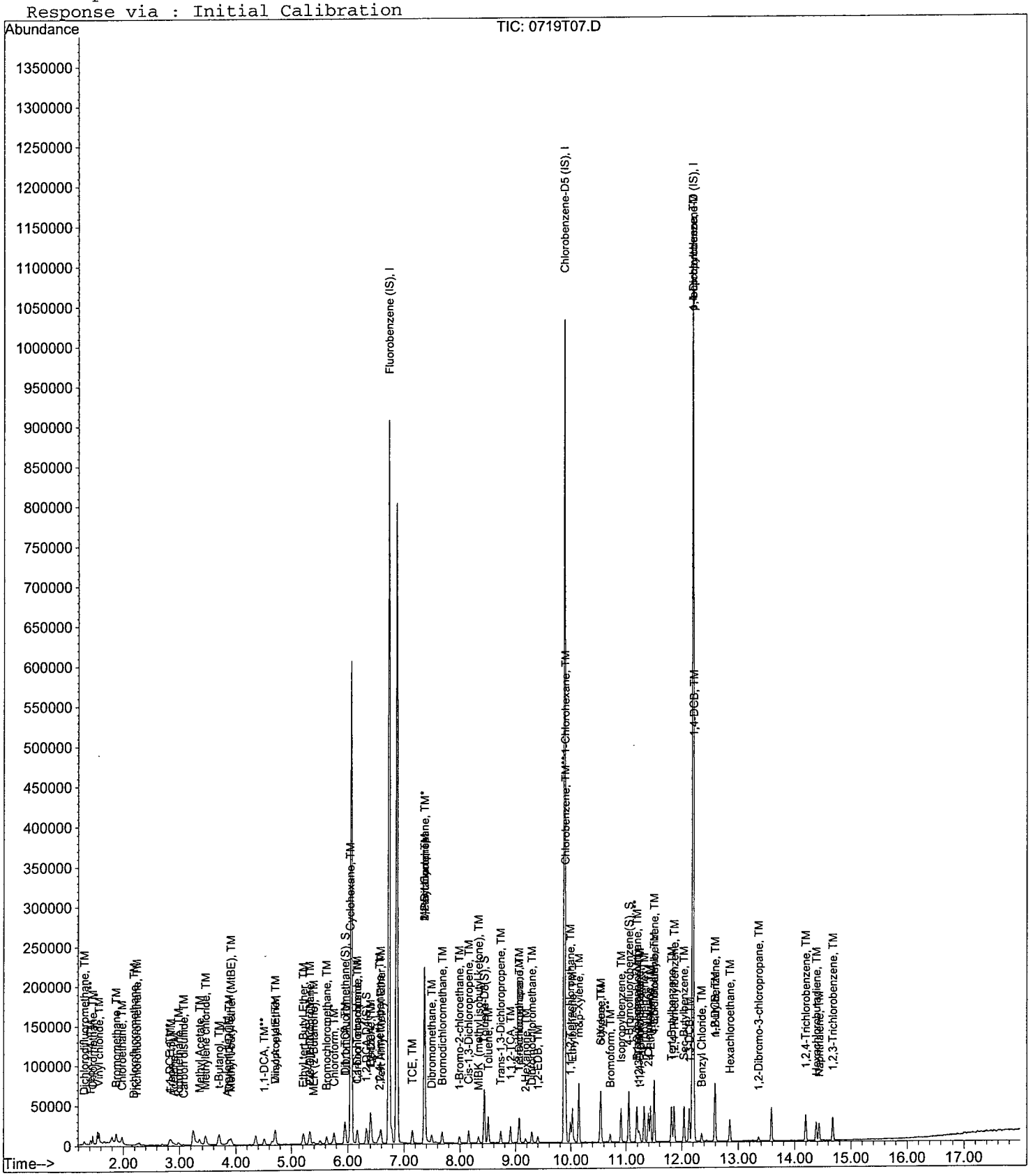
(#) = qualifier out of range (m) = manual integration

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



Quantitation Report (Not Reviewed)

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						
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						Qvalue
2) Dichlorodifluoromethane	1.30	85	4734	2.08028 ppb		100
3) Freon 114	1.41	85	6187	1.71327 ppb		100
4) Chloromethane	1.45	50	13155	2.01503 ppb		94
5) Vinyl chloride	1.56	62	17805	2.06457 ppb		100
6) Bromomethane	1.87	94	11262	2.04311 ppb		88
7) Chloroethane	1.97	64	9122	1.83649 ppb		94
8) Dichlorofluoromethane	2.18	67	573	2.01540 ppb		91
9) Trichlorofluoromethane	2.24	101	3492	1.95899 ppb		95
11) Acetone	2.90	43	5124	2.37170 ppb		95
12) Freon-113	2.86	101	7906	2.20502 ppb		91
13) 1,1-DCE	2.82	61	9495	1.97338 ppb		91
14) t-Butanol	3.69	59	9378	66.27585 ppb		96
15) Methyl Acetate	3.34	43	16454	3.02813 ppb		94
16) Iodomethane	2.98	142	8446	1.94071 ppb		98
17) Acrylonitrile	3.81	52	2540	1.84311 ppb		82
18) Methylene chloride	3.45	84	4510	1.88941 ppb		93
19) Carbon disulfide	3.06	76	1111	1.57628 ppb	#	87
20) Methyl t-butyl ether (MtBE	3.90	73	18413	1.98209 ppb		93
21) Trans-1,2-DCE	3.86	96	6430	1.93640 ppb		99
22) Diisopropyl Ether	4.70	59	4063	1.95295 ppb		91
23) 1,1-DCA	4.51	63	17292	1.96386 ppb		95
24) Vinyl Acetate	4.70	87	9481	1.90640 ppb		92
25) Ethyl tert Butyl Ether	5.21	59	22892	1.97102 ppb		94
26) MEK (2-Butanone)	5.39	43	4855	2.53560 ppb		91
27) Cis-1,2-DCE	5.33	96	10866	1.92643 ppb		91
28) 2,2-Dichloropropane	5.32	77	7282	4.48311 ppb		100
29) Chloroform	5.76	83	21749	1.98906 ppb		98
30) Bromochloromethane	5.62	128	5699	2.07515 ppb		93
32) 1,1,1-TCA	5.96	97	13045	1.98279 ppb		100
33) Cyclohexane	6.04	41	3794	2.12491 ppb	#	44
34) 1,1-Dichloropropene	6.17	75	9305	1.94750 ppb		97
35) 2,2,4-Trimethylpentane	6.55	57	13935	2.02928 ppb		93
37) Carbon Tetrachloride	6.16	117	12292	1.99343 ppb		89
38) Tert Amyl Methyl Ether	6.59	73	24026	1.94355 ppb		97
39) 1,2-DCA	6.42	62	14684	2.04783 ppb		98
40) Benzene	6.40	78	38526	1.96717 ppb		99
41) TCE	7.14	95	10599	1.99108 ppb		93
42) 2-Pentanone	7.36	43	304878	72.69773 ppb		99
43) 1,2-Dichloropropane	7.37	63	13169	2.06083 ppb		98
44) Bromodichloromethane	7.68	83	16800	1.90044 ppb		95
45) Methyl Cyclohexane	7.36	83	8243	2.16879 ppb		82

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

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

	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

(#) = qualifier out of range (m) = manual integration

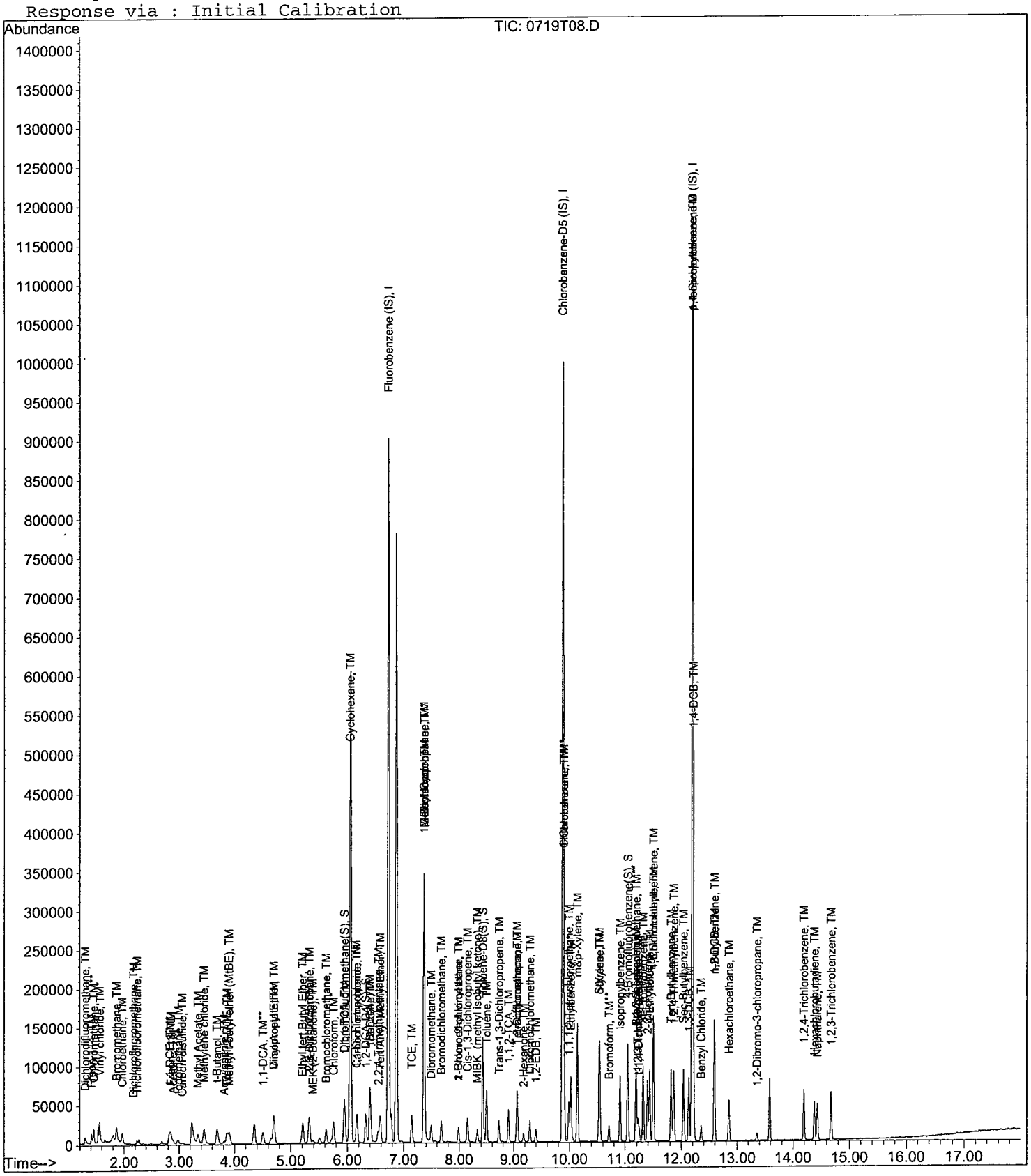
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T08.D
Acq On : 19 Jul 12 12:25
Sample : 2.0ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 8
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T09.D Vial: 9
Acq On : 19 Jul 12 12:53 Operator: DG,RS,HW,ARS,SV
Sample : 5.0ug/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	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						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

Data File : M:\THOR\DATA\T120719\0719T09.D Vial: 9
Acq On : 19 Jul 12 12:53 Operator: DG,RS,HW,ARS,SV
Sample : 5.0ug/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

	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

(#) = qualifier out of range (m) = manual integration

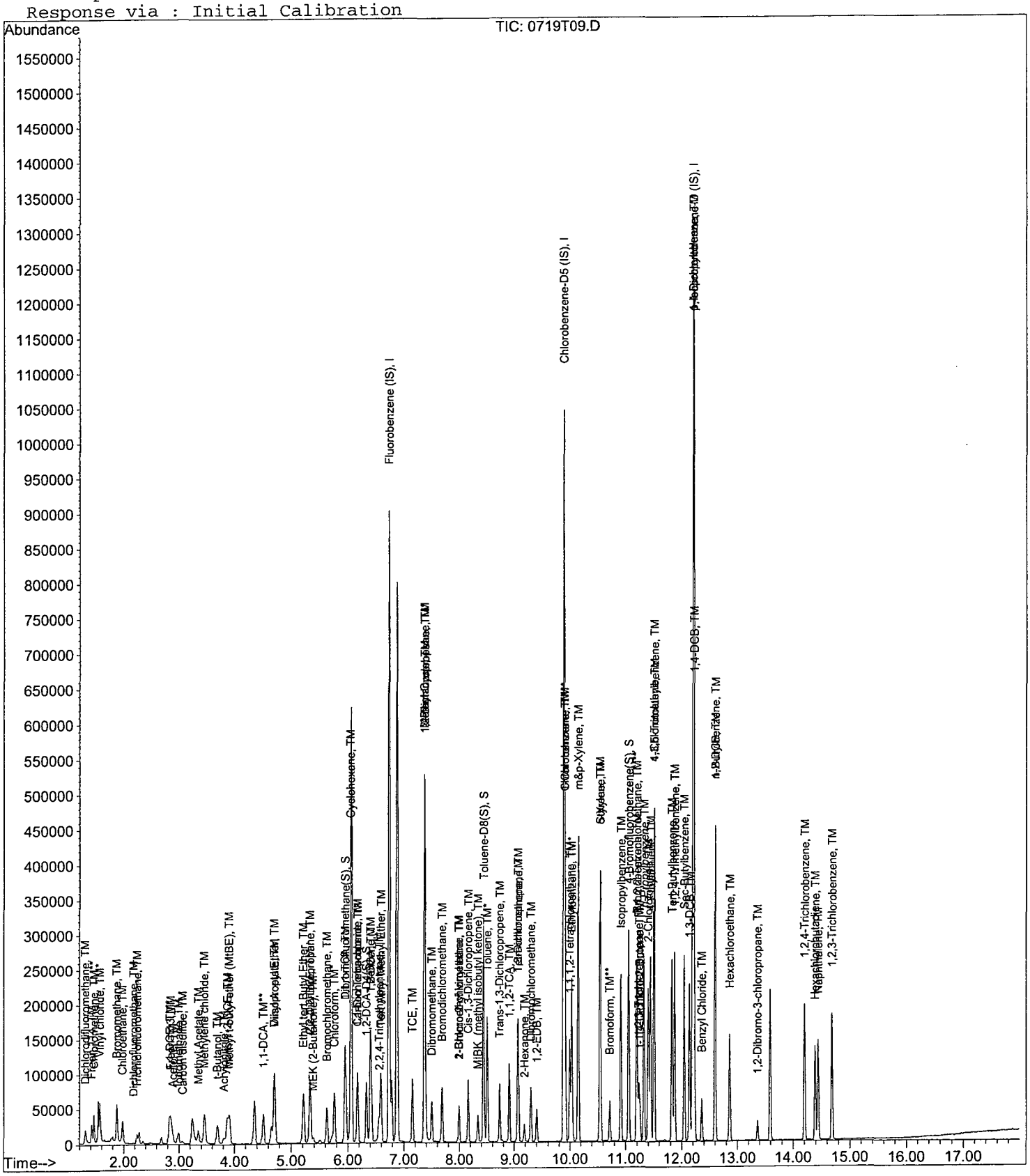
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T09.D
Acq On : 19 Jul 12 12:53
Sample : 5.0ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 9
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T10.D Vial: 10
Acq On : 19 Jul 12 13:20 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/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)	6.74	96	461760	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	382656	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	222464	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	168520	23.32155 ppb	0.00
Spiked Amount 29.744			Recovery = 78.409%		
36) 1,2-DCA-D4(S)	6.33	65	155567	23.16569 ppb	0.00
Spiked Amount 29.083			Recovery = 79.654%		
56) Toluene-D8(S)	8.43	98	509225	22.50992 ppb	0.00
Spiked Amount 30.231			Recovery = 74.460%		
64) 4-Bromofluorobenzene(S)	11.05	95	243014	22.71494 ppb	0.00
Spiked Amount 28.321			Recovery = 80.206%		
Target Compounds					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

Data File : M:\THOR\DATA\T120719\0719T10.D Vial: 10
Acq On : 19 Jul 12 13:20 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46)	Dibromomethane	7.49	93	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

(#) = qualifier out of range (m) = manual integration

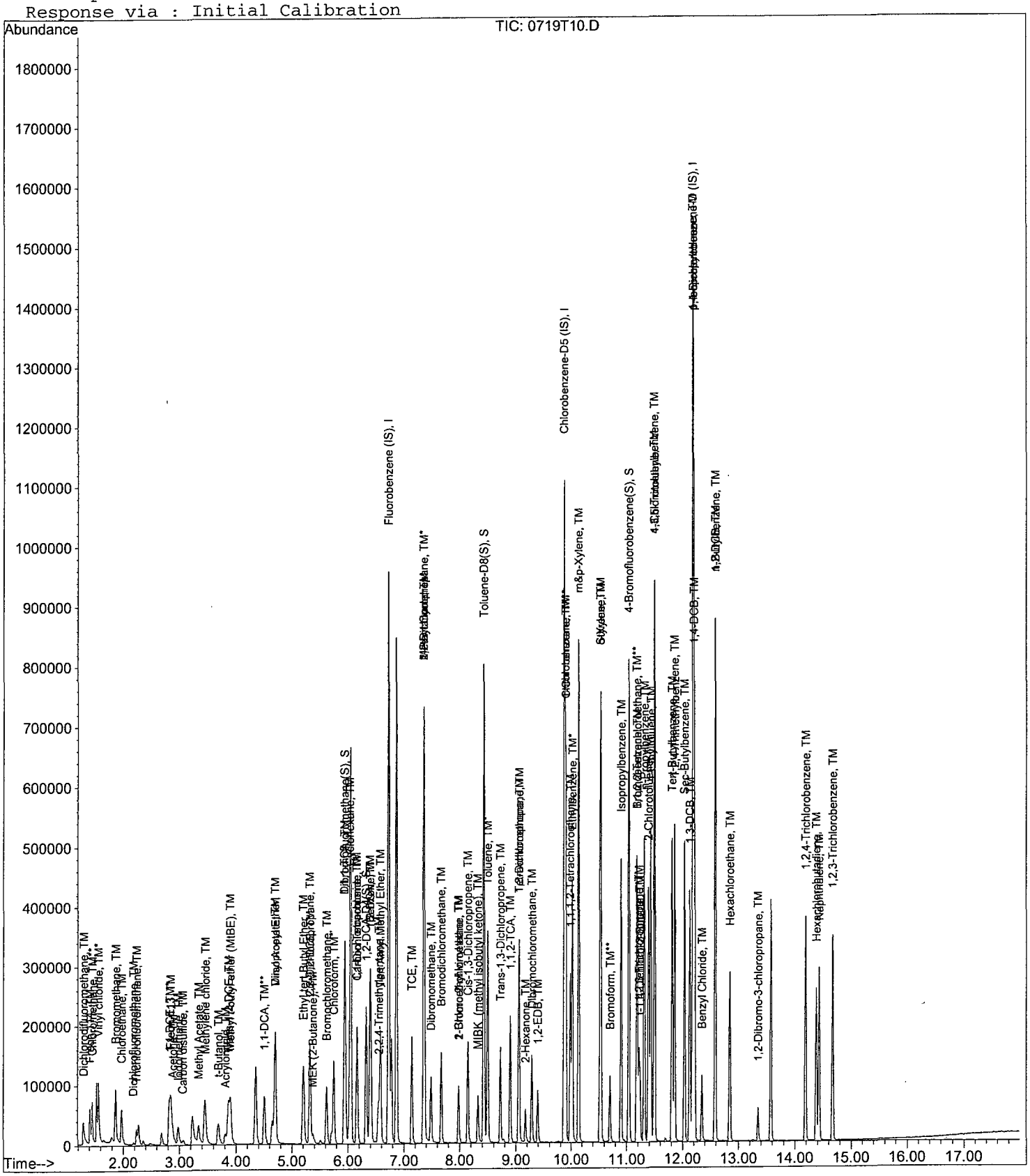
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T10.D
Acq On : 19 Jul 12 13:20
Sample : 10ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 10
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T11.D 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						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

Data File : M:\THOR\DATA\T120719\0719T11.D Vial: 11
Acq On : 19 Jul 12 13:48 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
46)	Dibromomethane	7.49	93	70661	19.67060 ppb		97
47)	2-Chloroethyl vinyl ether	7.99	106	2760	23.35204 ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	60201	19.31427 ppb		100
49)	1-Bromo-2-chloroethane	7.99	63	91400	19.89245 ppb		99
50)	Cis-1,3-Dichloropropene	8.15	75	176747	19.55069 ppb		99
51)	Toluene	8.50	91	471607	19.74924 ppb		98
52)	Trans-1,3-Dichloropropene	8.72	75	158806	19.92258 ppb		97
53)	1,1,2-TCA	8.90	83	102413	19.26196 ppb		100
54)	2-Hexanone	9.18	43	70616	19.75664 ppb		98
57)	1,2-EDB	9.40	107	106822	19.61984 ppb		99
58)	Tetrachloroethene	9.06	166	120268	19.53595 ppb		97
59)	1-Chlorohexane	9.90	91	145778	19.89376 ppb		99
60)	1,1,1,2-Tetrachloroethane	9.99	131	146253	20.33456 ppb		98
61)	m&p-Xylene	10.15	106	462394	41.21236 ppb		99
62)	o-Xylene	10.54	106	240916	20.75709 ppb		99
63)	Styrene	10.55	104	425446	21.57415 ppb		98
65)	1,3-Dichloropropane	9.07	76	188875	19.78566 ppb		99
66)	Dibromochloromethane	9.29	129	145665	20.26776 ppb		100
67)	Chlorobenzene	9.90	112	364549	19.41792 ppb		98
68)	Ethylbenzene	10.03	91	598003	20.25768 ppb		98
69)	Bromoform	10.71	173	98619	20.04032 ppb		96
71)	Isopropylbenzene	10.91	105	578914	20.44949 ppb		98
72)	1,1,2,2-Tetrachloroethane	11.19	83	154333	19.64672 ppb		98
73)	1,2,3-Trichloropropane	11.23	110	42893	19.23842 ppb		91
74)	t-1,4-Dichloro-2-Butene	11.25	53	32354	21.68350 ppb		96
75)	Bromobenzene	11.19	156	185530	19.88027 ppb		98
76)	n-Propylbenzene	11.32	91	758387	20.80665 ppb		98
77)	4-Ethyltoluene	11.43	105	653339	20.87252 ppb		98
78)	2-Chlorotoluene	11.39	91	521845	20.07749 ppb		100
79)	1,3,5-Trimethylbenzene	11.50	105	549841	21.19049 ppb		98
80)	4-Chlorotoluene	11.50	91	530306	20.61267 ppb		99
81)	Tert-Butylbenzene	11.82	119	482018	20.27796 ppb		98
82)	1,2,4-Trimethylbenzene	11.86	105	561538	20.91400 ppb		99
83)	Sec-Butylbenzene	12.04	105	668260	21.05726 ppb		99
84)	p-Isopropyltoluene	12.19	119	566536	21.12796 ppb		99
85)	Benzyl Chloride	12.35	91	154299	19.25622 ppb		98
86)	1,3-DCB	12.14	146	355716	20.15495 ppb		99
87)	1,4-DCB	12.22	146	358848	19.41437 ppb		100
88)	n-Butylbenzene	12.59	91	501731	20.87533 ppb		99
89)	1,2-DCB	12.59	146	337069	19.70479 ppb		99
90)	Hexachloroethane	12.86	117	96458	19.63343 ppb		96
91)	1,2-Dibromo-3-chloropropan	13.36	157	32448	22.04834 ppb		94
92)	1,2,4-Trichlorobenzene	14.20	180	162176	20.68292 ppb		100
93)	Hexachlorobutadiene	14.38	223	64729	19.76145 ppb		95
94)	Naphthalene	14.43	128	476108	21.74583 ppb		99
95)	1,2,3-Trichlorobenzene	14.68	180	231177	20.69267 ppb		99

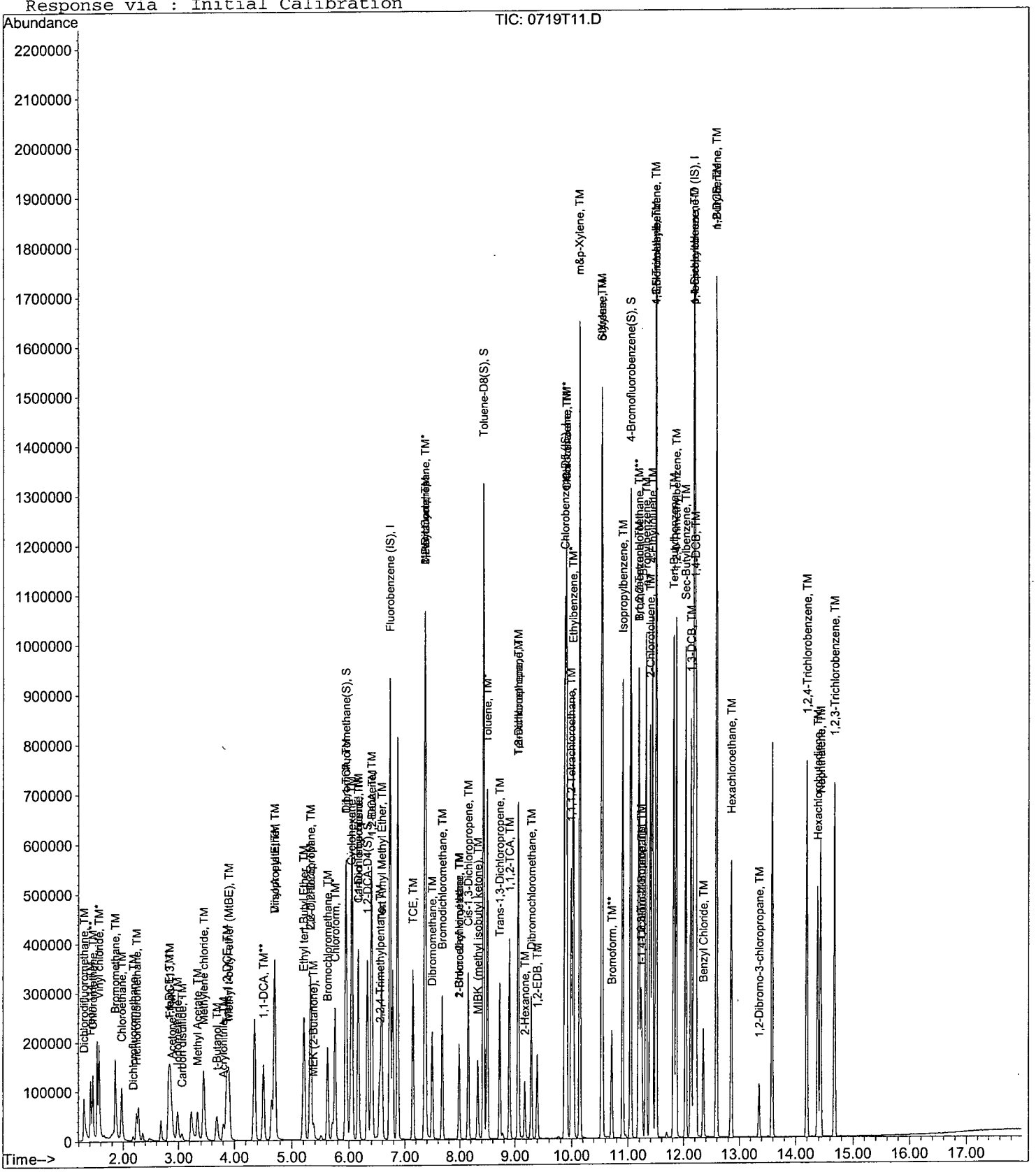
(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120719\0719T11.D
Acq On : 19 Jul 12 13:48
Sample : 20ug/L Vol Std 07-19-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 11
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T12.D Vial: 12
Acq On : 19 Jul 12 14:16 Operator: DG,RS,HW,ARS,SV
Sample : 40ug/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	450048	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	369920	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	219712	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	544884	77.36909 ppb		0.00
Spiked Amount 29.744			Recovery = 260.117%			
36) 1,2-DCA-D4(S)	6.33	65	488560	74.64543 ppb		0.00
Spiked Amount 29.083			Recovery = 256.659%			
56) Toluene-D8(S)	8.43	98	1669961	76.36095 ppb		0.00
Spiked Amount 30.231			Recovery = 252.593%			
64) 4-Bromofluorobenzene(S)	11.05	95	804405	77.77781 ppb		0.00
Spiked Amount 28.321			Recovery = 274.630%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.30	85	101464	43.22988 ppb		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

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T12.D Vial: 12
Acq On : 19 Jul 12 14:16 Operator: DG,RS,HW,ARS,SV
Sample : 40ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Dibromomethane	7.49	93	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

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T13.D Vial: 13
Acq On : 19 Jul 12 14:44 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	444096	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.88	117	369984	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	225280	25.00000 ppb		0.00
System Monitoring Compounds						
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						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

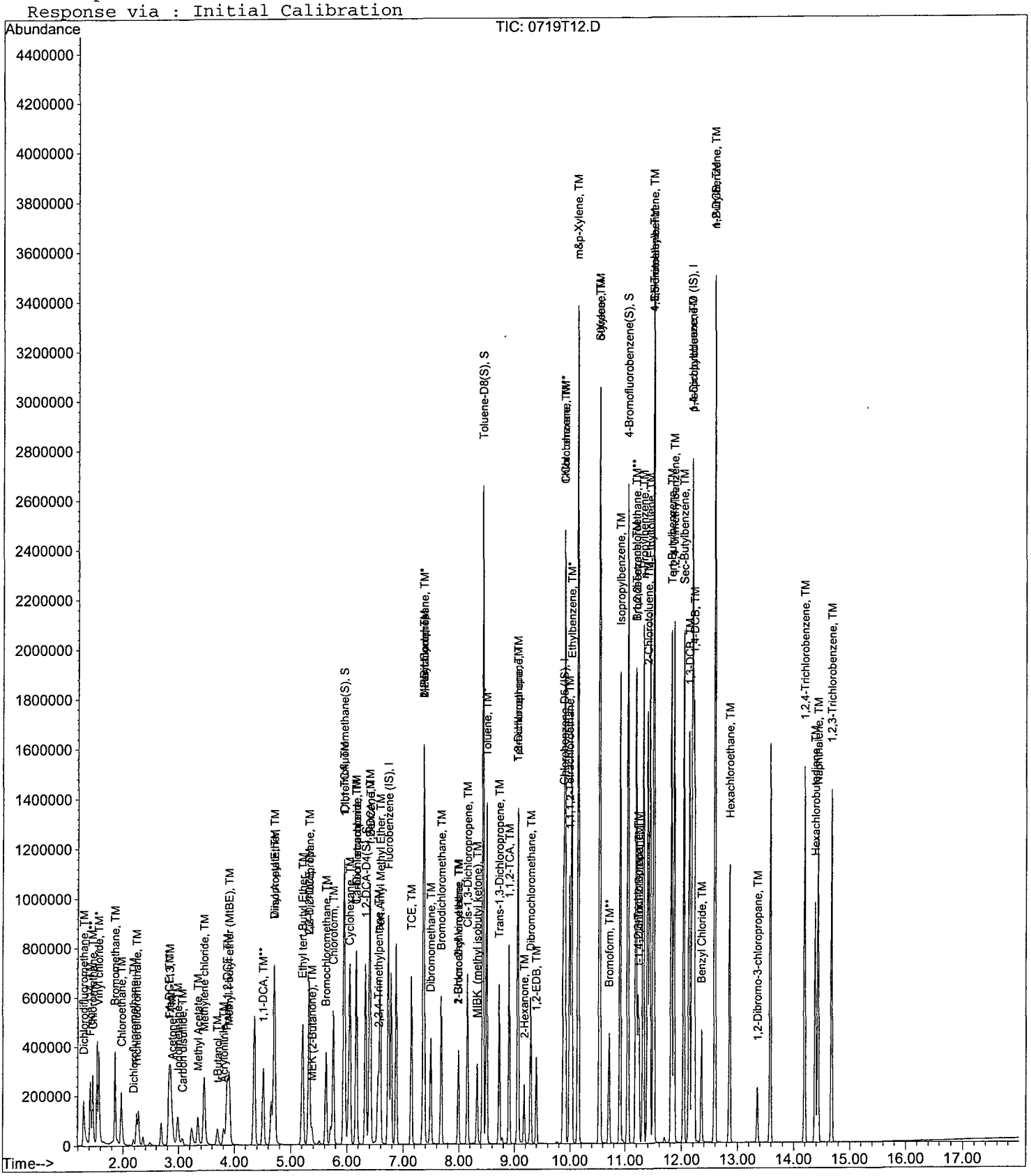
(#) = qualifier out of range (m) = manual integration

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



Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T13.D Vial: 13
Acq On : 19 Jul 12 14:44 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 07:59:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

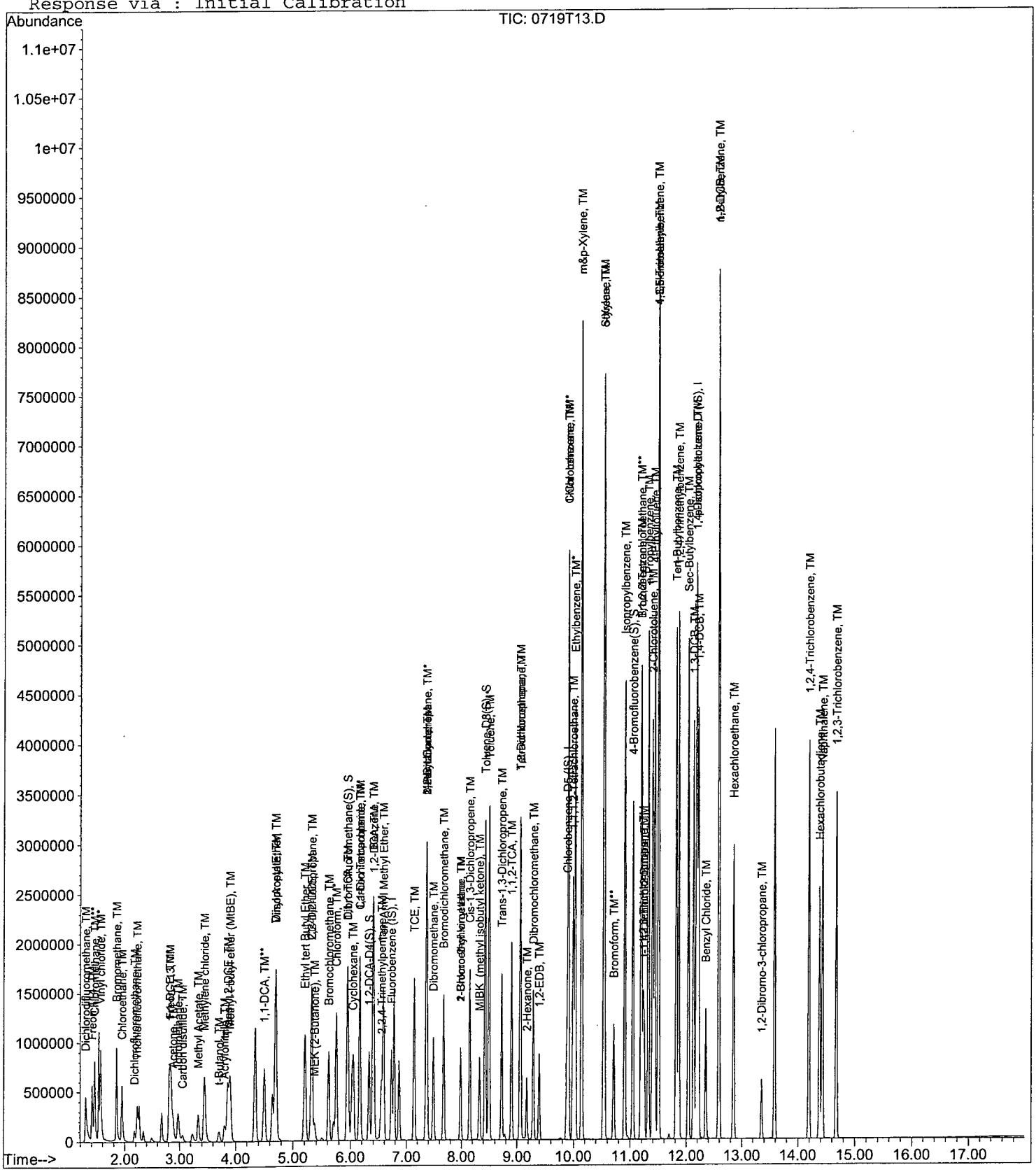
	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
46)	Dibromomethane	7.49	93	343569	97.11750	ppb		95
47)	2-Chloroethyl vinyl ether	7.99	106	11121	99.31396	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	317753	103.51662	ppb		98
49)	1-Bromo-2-chloroethane	7.99	63	444096	98.14420	ppb		99
50)	Cis-1,3-Dichloropropene	8.15	75	923494	103.72652	ppb		98
51)	Toluene	8.50	91	2302514	97.90801	ppb		100
52)	Trans-1,3-Dichloropropene	8.72	75	844862	107.62424	ppb		97
53)	1,1,2-TCA	8.90	83	506640	96.75885	ppb		98
54)	2-Hexanone	9.18	43	374170	106.29789	ppb		96
57)	1,2-EDB	9.40	107	552458	99.59106	ppb		98
58)	Tetrachloroethene	9.06	166	580637	92.57110	ppb		96
59)	1-Chlorohexane	9.90	91	748840	100.29983	ppb		96
60)	1,1,1,2-Tetrachloroethane	9.99	131	746191	101.82778	ppb		98
61)	m&p-Xylene	10.14	106	2312256	202.27283	ppb		97
62)	o-Xylene	10.54	106	1205888	101.97512	ppb		97
63)	Styrene	10.55	104	2181574	108.57892	ppb		97
65)	1,3-Dichloropropane	9.07	76	938122	96.45434	ppb		100
66)	Dibromochloromethane	9.29	129	748578	102.22894	ppb		99
67)	Chlorobenzene	9.90	112	1810618	94.65857	ppb		99
68)	Ethylbenzene	10.03	91	2980271	99.08969	ppb		98
69)	Bromoform	10.71	173	538782	107.45915	ppb		100
71)	Isopropylbenzene	10.91	105	2947712	100.07206	ppb		98
72)	1,1,2,2-Tetrachloroethane	11.19	83	796018	97.38982	ppb		99
73)	1,2,3-Trichloropropane	11.23	110	223287	96.25110	ppb		93
74)	t-1,4-Dichloro-2-Butene	11.25	53	179952	115.90904	ppb		99
75)	Bromobenzene	11.19	156	932826	96.06567	ppb		100
76)	n-Propylbenzene	11.32	91	3839951	101.25032	ppb		100
77)	4-Ethyltoluene	11.43	105	3324604	102.07879	ppb		99
78)	2-Chlorotoluene	11.40	91	2632771	97.35098	ppb		100
79)	1,3,5-Trimethylbenzene	11.50	105	2768017	102.52551	ppb		98
80)	4-Chlorotoluene	11.50	91	2649819	98.98815	ppb		100
81)	Tert-Butylbenzene	11.82	119	2490617	100.69949	ppb		99
82)	1,2,4-Trimethylbenzene	11.86	105	2848266	101.95249	ppb		99
83)	Sec-Butylbenzene	12.04	105	3384214	102.48812	ppb		100
84)	p-Isopropyltoluene	12.19	119	2906241	104.16479	ppb		99
85)	Benzyl Chloride	12.35	91	910665	109.22596	ppb		96
86)	1,3-DCB	12.14	146	1775349	96.67663	ppb		99
87)	1,4-DCB	12.22	146	1789528	93.04875	ppb		100
88)	n-Butylbenzene	12.59	91	2558982	102.32670	ppb		99
89)	1,2-DCB	12.59	146	1688312	94.85606	ppb		99
90)	Hexachloroethane	12.86	117	521928	102.10049	ppb		95
91)	1,2-Dibromo-3-chloropropan	13.35	157	180474	117.85879	ppb		94
92)	1,2,4-Trichlorobenzene	14.20	180	875328	107.28908	ppb		100
93)	Hexachlorobutadiene	14.38	223	327441	96.07540	ppb		95
94)	Naphthalene	14.43	128	2618767	114.95471	ppb		99
95)	1,2,3-Trichlorobenzene	14.68	180	1182785	101.75059	ppb		98

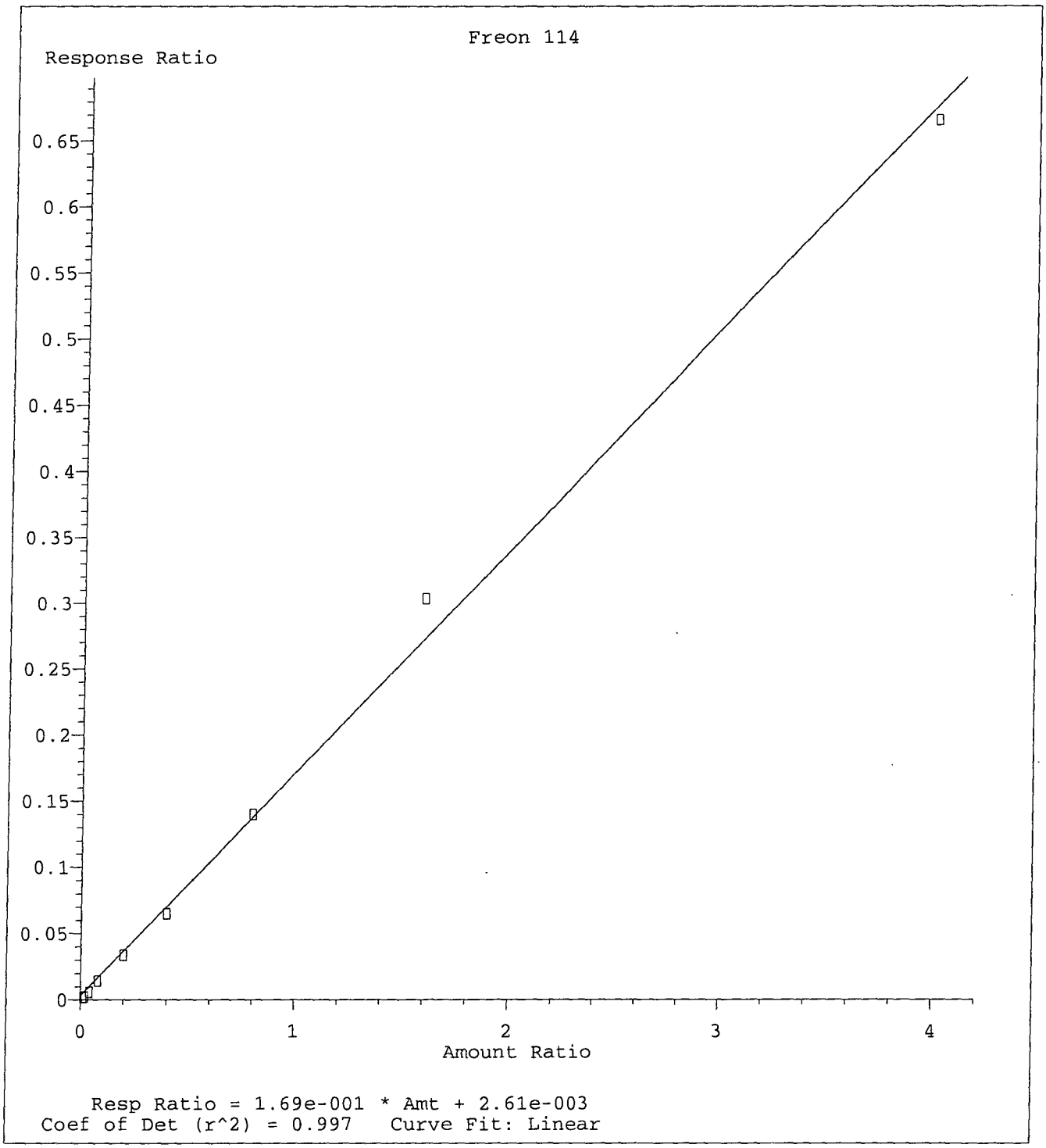
(#) = qualifier out of range (m) = manual integration

Data File : M:\THOR\DATA\T120719\0719T13.D Vial: 13
Acq On : 19 Jul 12 14:44 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-19-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

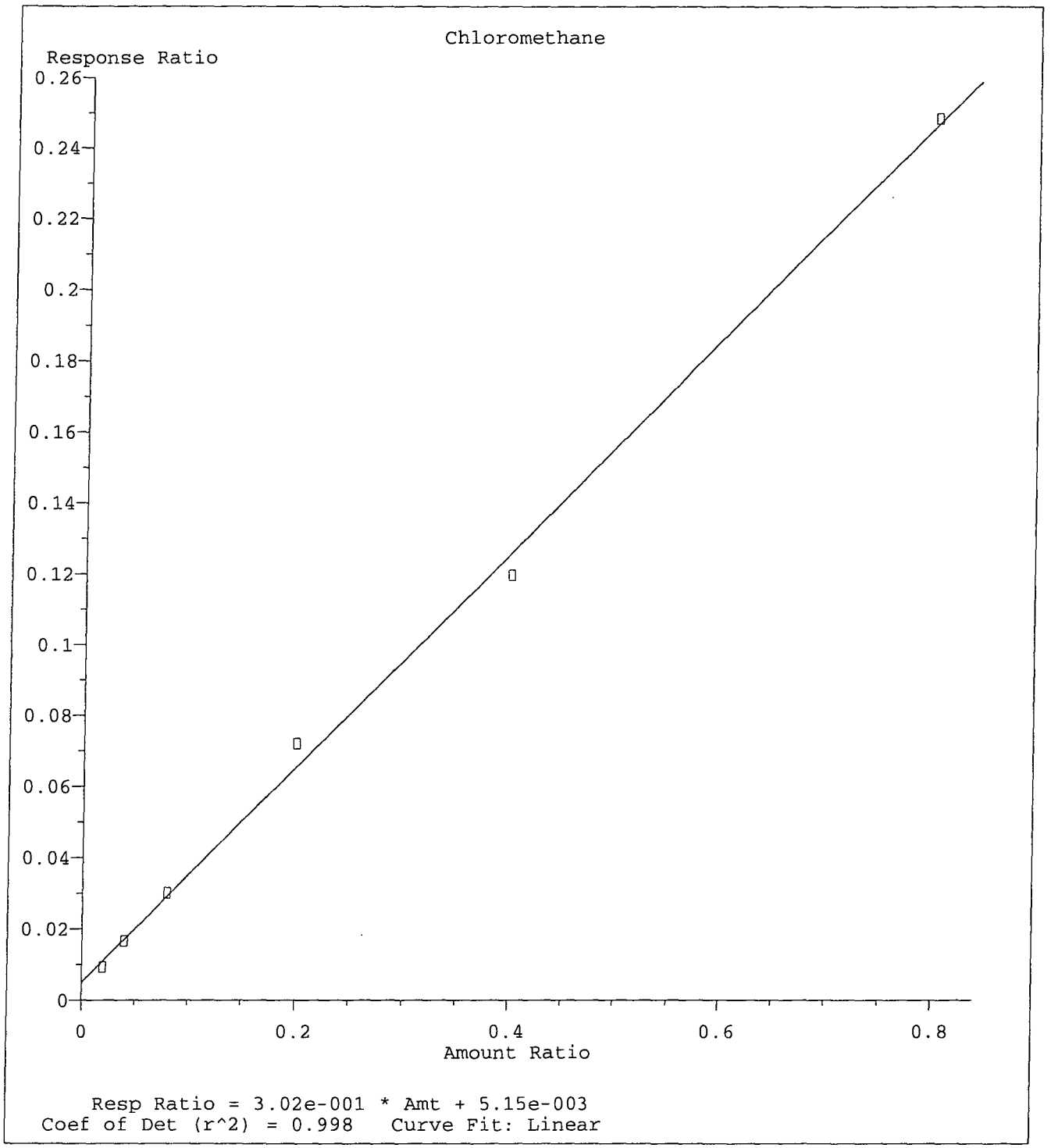
Quant Time: Jul 20 8:00 2012 Quant Results File: TALLW.RES

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

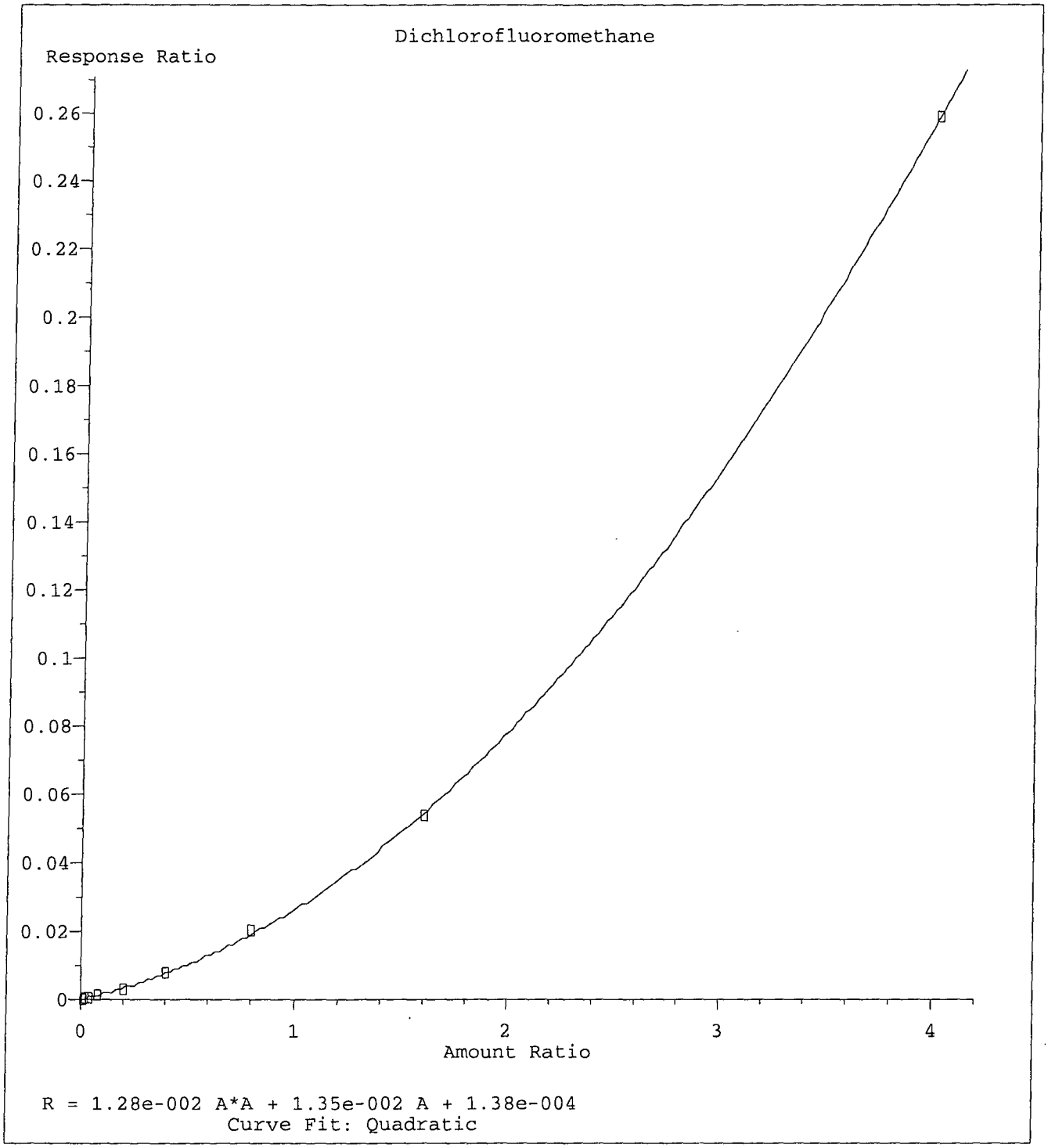




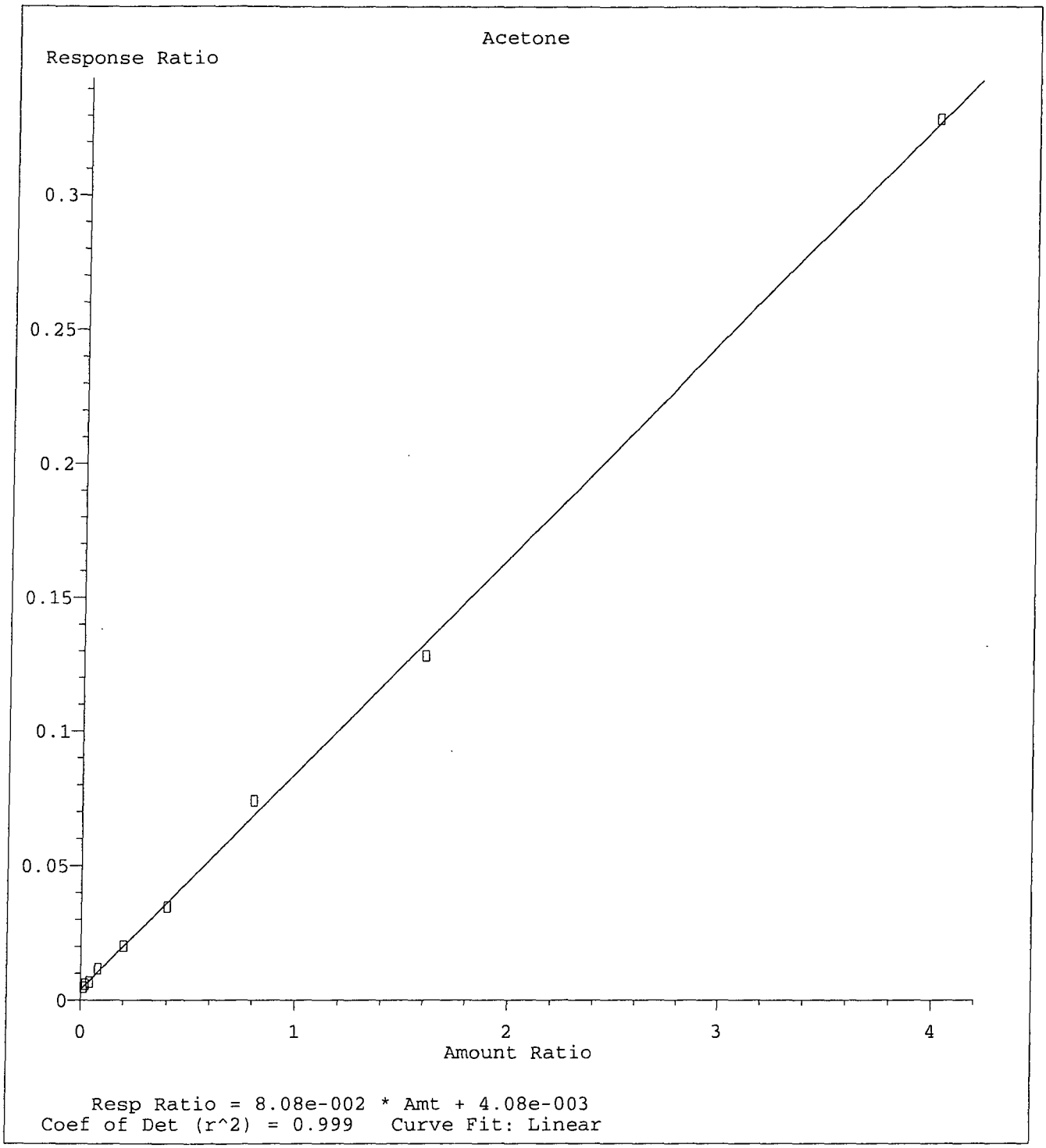
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



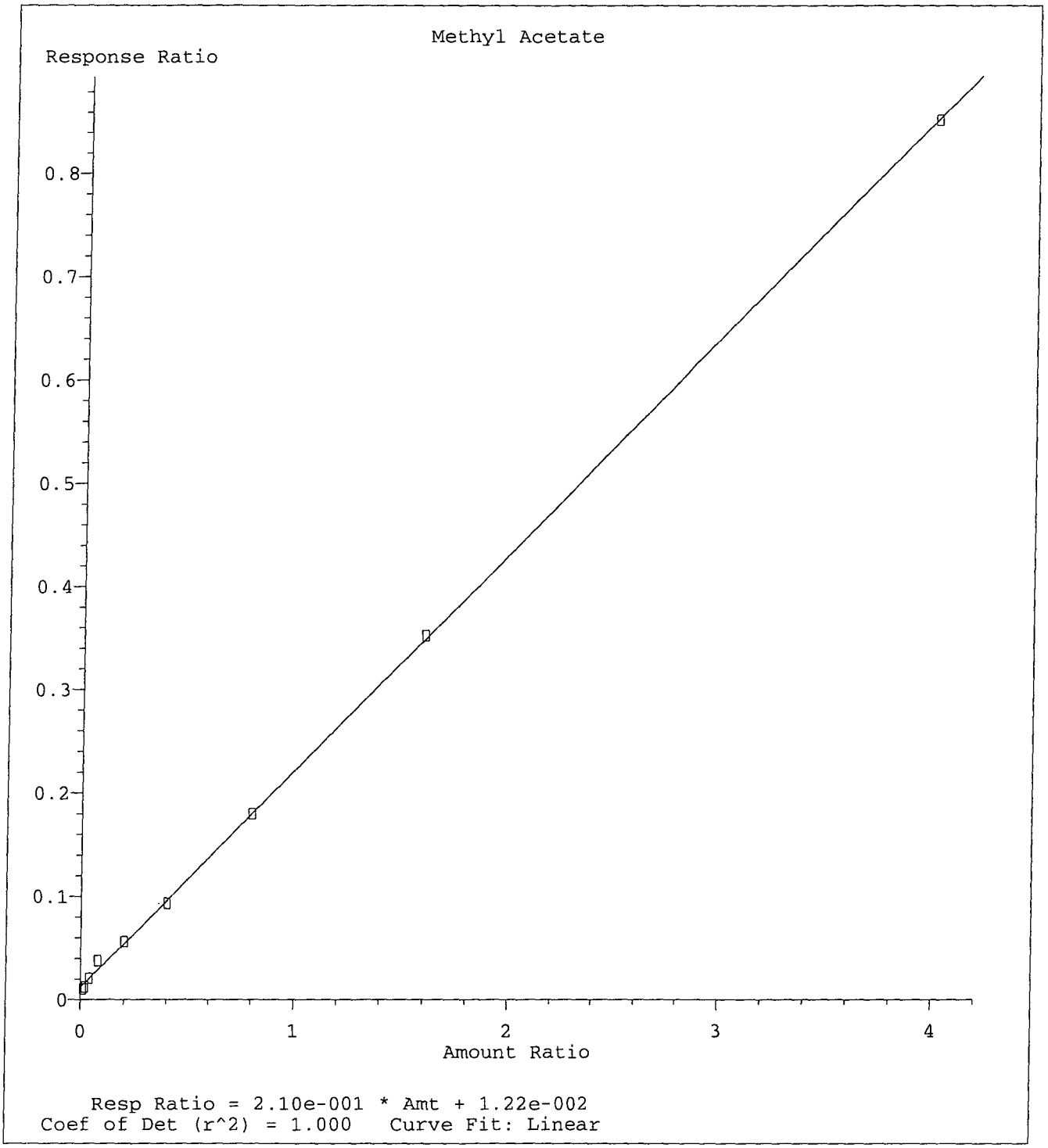
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



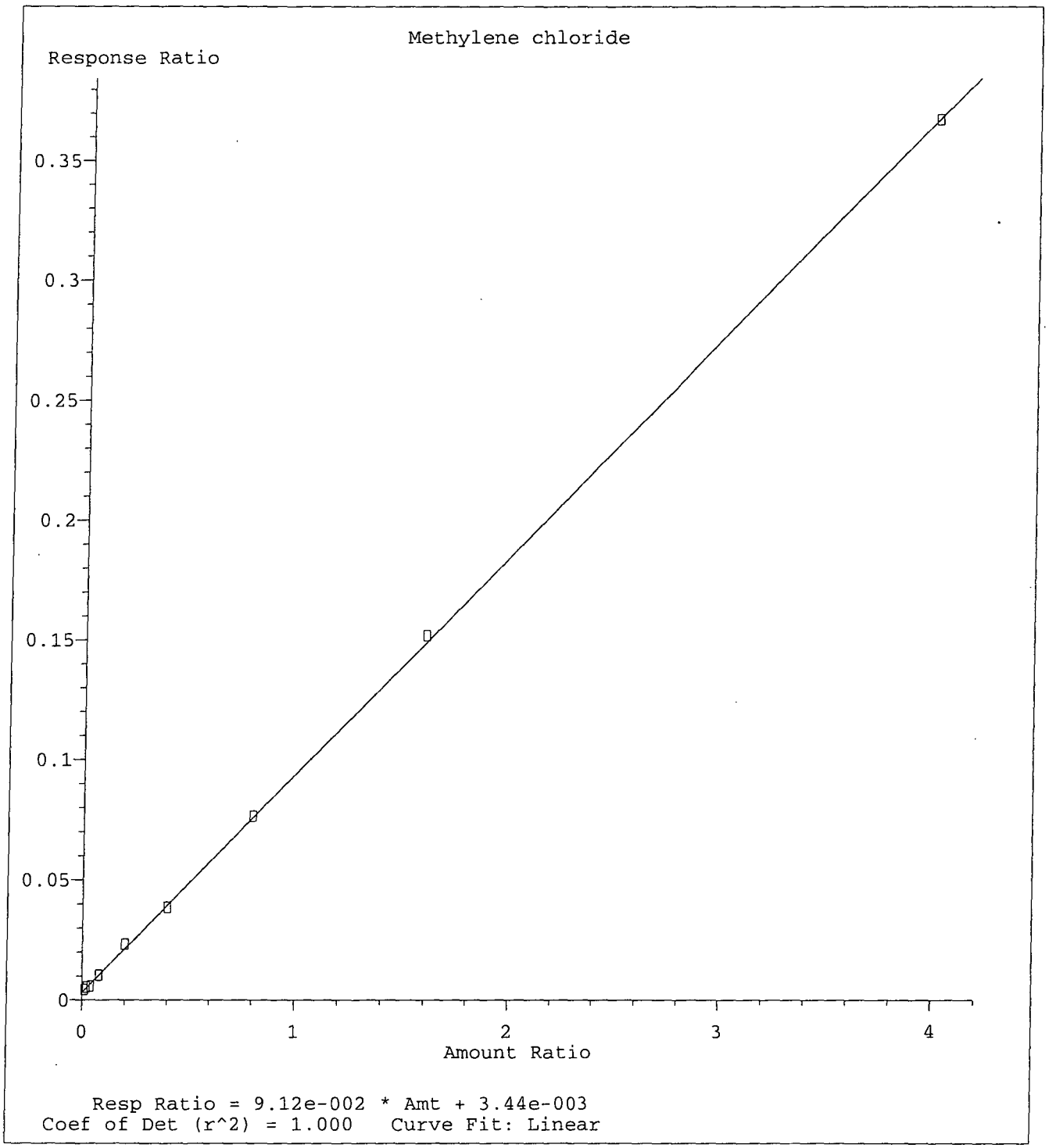
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



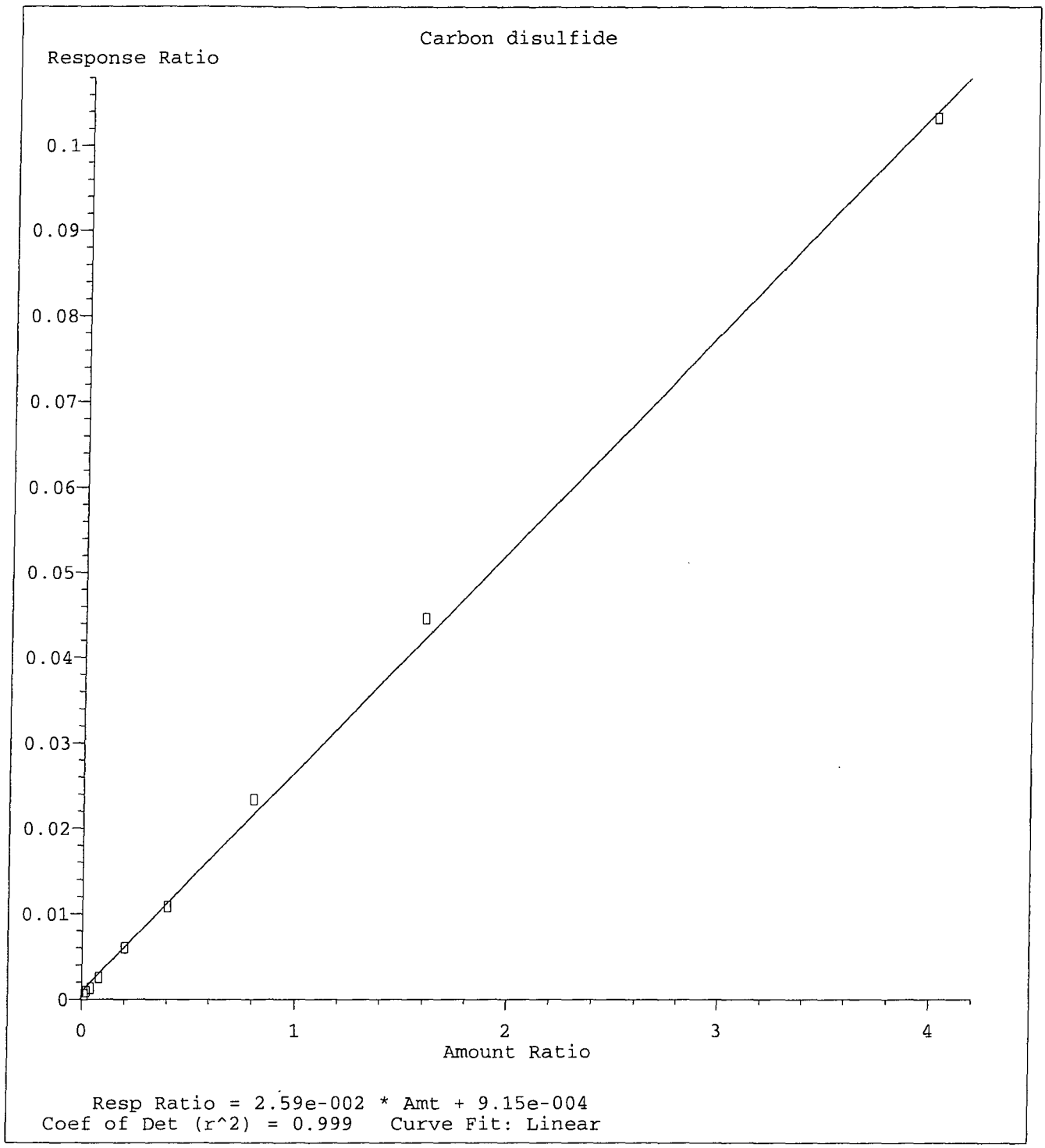
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



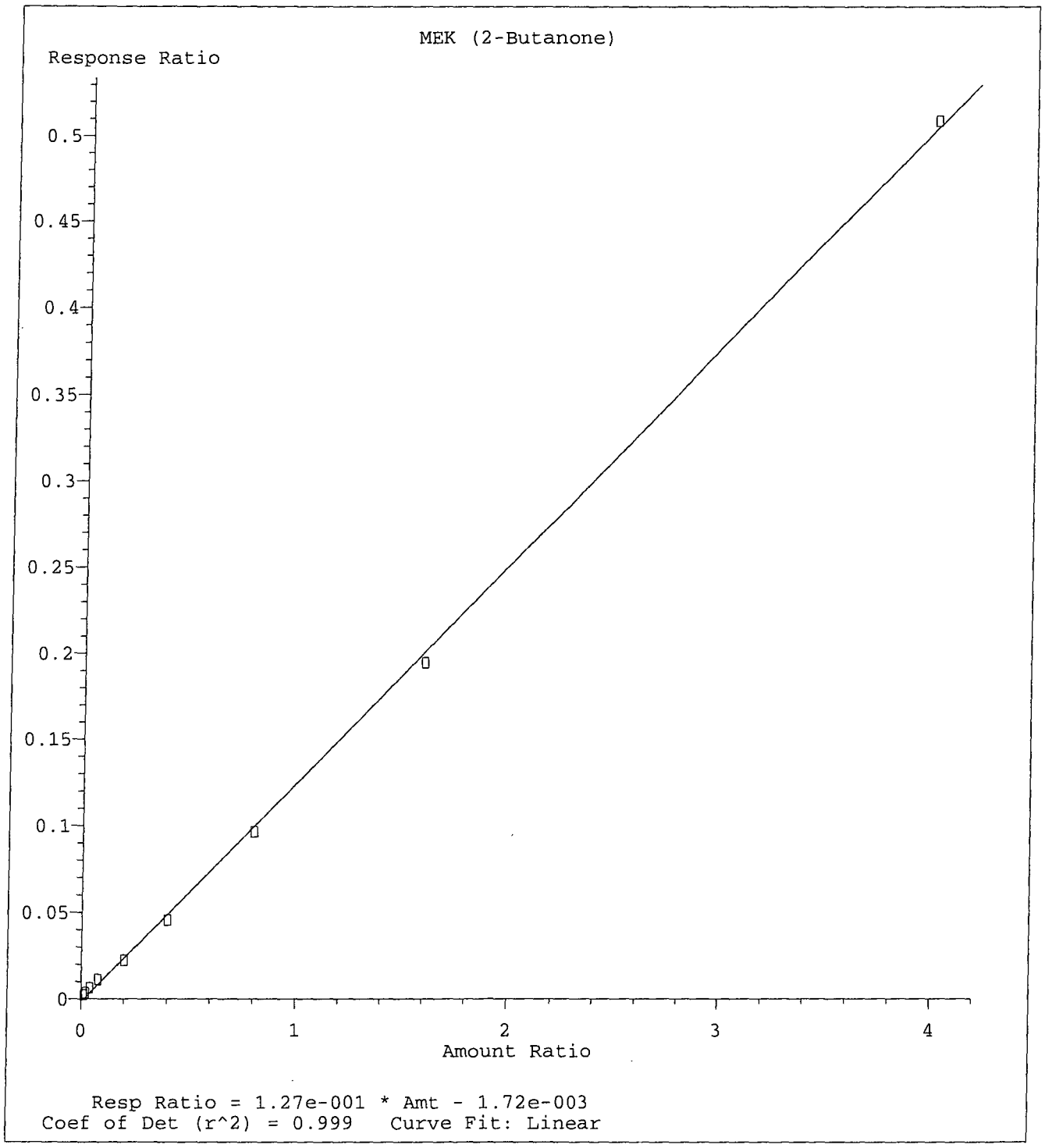
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



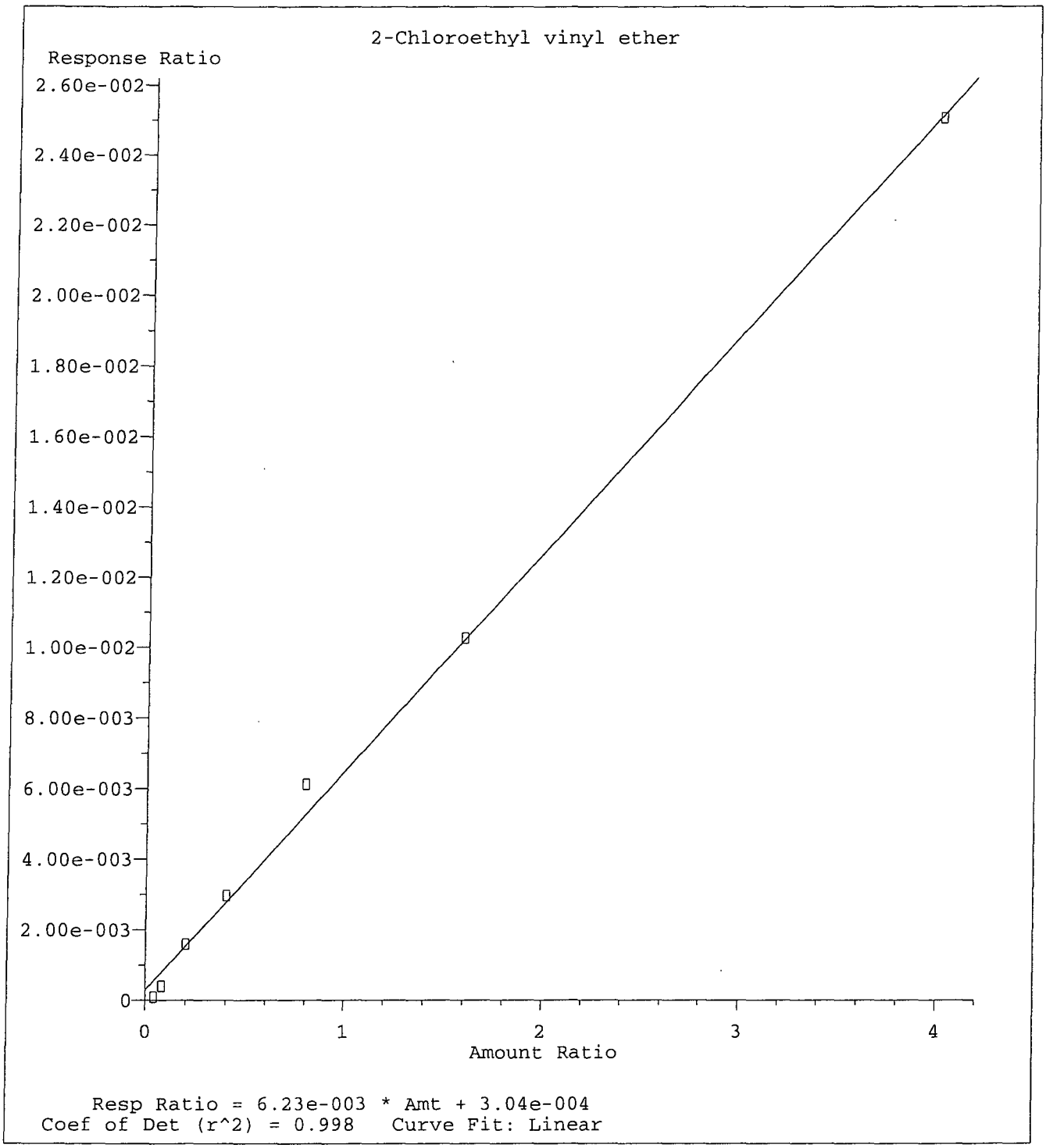
Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



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: 68284
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		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68284
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		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68284
Date Analyzed: 07/19/12
Instrument: Thor
Cal. Date: 07/19/12
Data File: 0719T31.D

		Compound	MEAN	CCRF	%D		%Drift	
81	TM	Tert-Butylbenzene	2.745	2.818	2.7	TM		
82	TM	1,2,4-Trimethylbenzene	3.100	3.213	3.6	TM		
83	TM	Sec-Butylbenzene	3.664	3.850	5.1	TM		
84	TM	p-Isopropyltoluene	3.096	3.241	4.7	TM		
85	TM	Benzyl Chloride	0.9252	0.6126	34	TM		*NT
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		
96								
97								
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108								
109								
110								
111								
112								
113								
114								
115								
116								
117								
118								
119								
120								
		Average			5.2			

KRS 7/27/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T31.D Vial: 31
Acq On : 19 Jul 12 23:03 Operator: DG,RS,HW,ARS,SV
Sample : 120719A LCS-1WT (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	459584	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	371008	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	216768	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.95	111	225058	31.29333 ppb		0.00
Spiked Amount 31.881			Recovery = 98.155%			
36) 1,2-DCA-D4(S)	6.33	65	220138	32.93626 ppb		0.00
Spiked Amount 33.647			Recovery = 97.888%			
56) Toluene-D8(S)	8.43	98	802051	36.56718 ppb		0.00
Spiked Amount 37.345			Recovery = 97.917%			
64) 4-Bromofluorobenzene(S)	11.05	95	313456	30.21914 ppb		0.00
Spiked Amount 29.515			Recovery = 102.384%			
Target Compounds						Qvalue
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: $\frac{(91788)(25)}{(459584)(0.4941)}$ (1) = 10.10522903 ✓ ARS 7/27/12

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120719\0719T31.D Vial: 31
Acq On : 19 Jul 12 23:03 Operator: DG,RS,HW,ARS,SV
Sample : 120719A LCS-1WT (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
44)	Bromodichloromethane	7.68	83	89098	9.56942	ppb		98
45)	Methyl Cyclohexane	7.36	83	38326	9.57410	ppb		95
46)	Dibromomethane	7.49	93	36747	10.03731	ppb		99
47)	2-Chloroethyl vinyl ether	7.99	106	1154	8.86120	ppb	#	100
48)	MIBK (methyl isobutyl ket	8.33	43	32328	10.17680	ppb		97
49)	1-Bromo-2-chloroethane	7.99	63	45864	9.79426	ppb		99
50)	Cis-1,3-Dichloropropene	8.15	75	86842	9.42535	ppb		98
51)	Toluene	8.50	91	246468	10.12718	ppb		98
52)	Trans-1,3-Dichloropropene	8.72	75	75443	9.28657	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

ARS 7/27/12

(#) = qualifier out of range (m) = manual integration

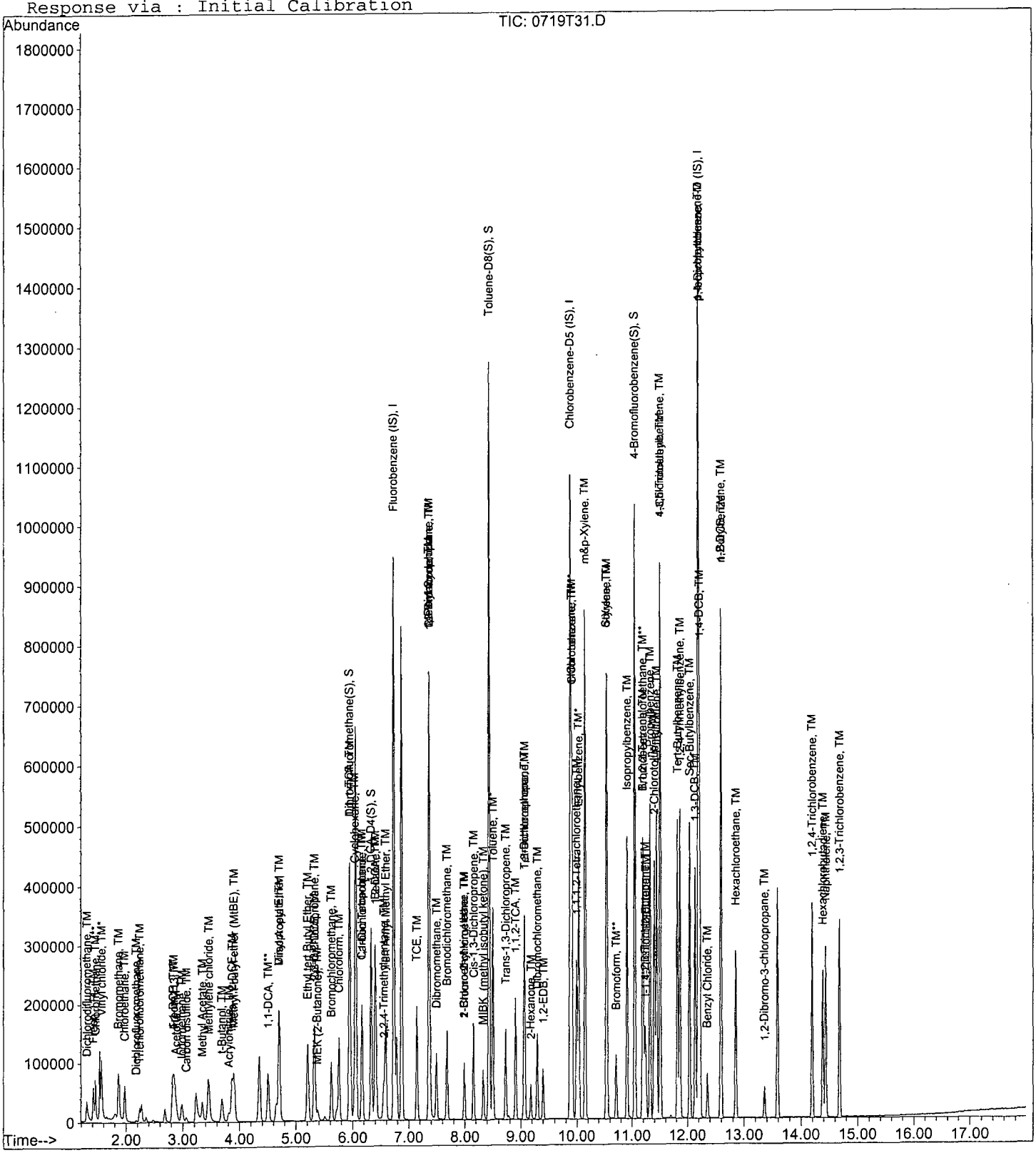
Quantitation Report

Data File : M:\THOR\DATA\T120719\0719T31.D
Acq On : 19 Jul 12 23:03
Sample : 120719A LCS-1WT (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 31
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 20 10:45 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68284
Date Analyzed: 07/26/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0726T04.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TM	Dichlorodifluoromethane	0.1266	0.1292	2.0	TM	
3	TML	Freon 114	0.1578	0.1753	11	TML	0.06
4	TM**L	Chloromethane	0.3709	0.2583	30	TM**L	19
5	TM*	Vinyl chloride	0.4941	0.4570	7.5	TM*	
6	TM	Bromomethane	0.3158	0.2823	11	TM	
7	TM	Chloroethane	0.2846	0.2656	6.7	TM	
8	TMQ	Dichlorofluoromethane	0.0241	0.0148	39	TMQ	18
9	TM	Trichlorofluoromethane	0.1021	0.1190	17	TM	
10	TMQ	Acrolein	0.0000	0.0062	0.00	TMQ	
11	TML	Acetone	0.1608	0.0985	39	TML	9.4
12	TM	Freon-113	0.2054	0.2207	7.4	TM	
13	TM*	1,1-DCE	0.2757	0.2691	2.4	TM*	
14	TM	t-Butanol	0.0081	0.0081	0.42	TM	
15	TML	Methyl Acetate	0.4032	0.2393	41	TML	0.76
16	TM	Iodomethane	0.2493	0.2345	6.0	TM	
17	TM	Acrylonitrile	0.0790	0.0817	3.4	TM	
18	TML	Methylene chloride	0.1556	0.0951	39	TML	5.2
19	TML	Carbon disulfide	0.0329	0.0247	25	TML	14
20	TM	Methyl t-butyl ether (MtBE)	0.5322	0.5090	4.4	TM	
21	TM	Trans-1,2-DCE	0.1902	0.1672	12	TM	
22	TM	Diisopropyl Ether	0.1192	0.1236	3.7	TM	
23	TM**	1,1-DCA	0.5045	0.5046	0.02	TM**	
24	TM	Vinyl Acetate	0.2849	0.2831	0.63	TM	
25	TM	Ethyl tert Butyl Ether	0.6654	0.6589	0.99	TM	
26	TML	MEK (2-Butanone)	0.1418	0.1256	11	TML	2.5
27	TM	Cis-1,2-DCE	0.3232	0.3311	2.5	TM	
28	TM	2,2-Dichloropropane	0.2032	0.2119	4.3	TM	
29	TM*	Chloroform	0.6265	0.6180	1.4	TM*	
30	TM	Bromochloromethane	0.1573	0.1556	1.1	TM	
31	S	Dibromofluoromethane(S)	0.3912	0.3943	0.80	S	
32	TM	1,1,1-TCA	0.3769	0.3716	1.4	TM	
33	TM	Cyclohexane	0.1023	0.0939	8.2	TM	
34	TM	1,1-Dichloropropene	0.2737	0.2693	1.6	TM	
35	TM	2,2,4-Trimethylpentane	0.3934	0.4057	3.1	TM	
36	S	1,2-DCA-D4(S)	0.3636	0.3686	1.4	S	
37	TM	Carbon Tetrachloride	0.3533	0.3519	0.39	TM	
38	TM	Tert Amyl Methyl Ether	0.7083	0.7079	0.06	TM	
39	TM	1,2-DCA	0.4108	0.4035	1.8	TM	
40	TM	Benzene	1.122	1.042	7.1	TM	
		Average			9.1		

ARS 7/27/12

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68284
Date Analyzed: 07/26/12
Instrument: Thor
Cal. Date: 07/25/12
Data File: 0726T04.D

		Compound	MEAN	CCRF	%D		%Drift
41	TM	TCE	0.3050	0.2876	5.7	TM	
42	TM	2-Pentanone	0.2403	0.2386	0.71	TM	
43	TM*	1,2-Dichloropropane	0.3661	0.3625	0.97	TM*	
44	TM	Bromodichloromethane	0.5065	0.5084	0.37	TM	
45	TM	Methyl Cyclohexane	0.2178	0.2158	0.89	TM	
46	TM	Dibromomethane	0.1991	0.2043	2.6	TM	
47	TML	2-Chloroethyl vinyl ether	0.0061	0.0063	2.3	TML	12
48	TM	MIBK (methyl isobutyl ketone)	0.1728	0.1649	4.6	TM	
49	TM	1-Bromo-2-chloroethane	0.2547	0.2586	1.5	TM	
50	TM	Cis-1,3-Dichloropropene	0.5012	0.5056	0.88	TM	
51	TM*	Toluene	1.324	1.324	0.00	TM*	
52	TM	Trans-1,3-Dichloropropene	0.4419	0.4496	1.7	TM	
53	TM	1,1,2-TCA	0.2948	0.2925	0.76	TM	
54	TM	2-Hexanone	0.1982	0.1994	0.64	TM	
55	I	Chlorobenzene-D5 (IS)	ISTD			I	
56	S	Toluene-D8(S)	1.478	1.501	1.6	S	
57	TM	1,2-EDB	0.3748	0.3856	2.9	TM	
58	TM	Tetrachloroethene	0.4238	0.4311	1.7	TM	
59	TM	1-Chlorohexane	0.5045	0.5120	1.5	TM	
60	TM	1,1,1,2-Tetrachloroethane	0.4952	0.4998	0.94	TM	
61	TM	m&p-Xylene	0.7724	0.8035	4.0	TM	
62	TM	o-Xylene	0.7990	0.8480	6.1	TM	
63	TM	Styrene	1.358	1.420	4.6	TM	
64	S	4-Bromofluorobenzene(S)	0.6990	0.7267	4.0	S	
65	TM	1,3-Dichloropropane	0.6572	0.6785	3.2	TM	
66	TM	Dibromochloromethane	0.4948	0.5142	3.9	TM	
67	TM**	Chlorobenzene	1.292	1.310	1.3	TM**	
68	TM*	Ethylbenzene	2.032	2.075	2.1	TM*	
69	TM**	Bromoform	0.3388	0.3590	6.0	TM**	
70	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
71	TM	Isopropylbenzene	3.269	3.309	1.2	TM	
72	TM**	1,1,2,2-Tetrachloroethane	0.9070	0.9174	1.1	TM**	
73	TM	1,2,3-Trichloropropane	0.2574	0.2596	0.84	TM	
74	TM	t-1,4-Dichloro-2-Butene	0.1723	0.2025	18	TM	
75	TM	Bromobenzene	1.078	1.068	0.89	TM	
76	TM	n-Propylbenzene	4.209	4.343	3.2	TM	
77	TM	4-Ethyltoluene	3.614	3.796	5.0	TM	
78	TM	2-Chlorotoluene	3.001	3.077	2.5	TM	
79	TM	1,3,5-Trimethylbenzene	2.996	3.151	5.2	TM	
80	TM	4-Chlorotoluene	2.971	3.044	2.5	TM	
		Average			2.8		

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: 68284
Date Analyzed: 07/26/12
Instrument: Thor
Cal. Date: 07/25/12
Data File: 0726T04.D

		Compound	MEAN	CCRF	%D		%Drift
81	TM	Tert-Butylbenzene	2.745	2.792	1.7	TM	
82	TM	1,2,4-Trimethylbenzene	3.100	3.240	4.5	TM	
83	TM	Sec-Butylbenzene	3.664	3.916	6.9	TM	
84	TM	p-Isopropyltoluene	3.096	3.274	5.7	TM	
85	TM	Benzyl Chloride	0.9252	0.9863	6.6	TM	
86	TM	1,3-DCB	2.038	2.073	1.7	TM	
87	TM	1,4-DCB	2.134	2.138	0.16	TM	
88	TM	n-Butylbenzene	2.775	2.924	5.4	TM	
89	TM	1,2-DCB	1.975	2.011	1.8	TM	
90	TM	Hexachloroethane	0.5673	0.5550	2.2	TM	
91	TM	1,2-Dibromo-3-chloropropane	0.1699	0.1892	11	TM	
92	TM	1,2,4-Trichlorobenzene	0.9054	0.9093	0.43	TM	
93	TM	Hexachlorobutadiene	0.3782	0.3896	3.0	TM	
94	TM	Naphthalene	2.528	2.619	3.6	TM	
95	TM	1,2,3-Trichlorobenzene	1.290	1.317	2.1	TM	
96							
97							
98							
99							
100							
101							
102							
103							
104							
105							
106							
107							
108							
109							
110							
111							
112							
113							
114							
115							
116							
117							
118							
119							
120							
		Average			3.8		

ARS 7/27/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T04.D Vial: 29
Acq On : 26 Jul 12 10:46 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/L Vol Std 07-26-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:06 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units		Dev(Min)
1) Fluorobenzene (IS)	6.73	96	398336	25.00000 ppb		0.00
55) Chlorobenzene-D5 (IS)	9.87	117	321152	25.00000 ppb		0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	193728	25.00000 ppb		0.00
System Monitoring Compounds						
31) Dibromofluoromethane(S)	5.94	111	200318	32.13606 ppb		0.00
Spiked Amount 31.881			Recovery = 100.799%			
36) 1,2-DCA-D4(S)	6.32	65	197620	34.11344 ppb		0.00
Spiked Amount 33.647			Recovery = 101.386%			
56) Toluene-D8(S)	8.43	98	720301	37.93815 ppb		0.00
Spiked Amount 37.345			Recovery = 101.588%			
64) 4-Bromofluorobenzene(S)	11.05	95	275538	30.68737 ppb		0.00
Spiked Amount 29.515			Recovery = 103.970%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.28	85	20584	10.20168 ppb		98
3) Freon 114	1.39	85	27926	9.99425 ppb		88
4) Chloromethane	1.43	50	41158	8.12483 ppb		98
5) Vinyl chloride	1.54	62	72811	9.24853 ppb		99
6) Bromomethane	1.85	94	44988	8.94048 ppb		95
7) Chloroethane	1.95	64	42318	9.33277 ppb		96
8) Dichlorofluoromethane	2.16	67	2357	8.15476 ppb		88
9) Trichlorofluoromethane	2.22	101	18964	11.65401 ppb		95
11) Acetone	2.87	43	15701	10.93625 ppb		95
12) Freon-113	2.83	101	35158	10.74157 ppb		93
13) 1,1-DCE	2.80	61	42874	9.76104 ppb		98
14) t-Butanol	3.67	59	16079	124.47769 ppb		98
15) Methyl Acetate	3.32	43	38136	9.92354 ppb		99
16) Iodomethane	2.96	142	37360	9.40380 ppb		98
17) Acrylonitrile	3.79	52	13014	10.34464 ppb		81
18) Methylene chloride	3.43	84	15151	9.48248 ppb		98
19) Carbon disulfide	3.05	76	3929	8.64622 ppb	#	87
20) Methyl t-butyl ether (MtBE	3.88	73	81107	9.56410 ppb		97
21) Trans-1,2-DCE	3.84	96	26647	8.79065 ppb		89
22) Diisopropyl Ether	4.69	59	19686	10.36546 ppb		91
23) 1,1-DCA	4.49	63	80395	10.00189 ppb		95
24) Vinyl Acetate	4.69	87	45113	9.93687 ppb		95
25) Ethyl tert Butyl Ether	5.19	59	104979	9.90141 ppb		99
26) MEK (2-Butanone)	5.37	43	20005	10.25031 ppb		96
27) Cis-1,2-DCE	5.32	96	52760	10.24648 ppb		91
28) 2,2-Dichloropropane	5.31	77	33764	10.42720 ppb		91
29) Chloroform	5.75	83	98466	9.86467 ppb		97
30) Bromochloromethane	5.61	128	24790	9.88814 ppb		95
32) 1,1,1-TCA	5.95	97	59207	9.85810 ppb		92
33) Cyclohexane	6.03	41	14959	9.17770 ppb		93
34) 1,1-Dichloropropene	6.16	75	42905	9.83684 ppb		97
35) 2,2,4-Trimethylpentane	6.54	57	64643	10.31205 ppb		96
37) Carbon Tetrachloride	6.15	117	56070	9.96085 ppb		92
38) Tert Amyl Methyl Ether	6.58	73	112785	9.99431 ppb		99
39) 1,2-DCA	6.41	62	64294	9.82217 ppb		99
40) Benzene	6.39	78	166002	9.28513 ppb		99
41) TCE	7.14	95	45825	9.43003 ppb		99
42) 2-Pentanone	7.36	43	475166	124.11594 ppb		100
43) 1,2-Dichloropropane	7.37	63	57766	9.90259 ppb		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T04.D Vial: 29
Acq On : 26 Jul 12 10:46 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/L Vol Std 07-26-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:06 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
44) Bromodichloromethane	7.67	83	80999	10.03720	ppb	98
45) Methyl Cyclohexane	7.35	83	34388	9.91121	ppb	98
46) Dibromomethane	7.49	93	32545	10.25640	ppb	98
47) 2-Chloroethyl vinyl ether	7.98	106	999	8.84903	ppb	100
48) MIBK (methyl isobutyl ket	8.32	43	26280	9.54494	ppb	95
49) 1-Bromo-2-chloroethane	7.98	63	41208	10.15305	ppb	100
50) Cis-1,3-Dichloropropene	8.15	75	80563	10.08832	ppb	98
51) Toluene	8.50	91	210933	9.99972	ppb	100
52) Trans-1,3-Dichloropropene	8.72	75	71643	10.17479	ppb	97
53) 1,1,2-TCA	8.90	83	46611	9.92446	ppb	98
54) 2-Hexanone	9.17	43	31774	10.06364	ppb	94
57) 1,2-EDB	9.40	107	49540	10.28844	ppb	95
58) Tetrachloroethene	9.05	166	55383	10.17231	ppb	96
59) 1-Chlorohexane	9.90	91	65775	10.14949	ppb	97
60) 1,1,1,2-Tetrachloroethane	9.99	131	64208	10.09434	ppb	97
61) m&p-Xylene	10.14	106	206429	20.80390	ppb	100
62) o-Xylene	10.54	106	108934	10.61263	ppb	96
63) Styrene	10.55	104	182400	10.45858	ppb	99
65) 1,3-Dichloropropane	9.06	76	87161	10.32421	ppb	98
66) Dibromochloromethane	9.29	129	66056	10.39253	ppb	100
67) Chlorobenzene	9.90	112	168239	10.13286	ppb	98
68) Ethylbenzene	10.03	91	266504	10.20819	ppb	98
69) Bromoform	10.71	173	46121	10.59745	ppb	99
71) Isopropylbenzene	10.91	105	256398	10.12215	ppb	98
72) 1,1,2,2-Tetrachloroethane	11.19	83	71093	10.11458	ppb	99
73) 1,2,3-Trichloropropane	11.23	110	20117	10.08407	ppb	99
74) t-1,4-Dichloro-2-Butene	11.25	53	15689	11.75131	ppb	90
75) Bromobenzene	11.19	156	82758	9.91078	ppb	99
76) n-Propylbenzene	11.32	91	336546	10.31918	ppb	98
77) 4-Ethyltoluene	11.43	105	294163	10.50301	ppb	99
78) 2-Chlorotoluene	11.39	91	238448	10.25301	ppb	98
79) 1,3,5-Trimethylbenzene	11.50	105	244143	10.51569	ppb	100
80) 4-Chlorotoluene	11.50	91	235882	10.24689	ppb	100
81) Tert-Butylbenzene	11.82	119	216392	10.17400	ppb	98
82) 1,2,4-Trimethylbenzene	11.86	105	251104	10.45204	ppb	97
83) Sec-Butylbenzene	12.04	105	303423	10.68549	ppb	100
84) p-Isopropyltoluene	12.19	119	253700	10.57402	ppb	99
85) Benzyl Chloride	12.35	91	76432	10.66038	ppb	97
86) 1,3-DCB	12.13	146	160661	10.17369	ppb	100
87) 1,4-DCB	12.22	146	165656	10.01635	ppb	99
88) n-Butylbenzene	12.59	91	226597	10.53674	ppb	100
89) 1,2-DCB	12.59	146	155808	10.17964	ppb	98
90) Hexachloroethane	12.86	117	43009	9.78378	ppb	93
91) 1,2-Dibromo-3-chloropropan	13.36	157	14662	11.13450	ppb	87
92) 1,2,4-Trichlorobenzene	14.20	180	70464	10.04343	ppb	98
93) Hexachlorobutadiene	14.38	223	30194	10.30220	ppb	86
94) Naphthalene	14.43	128	202923	10.35837	ppb	99
95) 1,2,3-Trichlorobenzene	14.68	180	102072	10.21099	ppb	97

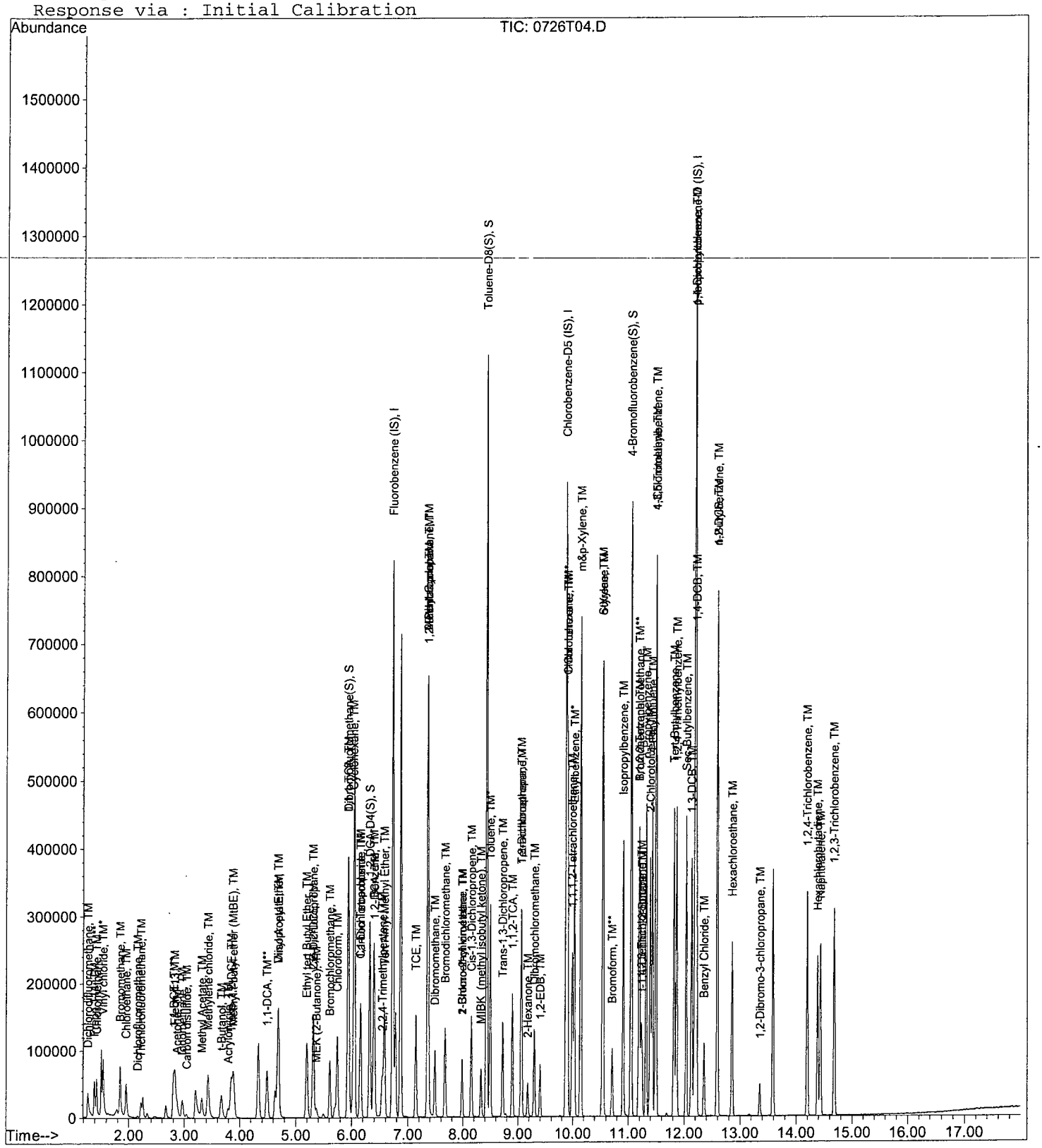
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T04.D Vial: 29
Acq On : 26 Jul 12 10:46 Operator: DG,RS,HW,ARS,SV
Sample : 10ug/L Vol Std 07-26-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:06 2012 Quant Results File: TALLW.RES

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. SDG No: 68284
Case No: Initial Cal. Date: 07/25/12
Matrix: Water Instrument: Thor (TGAS.M) Initials:

			0725T04.D	0725T05.D	0725T06.D	0725T07.D	0725T08.D	0725T09.D	0725T10.D							
		Compound	20	50	100	300	600	800	1000				Avg	%RSD		r2
1	I	Fluorobenzene (IS)	ISTD													
2	TMHBL	Gasoline	16.5	7.205	4.047	2.093	1.605	1.465	1.393				4.9	113	TMHBL	1.000
3	I	Chlorobenzene-D5 (IS)	ISTD													
4	I	1,4-Dichlorobenzene-D (IS)	ISTD													
5																
6																
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ARS 7/26/12

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0725T03.D Vial: 2
Acq On : 25 Jul 12 10:22 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 8:59 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	96	383424	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.87	117	310848	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	187136	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	196549	32.75773 ppb	0.00
Spiked Amount 31.881			Recovery	= 102.750%	
36) 1,2-DCA-D4(S)	6.33	65	189874	34.05104 ppb	0.00
Spiked Amount 33.647			Recovery	= 101.202%	
56) Toluene-D8(S)	8.43	98	687242	37.39680 ppb	0.00
Spiked Amount 37.345			Recovery	= 100.140%	
64) 4-Bromofluorobenzene(S)	11.05	95	268751	30.92365 ppb	0.00
Spiked Amount 29.515			Recovery	= 104.773%	
Target Compounds					Qvalue
4) Chloromethane	1.45	50	159	-0.39190 ppb #	74
6) Bromomethane	1.78	94	376	0.07763 ppb #	3
11) Acetone	2.90	43	3396	1.47860 ppb	98
14) t-Butanol	3.69	59	126	1.01338 ppb #	72
15) Methyl Acetate	3.34	43	3113	-0.48779 ppb	93
18) Methylene chloride	3.45	84	326	-0.71073 ppb	84
23) 1,1-DCA	4.34	63	775	0.10017 ppb #	1
26) MEK (2-Butanone)	5.39	43	1036	0.87321 ppb #	46
34) 1,1-Dichloropropene	6.05	75	22005	5.24130 ppb #	48
35) 2,2,4-Trimethylpentane	6.55	57	913	0.15131 ppb	91
37) Carbon Tetrachloride	6.05	117	28709	5.29852 ppb #	14
38) Tert Amyl Methyl Ether	6.73	73	8830	0.81289 ppb #	29
39) 1,2-DCA	6.40	62	6268	0.99480 ppb #	74
40) Benzene	6.40	78	769435	44.71126 ppb	98
48) MIBK (methyl isobutyl ket	8.43	43	1645	0.62070 ppb #	1
51) Toluene	8.50	91	828486	40.80362 ppb	100
58) Tetrachloroethene	9.06	166	842	0.15978 ppb	84
59) 1-Chlorohexane	10.03	91	895259	142.72325 ppb #	17
61) m&p-Xylene	10.14	106	710590	73.98703 ppb	98
62) o-Xylene	10.54	106	355718	35.80371 ppb	99
63) Styrene	10.54	104	17860	1.05802 ppb #	1
68) Ethylbenzene	10.03	91	895459	35.43670 ppb	99
79) 1,3,5-Trimethylbenzene	11.50	105	3503	0.15620 ppb	89
81) Tert-Butylbenzene	11.86	119	92293	4.49215 ppb #	73
82) 1,2,4-Trimethylbenzene	11.86	105	731223	31.50884 ppb	99
83) Sec-Butylbenzene	11.86	105	709314	25.85946 ppb #	55
94) Naphthalene	14.43	128	598073	31.60454 ppb	99

ARS 7/26/12

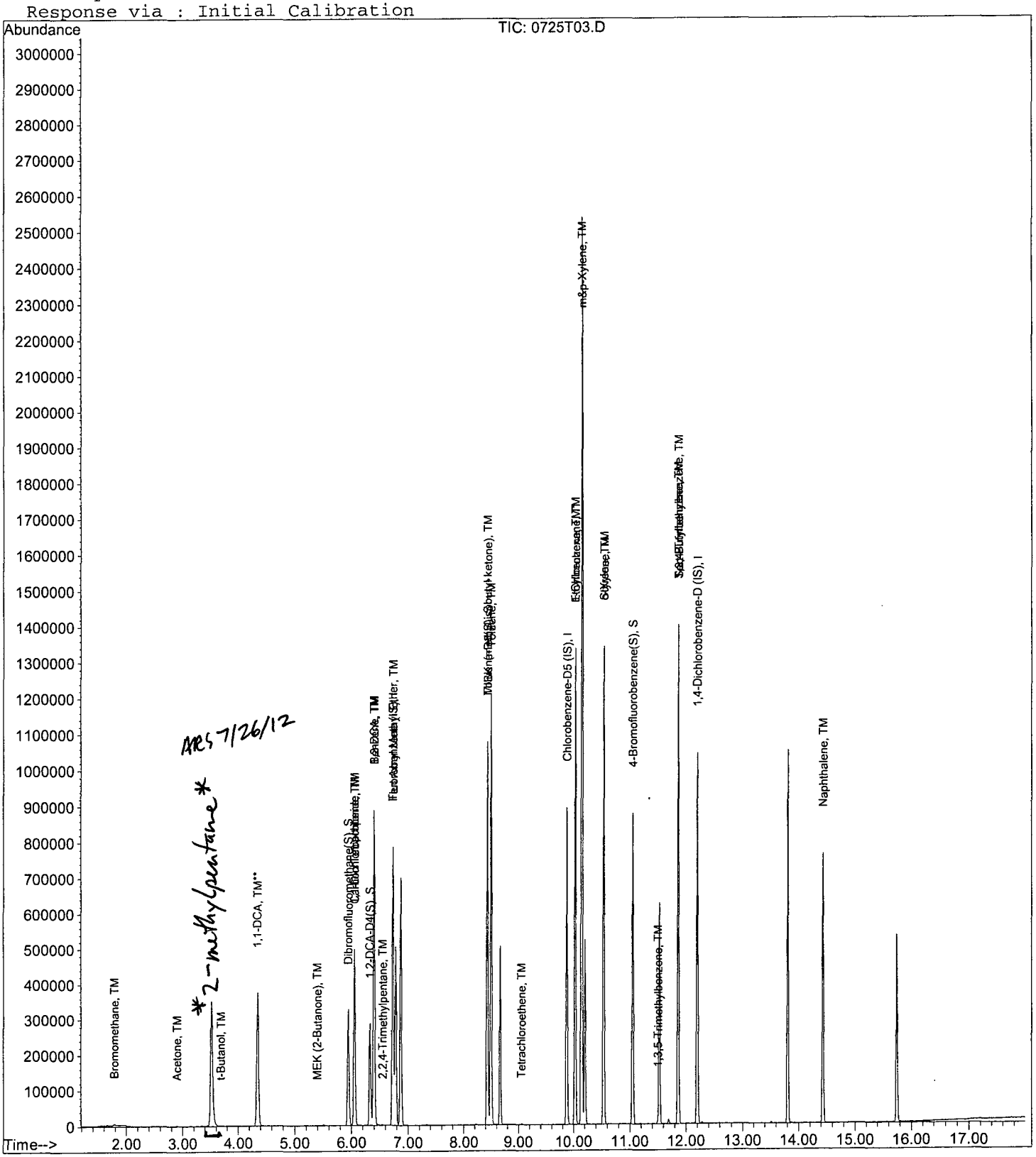
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T03.D Vial: 2
Acq On : 25 Jul 12 10:22 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 8:59 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:59 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	757122	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	882358	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	975664	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10003915m	-268.75372	ppb	100

(#) = qualifier out of range (m) = manual integration

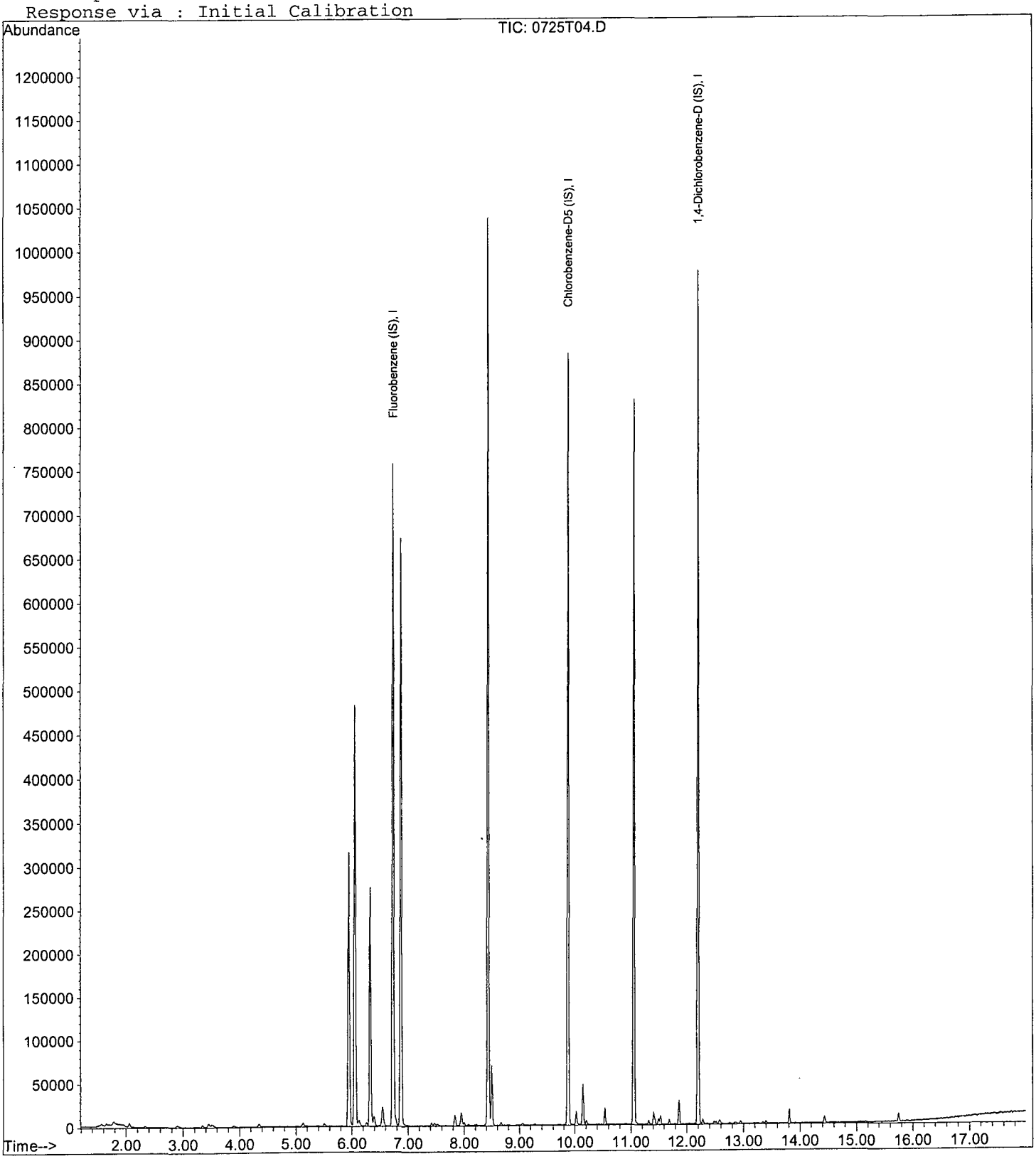
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D
Acq On : 25 Jul 12 10:50
Sample : 20ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 3
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:59 2012 Quant Results File: TGAS.RES

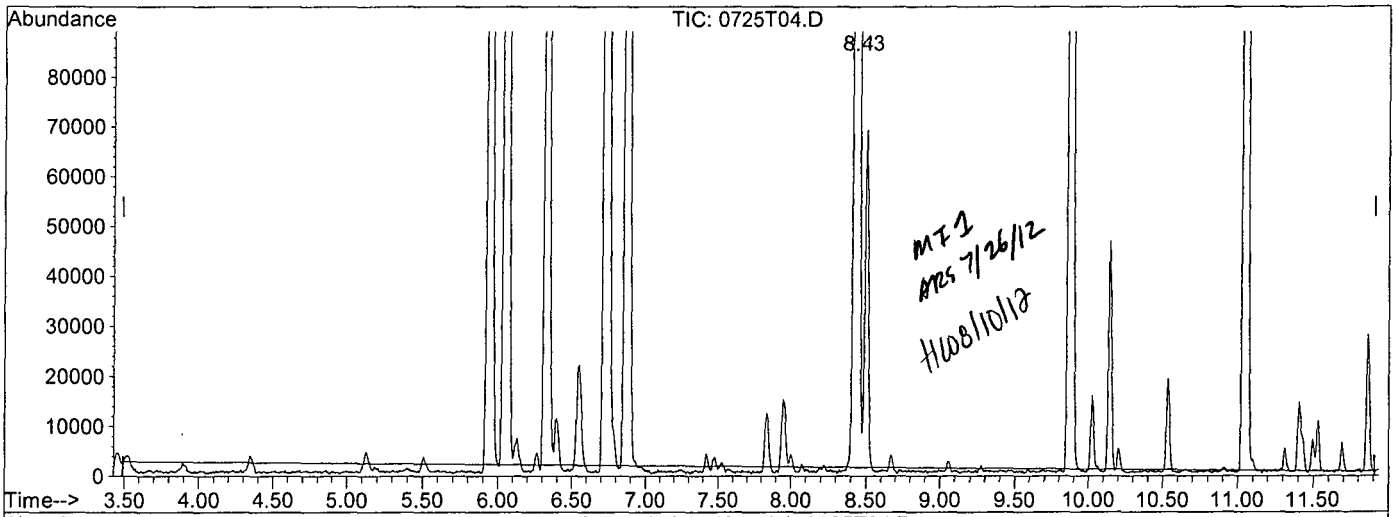
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

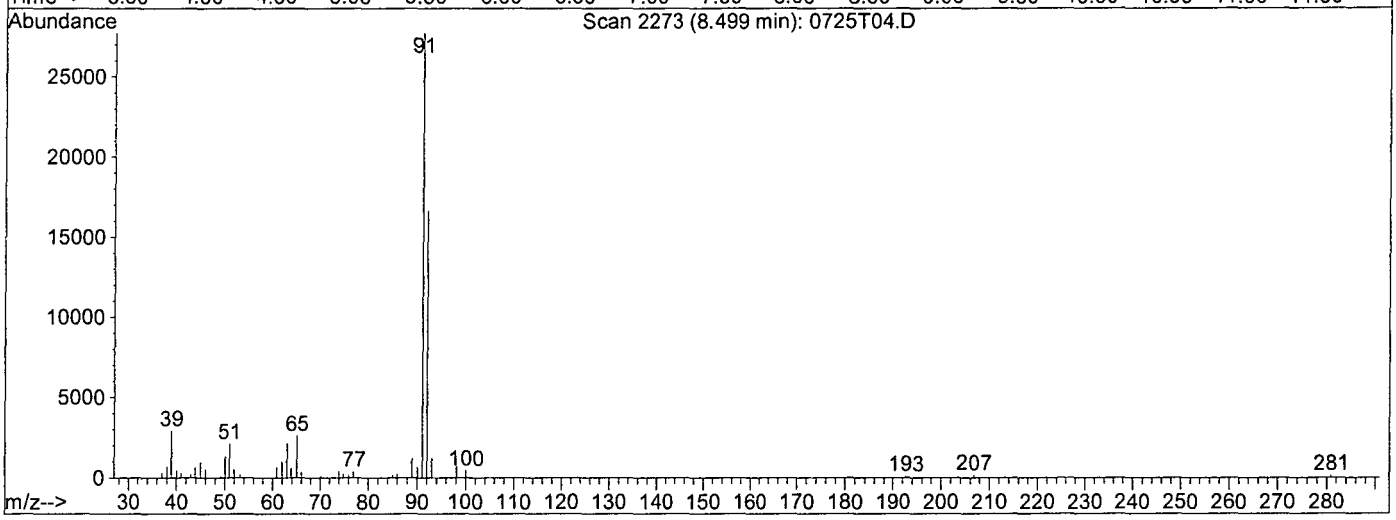


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T04.D

(2) Gasoline (TMHB)

8.50min -376.6351ppb m

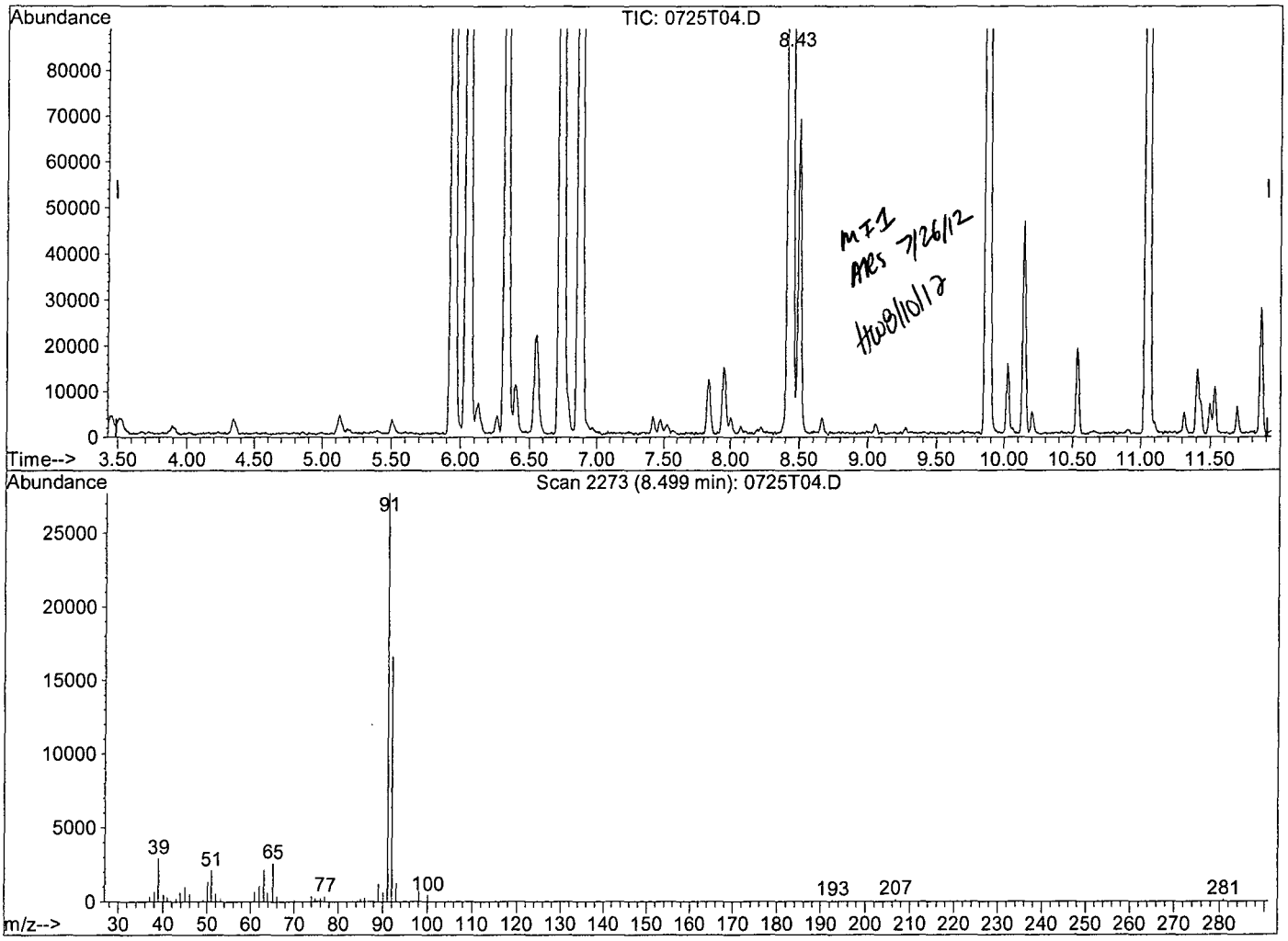
response 7759068

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	1.20#
0.00	1.40	3.55#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T04.D Vial: 3
Acq On : 25 Jul 12 10:50 Operator: DG,RS,HW,ARS,SV
Sample : 20ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:59 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration



TIC: 0725T04.D

(2) Gasoline (TMHB)

8.43min -268.7537ppb m

response 10003915

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.93#
0.00	1.40	2.76#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	757407	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	877869	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	954185	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	10913490m	-225.23930	ppb	100

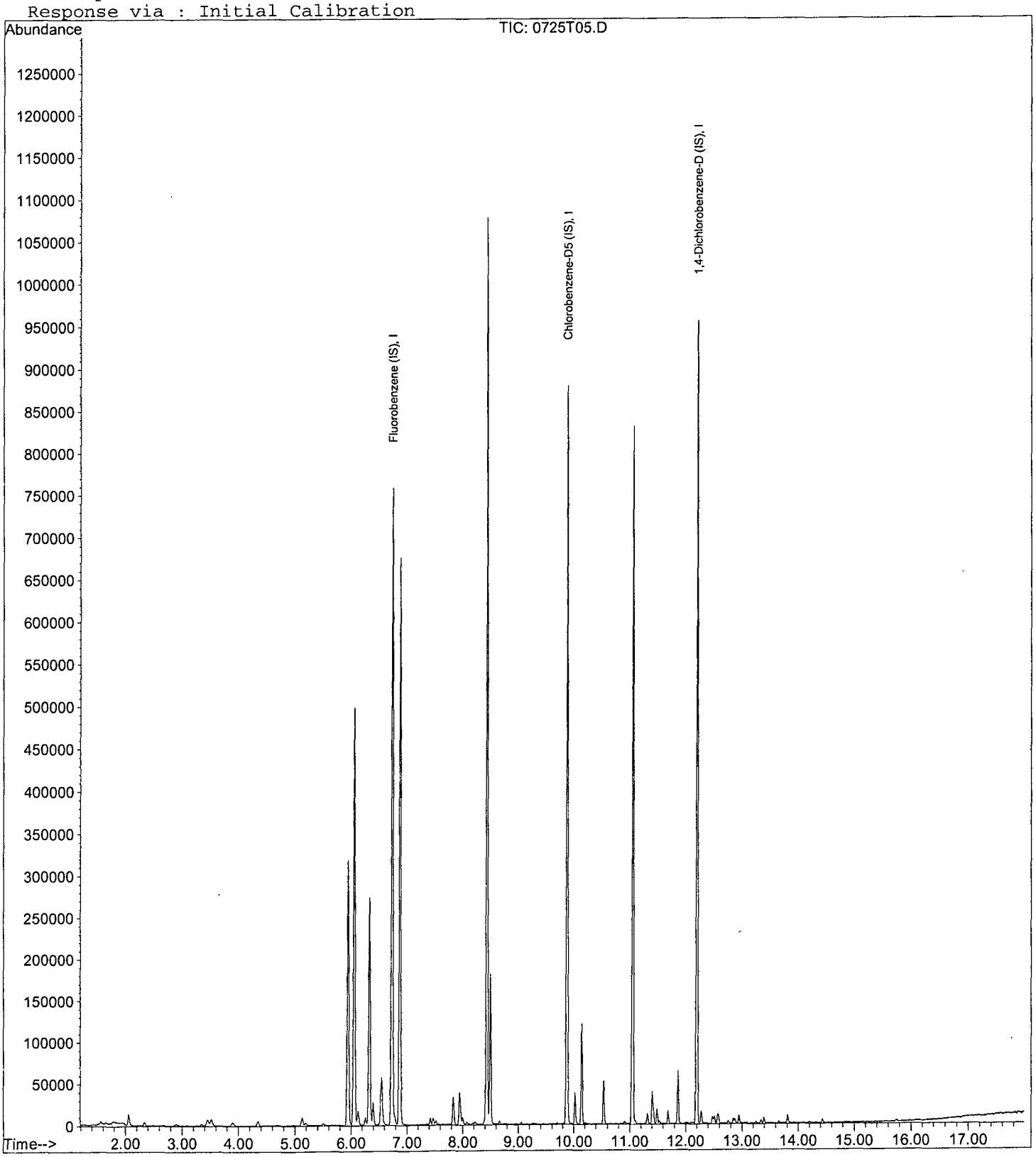
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

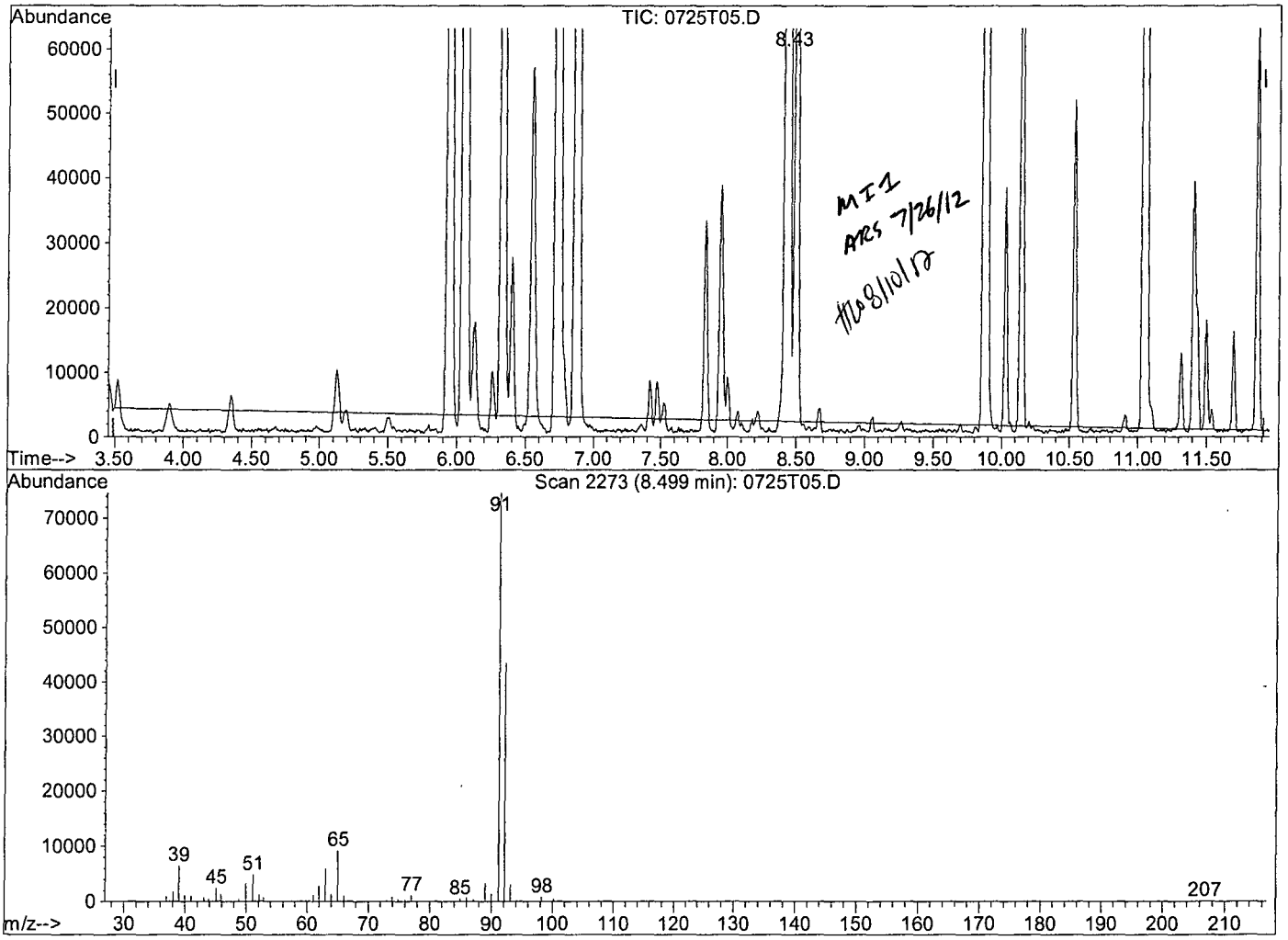
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration



TIC: 0725T05.D

(2) Gasoline (TMHB)

8.50min -333.5537ppb m

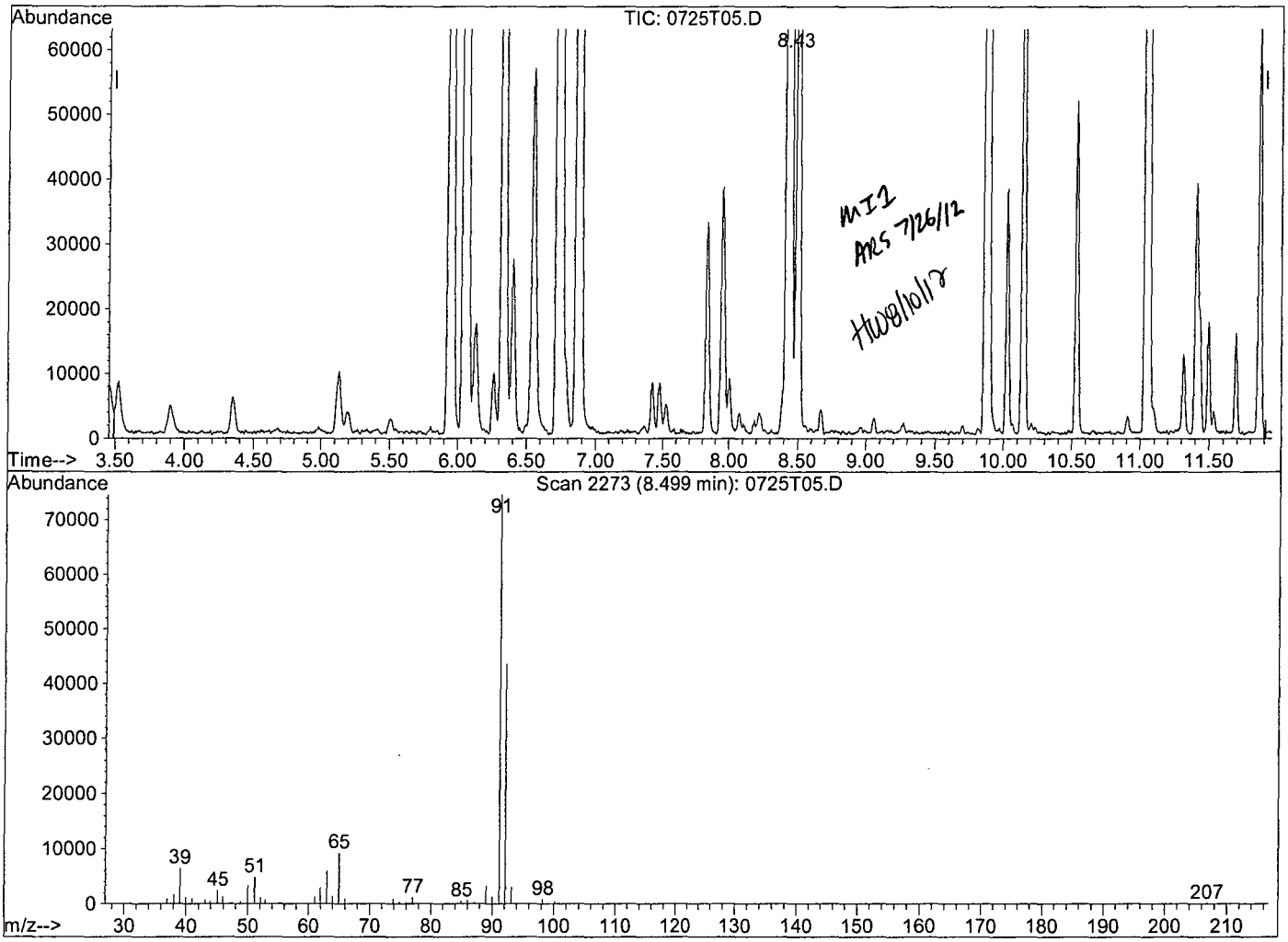
response 8658785

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	1.05#
0.00	1.40	3.08#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T05.D Vial: 4
Acq On : 25 Jul 12 11:17 Operator: DG,RS,HW,ARS,SV
Sample : 50ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:58 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration



TIC: 0725T05.D

(2) Gasoline (TMHB)

8.43min -225.2393ppb m

response 10913490

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.83#
0.00	1.40	2.44#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	774747	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	873528	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	976201	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	12540540m	-160.56049	ppb	100

(#) = qualifier out of range (m) = manual integration

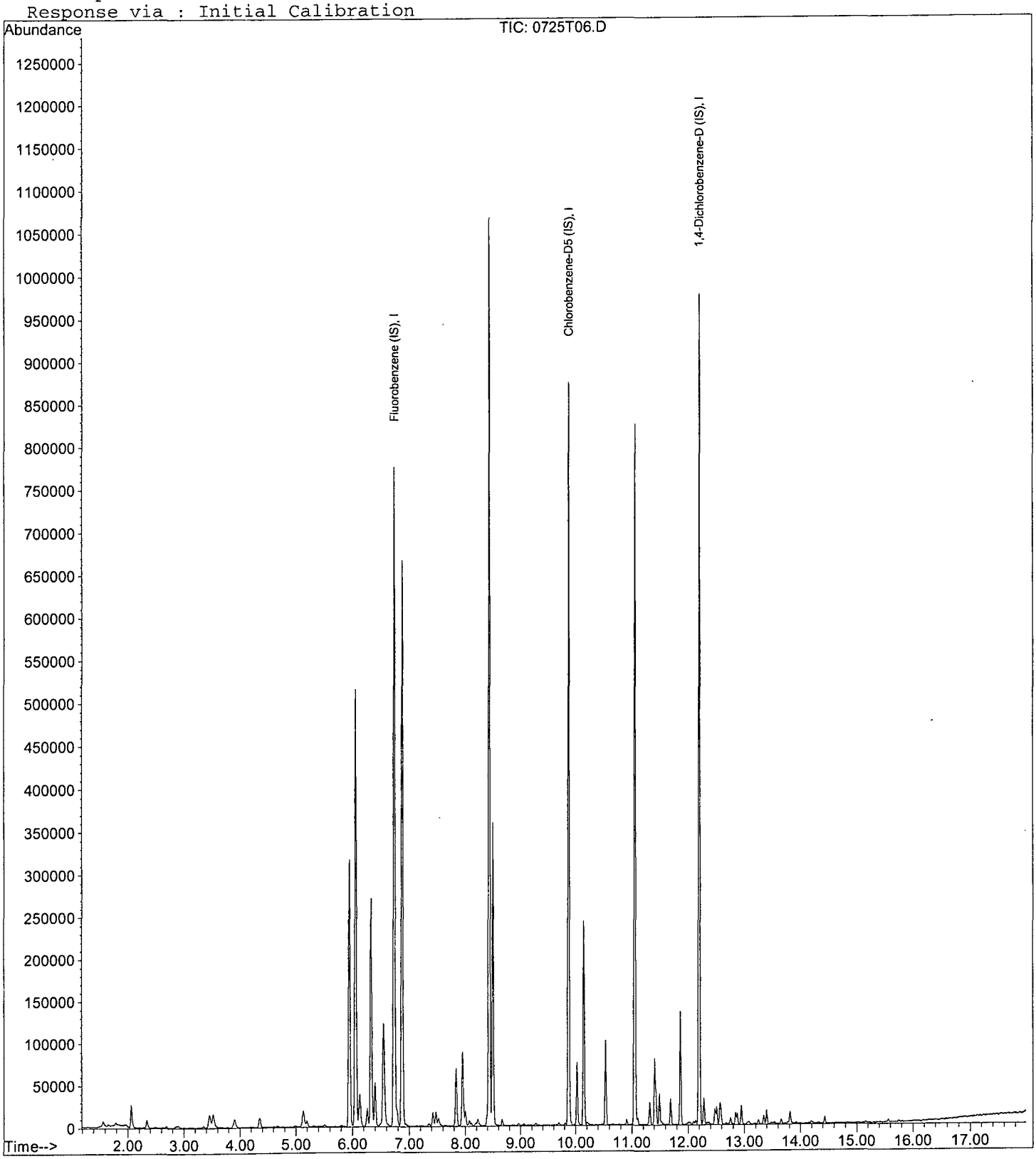
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D
Acq On : 25 Jul 12 11:45
Sample : 100ug/L Vol Std 07-25-12
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 5
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:58 2012 Quant Results File: TGAS.RES

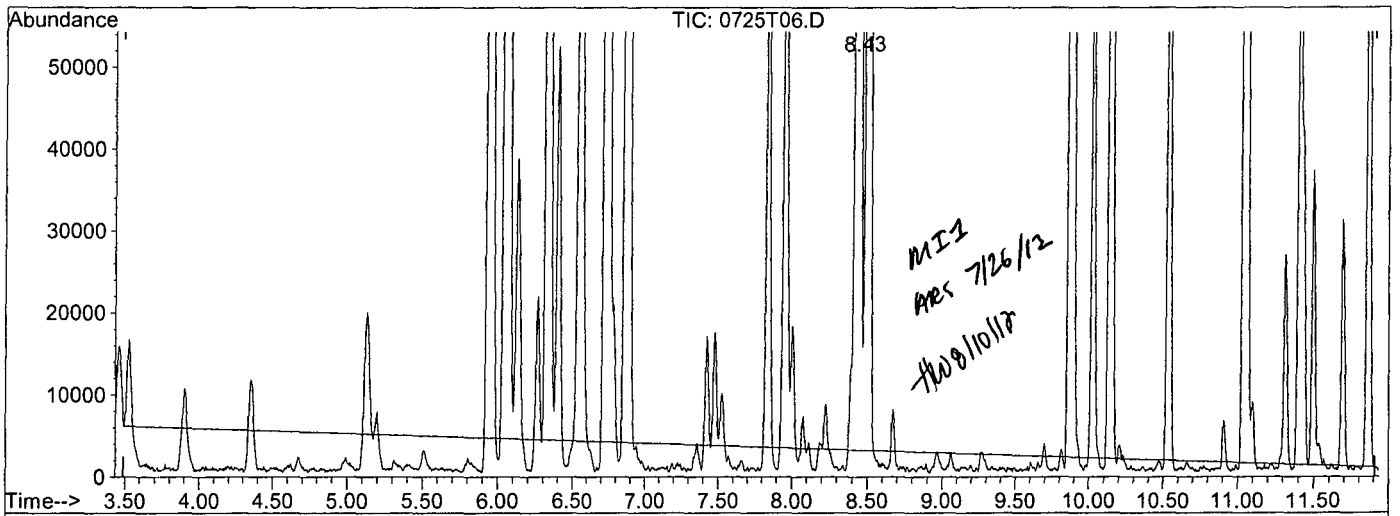
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

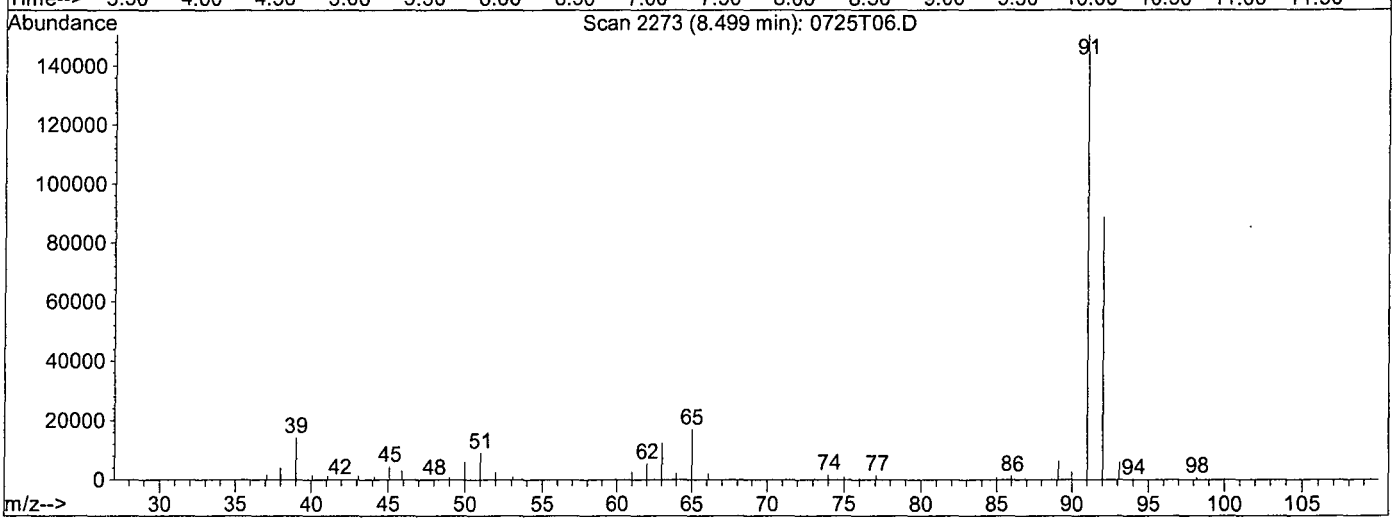


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T06.D

(2) Gasoline (TMHB)

8.50min -268.9292ppb m

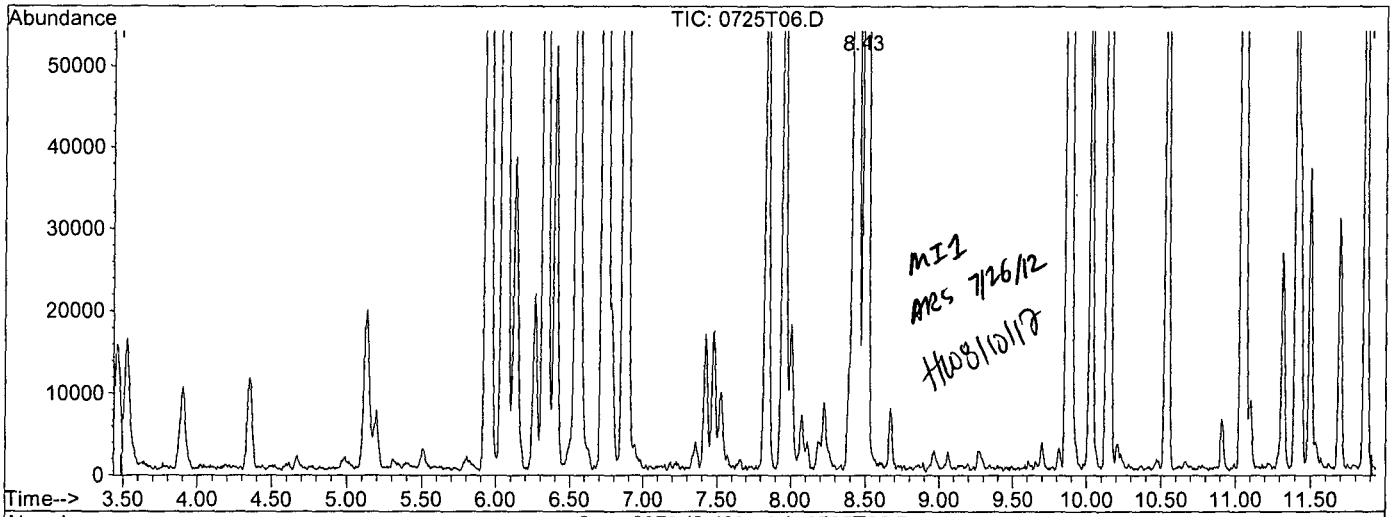
response 10233059

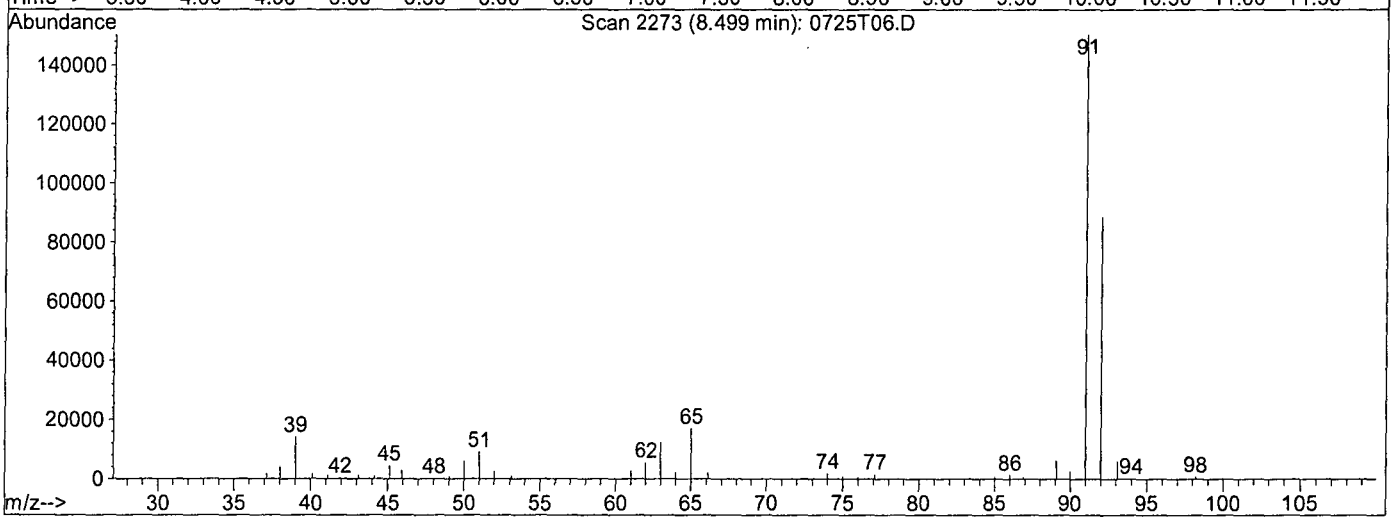
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.93#
0.00	1.40	2.66#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T06.D Vial: 5
Acq On : 25 Jul 12 11:45 Operator: DG,RS,HW,ARS,SV
Sample : 100ug/L Vol Std 07-25-12 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:58 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T06.D

(2) Gasoline (TMHB)

8.43min -160.5605ppb m

response 12540540

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.76#
0.00	1.40	2.17#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:50 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	782981	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	897407	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	996199	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	19663639m	410.65057	ppb	100

(#) = qualifier out of range (m) = manual integration

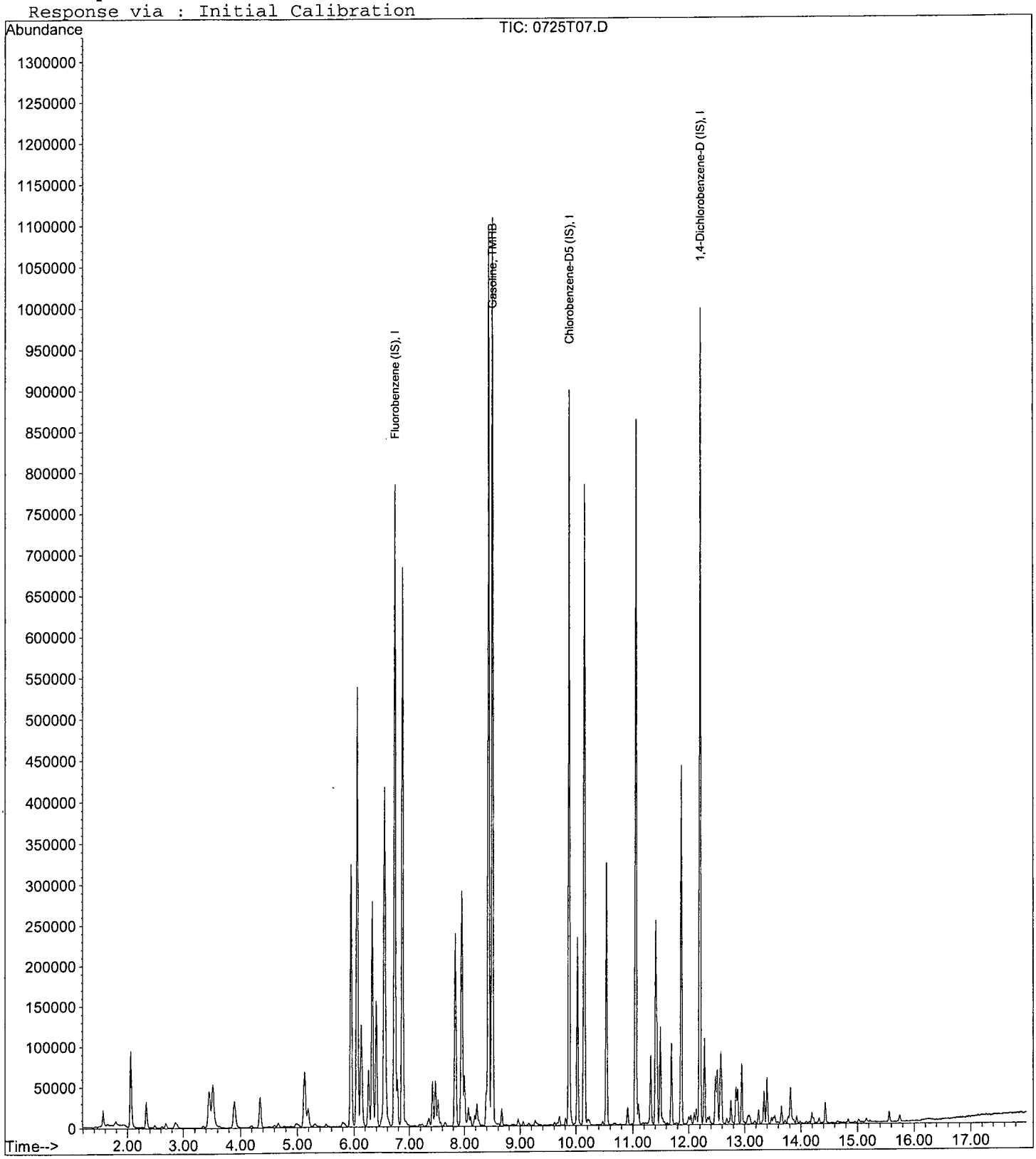
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D
Acq On : 25 Jul 12 12:13
Sample : 300ug/L Vol Std 07-25-13
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 6
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:50 2012 Quant Results File: TGAS.RES

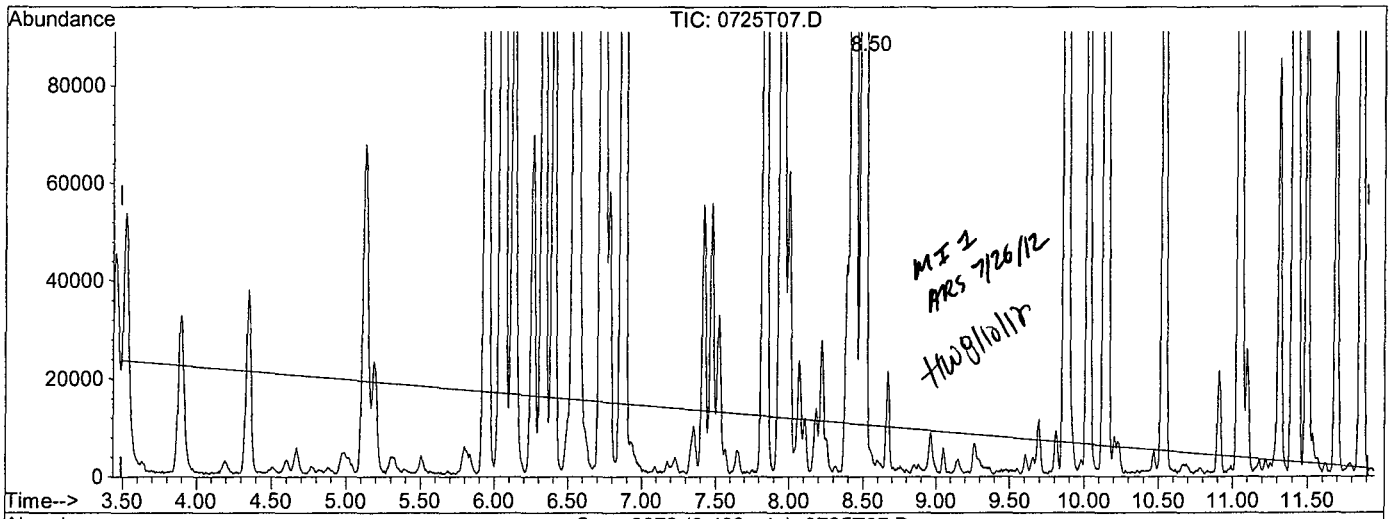
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

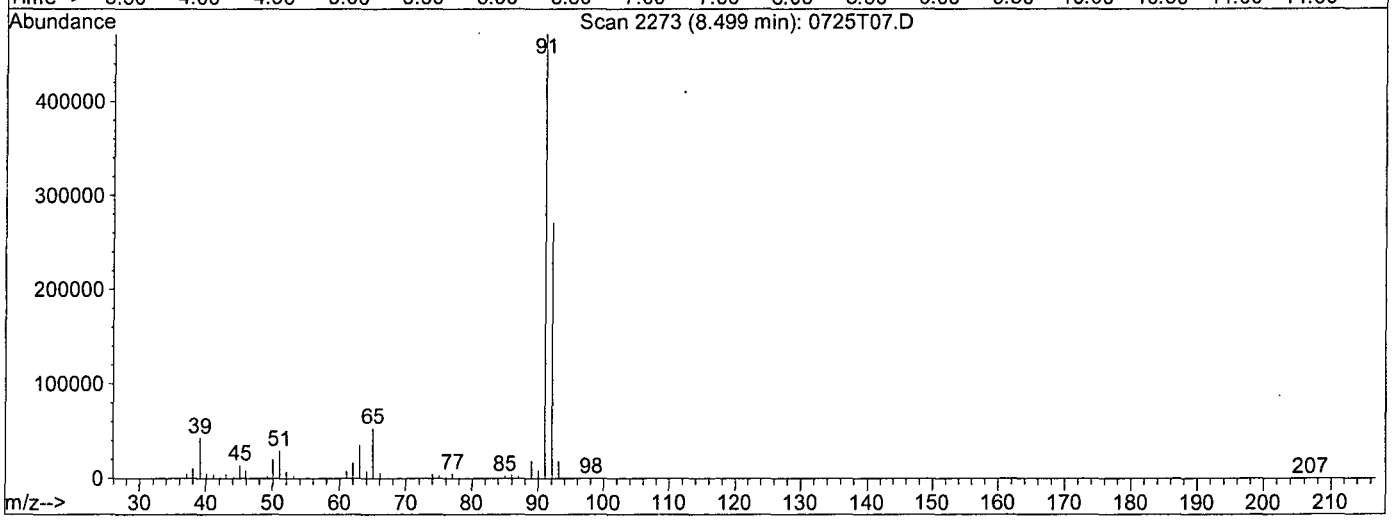


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:49 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Single Level Calibration





TIC: 0725T07.D

(2) Gasoline (TMHB)

8.50min 339.0063ppb m

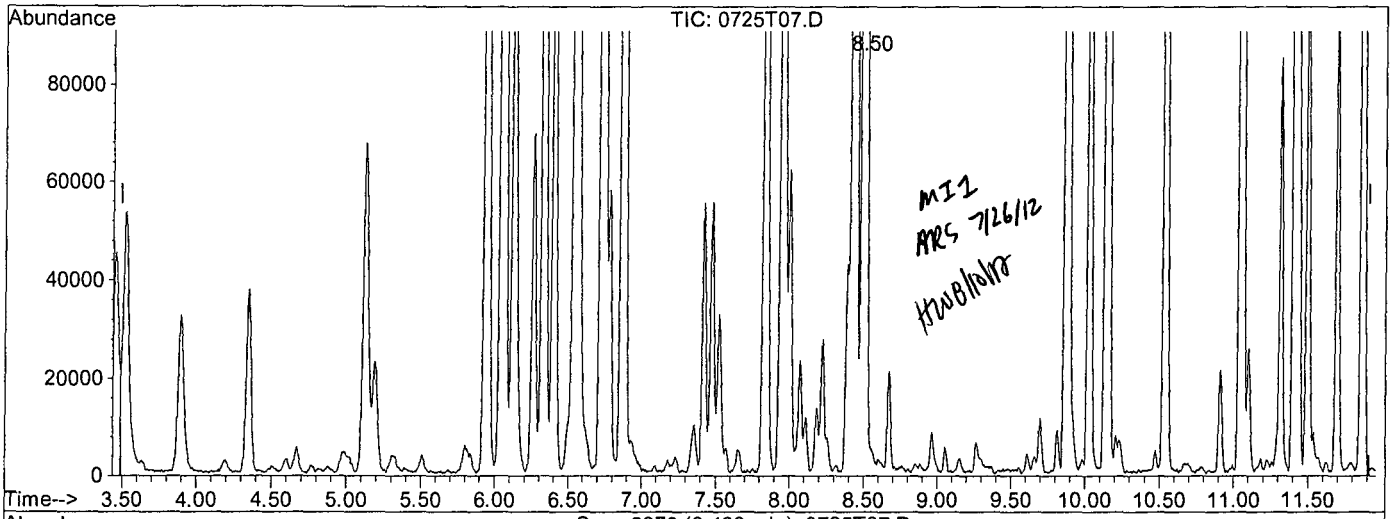
response 17146776

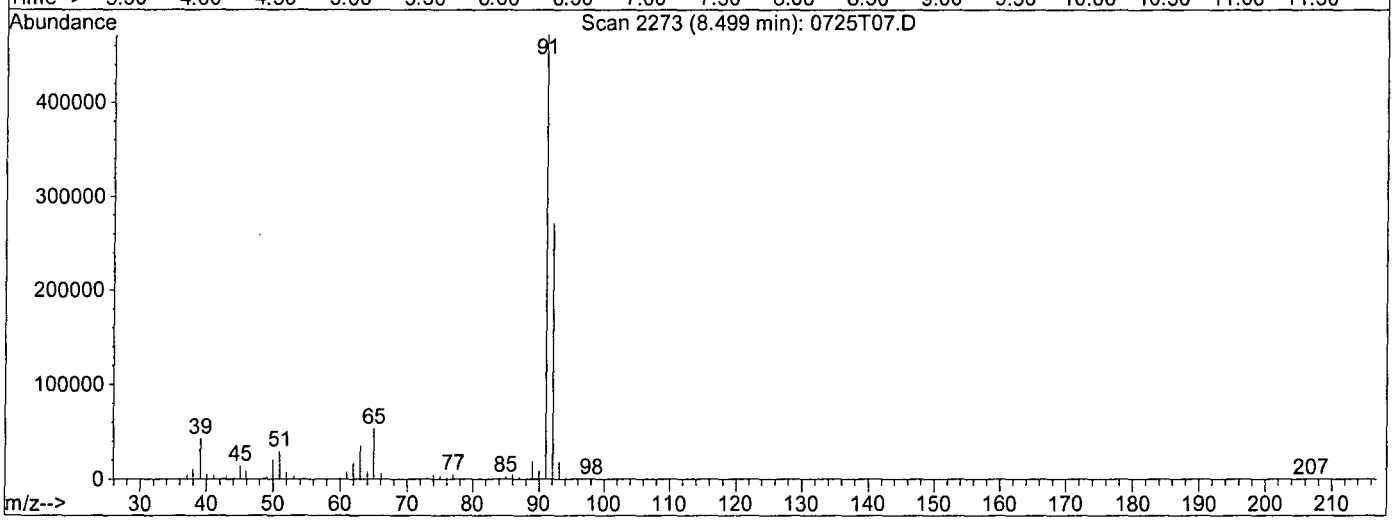
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.55#
0.00	0.00	1.63#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T07.D Vial: 6
Acq On : 25 Jul 12 12:13 Operator: DG,RS,HW,ARS,SV
Sample : 300ug/L Vol Std 07-25-13 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:50 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Single Level Calibration





TIC: 0725T07.D

(2) Gasoline (TMHB)

8.50min 410.6506ppb m

response 19663639

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.48#
0.00	0.00	1.42#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:56 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	782399	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	890063	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	996015	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	30141216m	652.19460	ppb	100

(#) = qualifier out of range (m) = manual integration

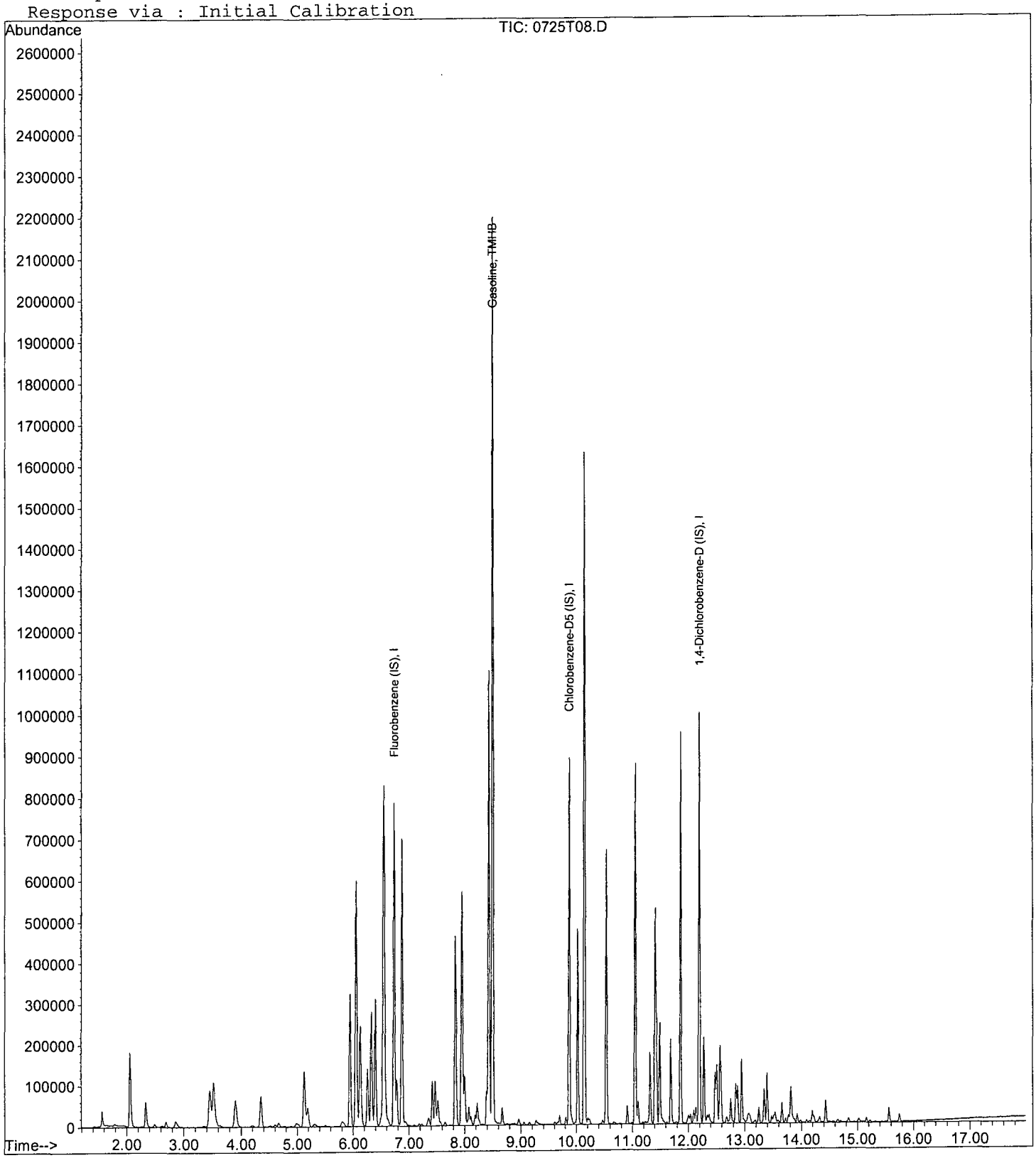
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D
Acq On : 25 Jul 12 12:41
Sample : 600ug/L Vol Std 07-25-14
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 7
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:56 2012 Quant Results File: TGAS.RES

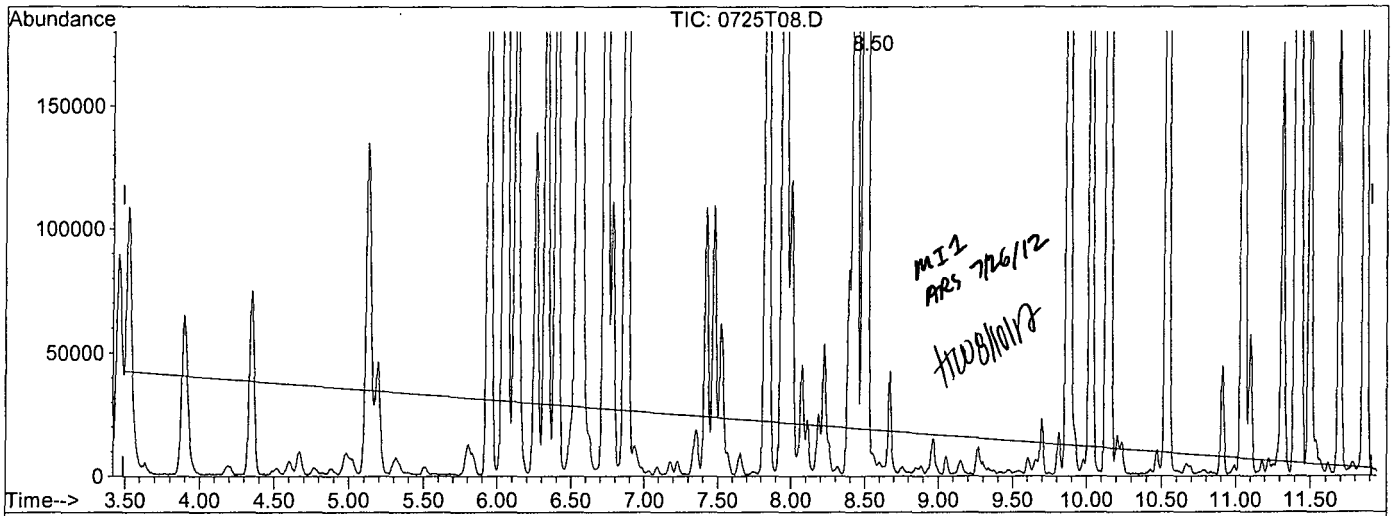
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

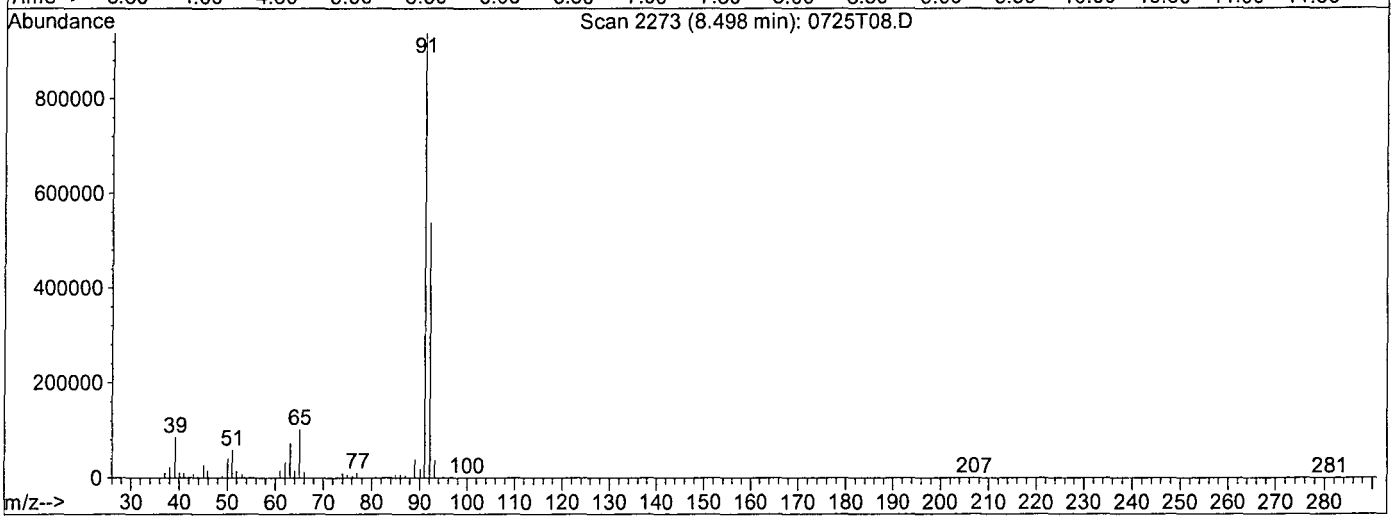


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T08.D

(2) Gasoline (TMHB)

8.50min 500.4974ppb m

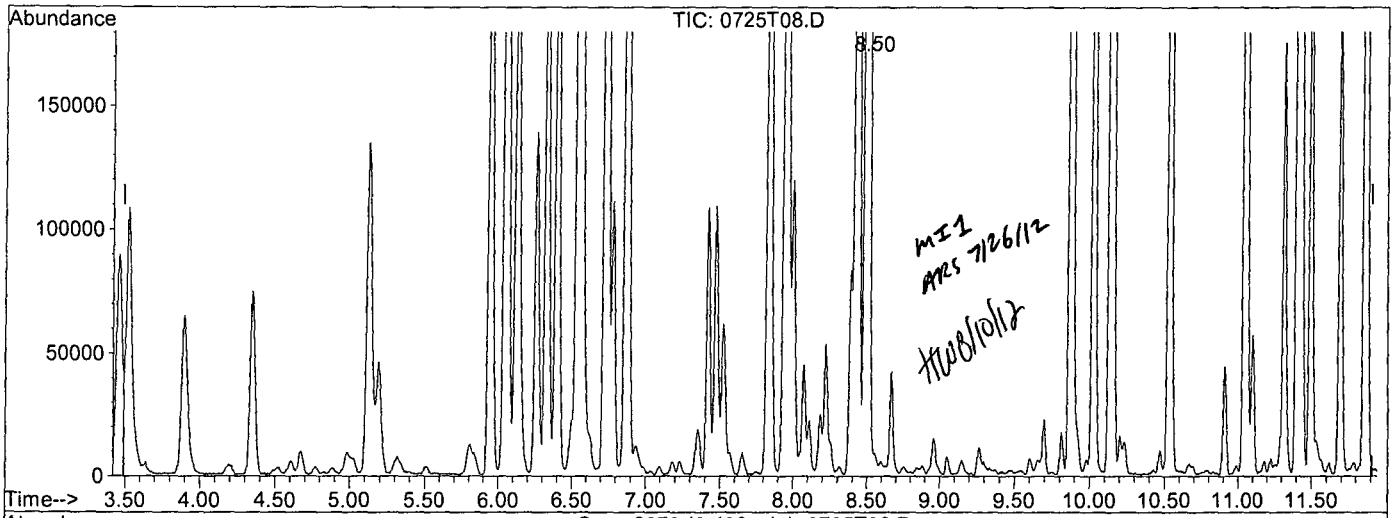
response 26879245

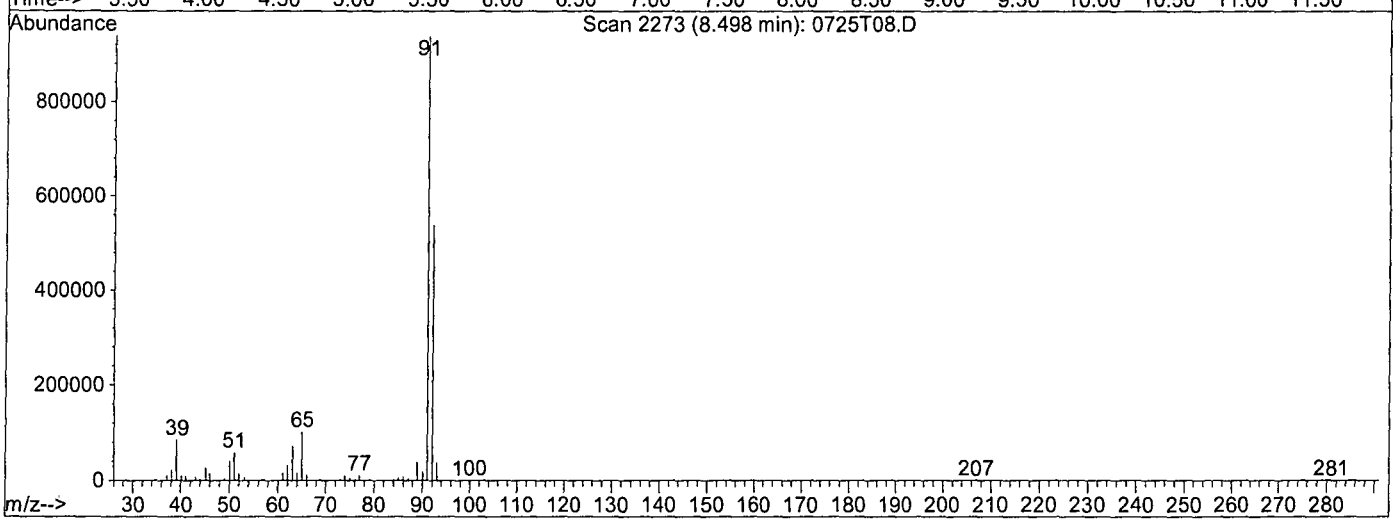
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.36#
0.00	1.40	1.04#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T08.D Vial: 7
Acq On : 25 Jul 12 12:41 Operator: DG,RS,HW,ARS,SV
Sample : 600ug/L Vol Std 07-25-14 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:56 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T08.D

(2) Gasoline (TMHB)

8.50min 652.1946ppb m

response 30141216

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.32#
0.00	1.40	0.93#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 15:55 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	788221	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	883861	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1013991	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	36946726m	955.99215	ppb	100

(#) = qualifier out of range (m) = manual integration

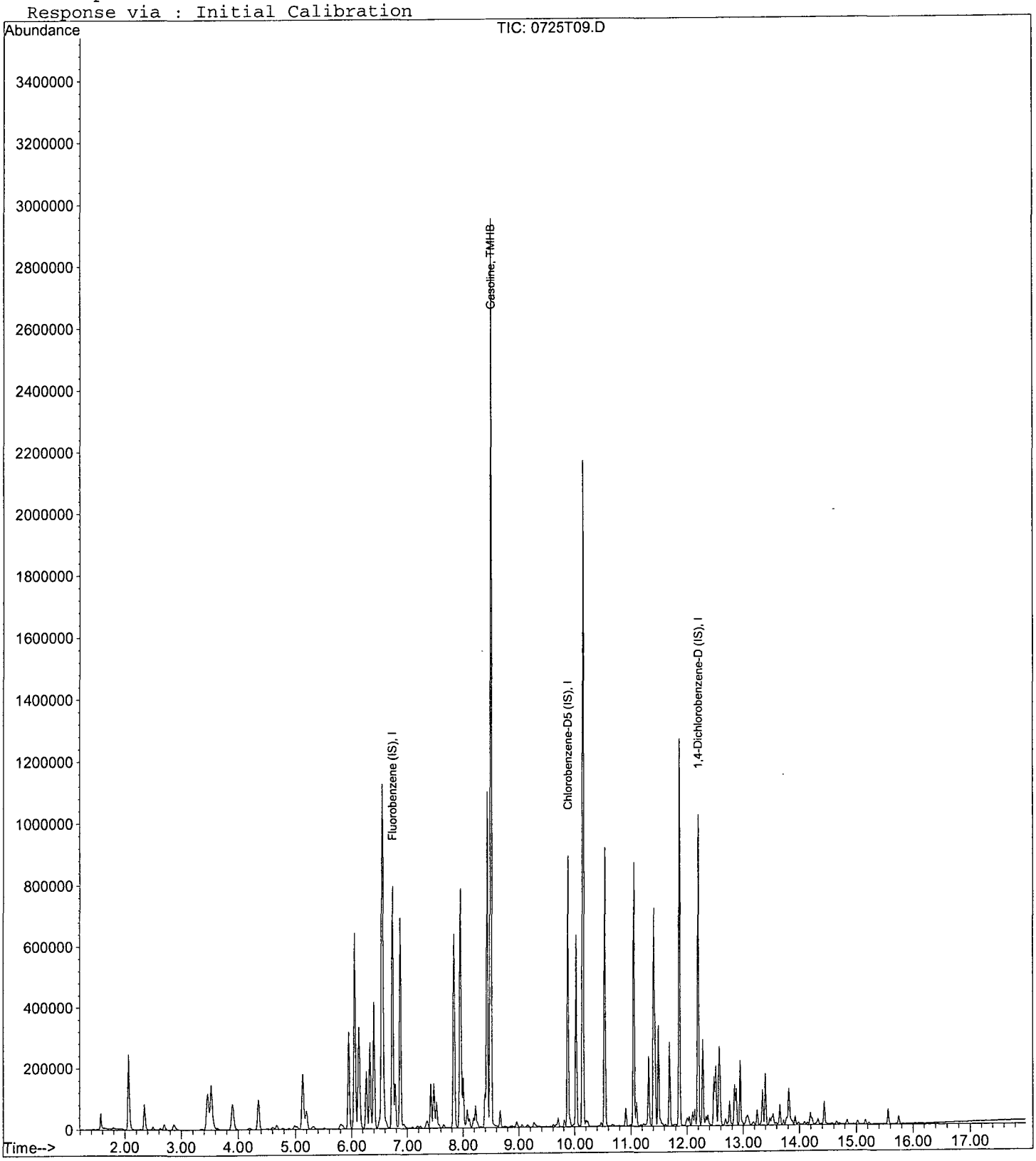
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D
Acq On : 25 Jul 12 13:08
Sample : 800ug/L Vol Std 07-25-15
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 8
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 15:55 2012 Quant Results File: TGAS.RES

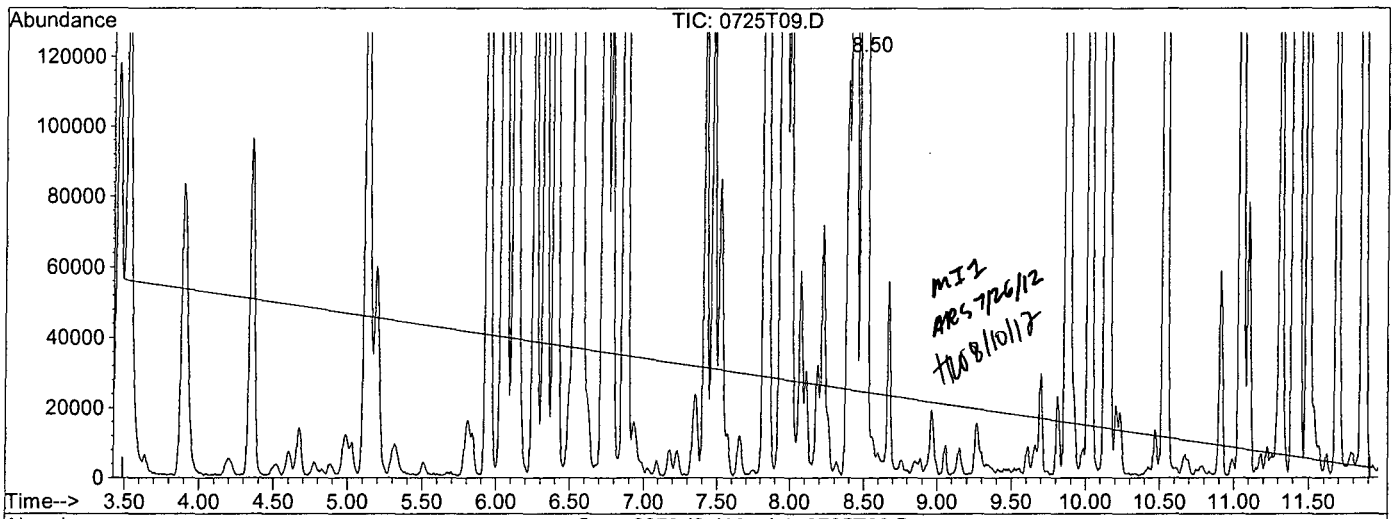
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

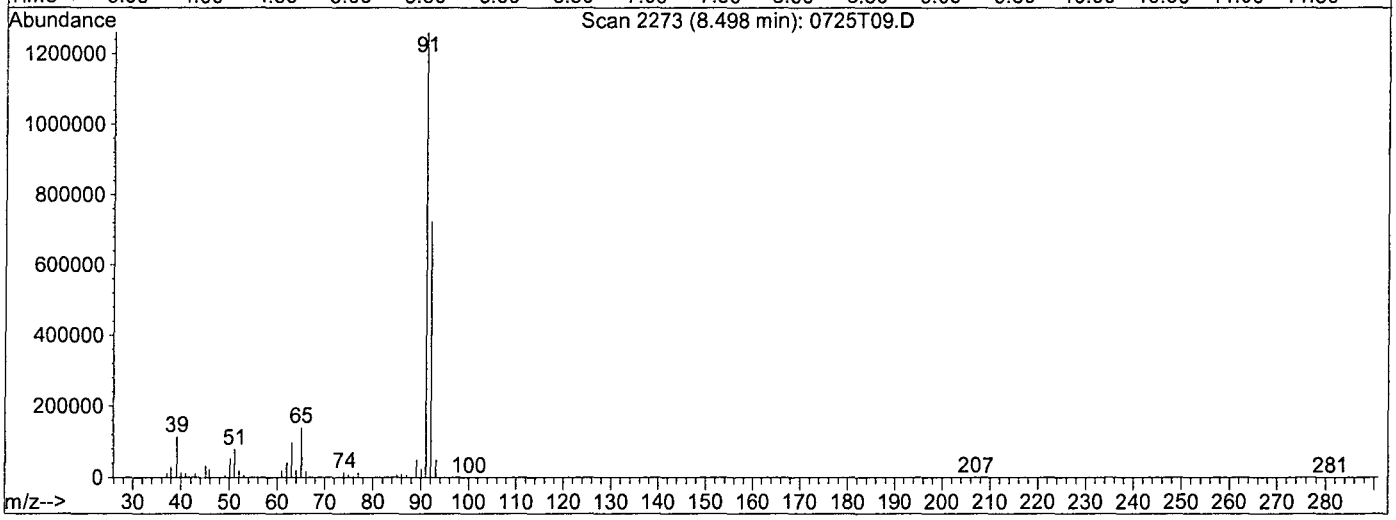


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T09.D

(2) Gasoline (TMHB)

8.50min 790.6203ppb m

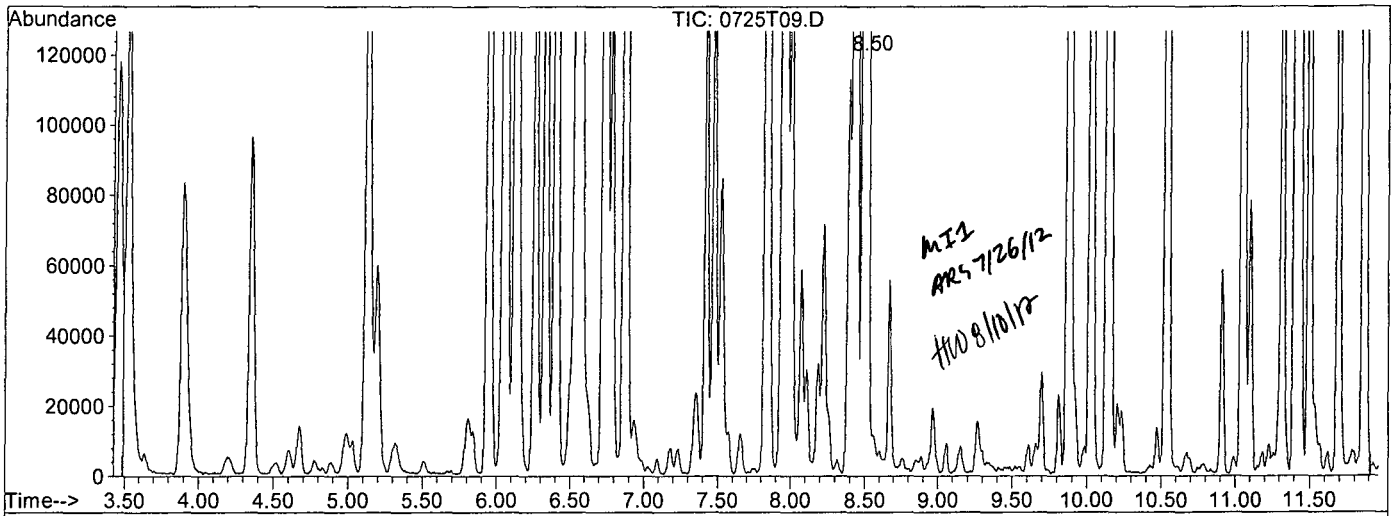
response 33364245

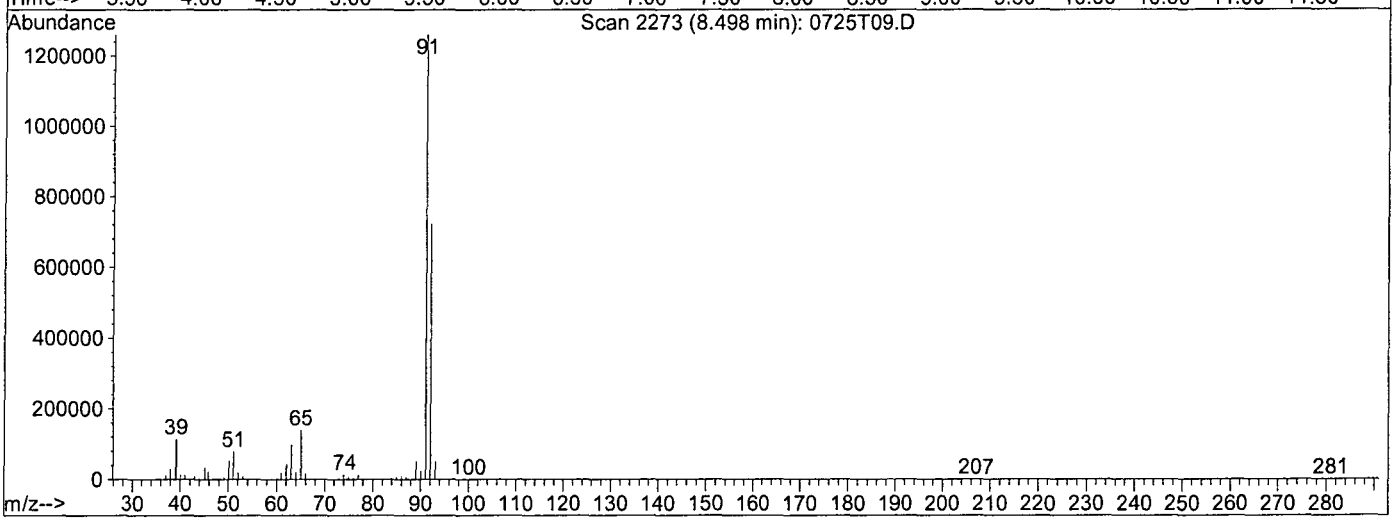
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.30#
0.00	1.40	0.86#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T09.D Vial: 8
Acq On : 25 Jul 12 13:08 Operator: DG,RS,HW,ARS,SV
Sample : 800ug/L Vol Std 07-25-15 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:55 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T09.D

(2) Gasoline (TMHB)

8.50min 955.9921ppb m

response 36946726

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.27#
0.00	1.40	0.77#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 25 16:00 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	808332	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	927489	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1069004	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	45050186m	1278.31907	ppb	100

(#) = qualifier out of range (m) = manual integration

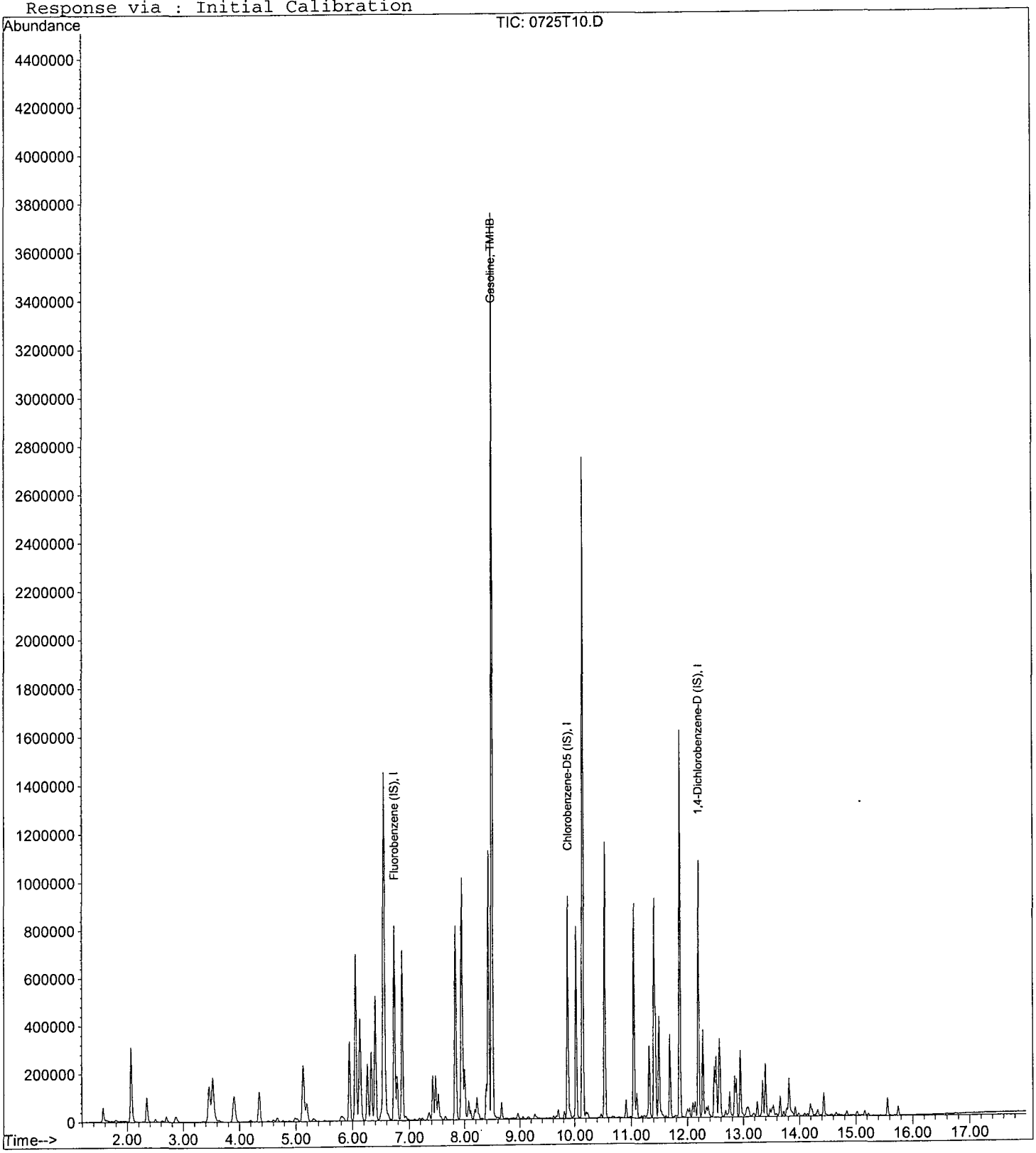
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D
Acq On : 25 Jul 12 13:36
Sample : 1000ug/L Vol Std 07-25-16
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 9
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 25 16:00 2012 Quant Results File: TGAS.RES

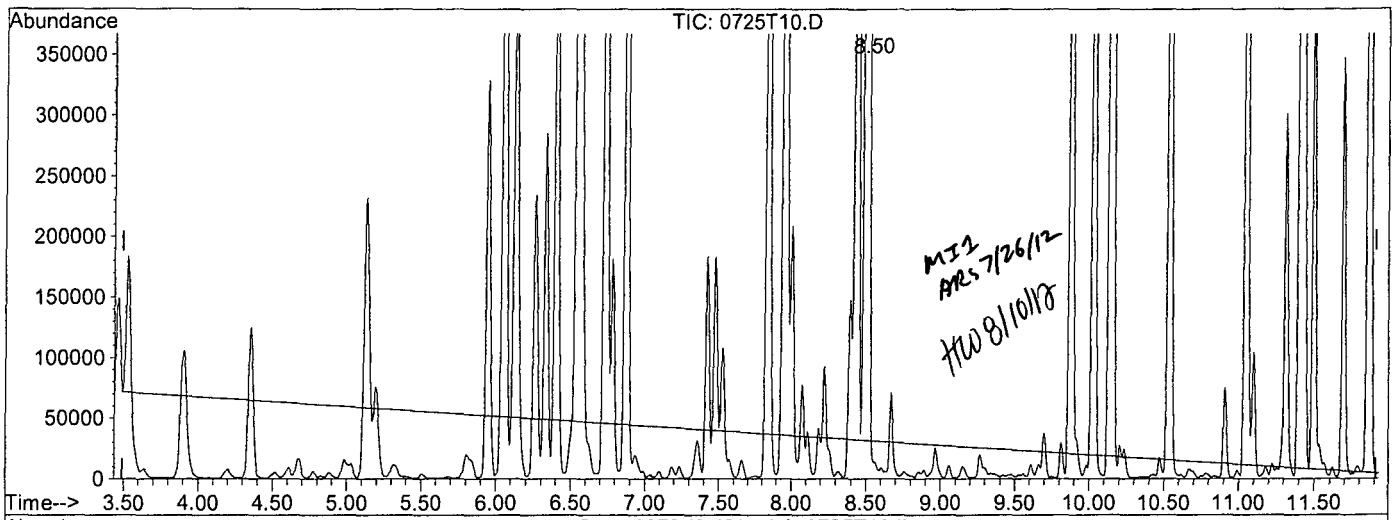
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

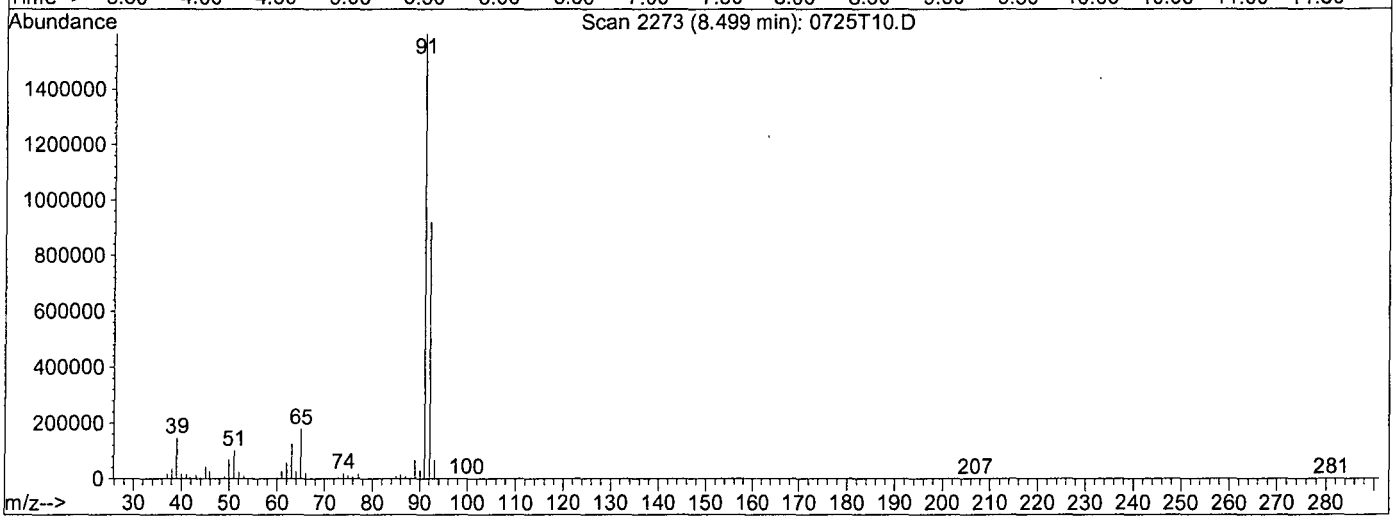


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 15:53 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





TIC: 0725T10.D

(2) Gasoline (TMHB)

8.50min 1108.4543ppb m

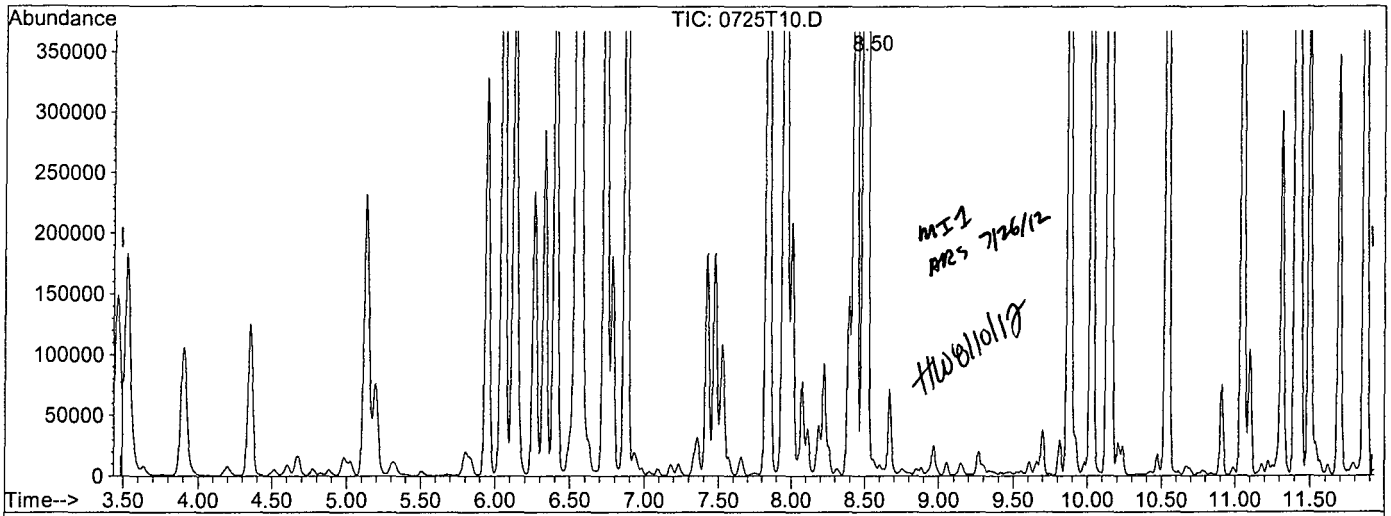
response 41276485

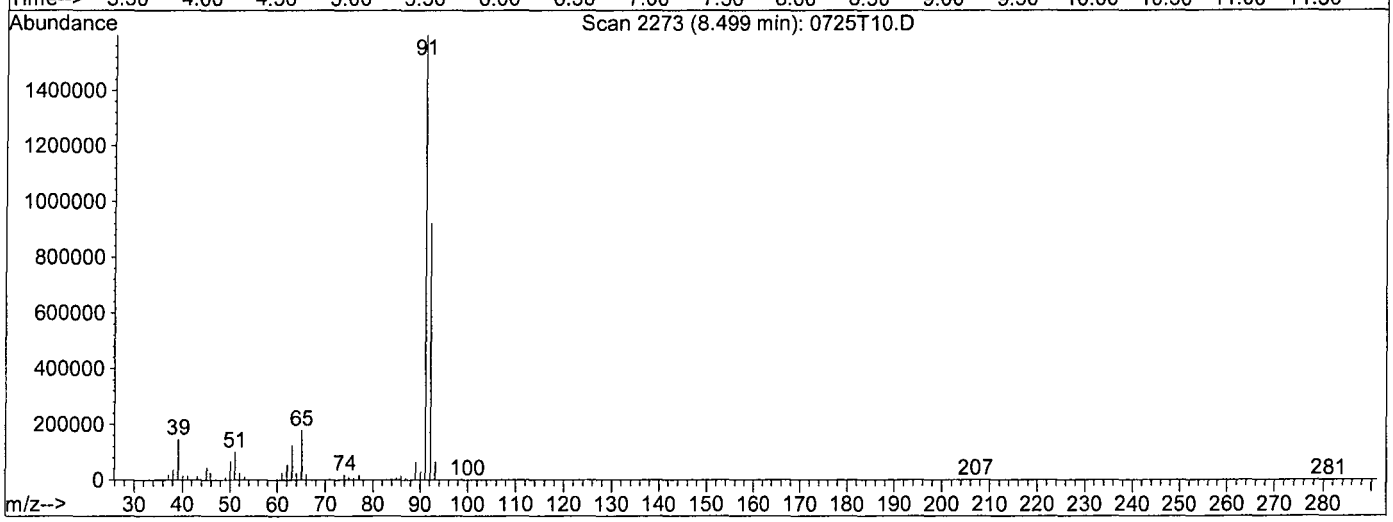
Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.25#
0.00	1.40	0.73#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T10.D Vial: 9
Acq On : 25 Jul 12 13:36 Operator: DG,RS,HW,ARS,SV
Sample : 1000ug/L Vol Std 07-25-16 Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 25 16:00 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 08:14:32 2012
Response via : Multiple Level Calibration





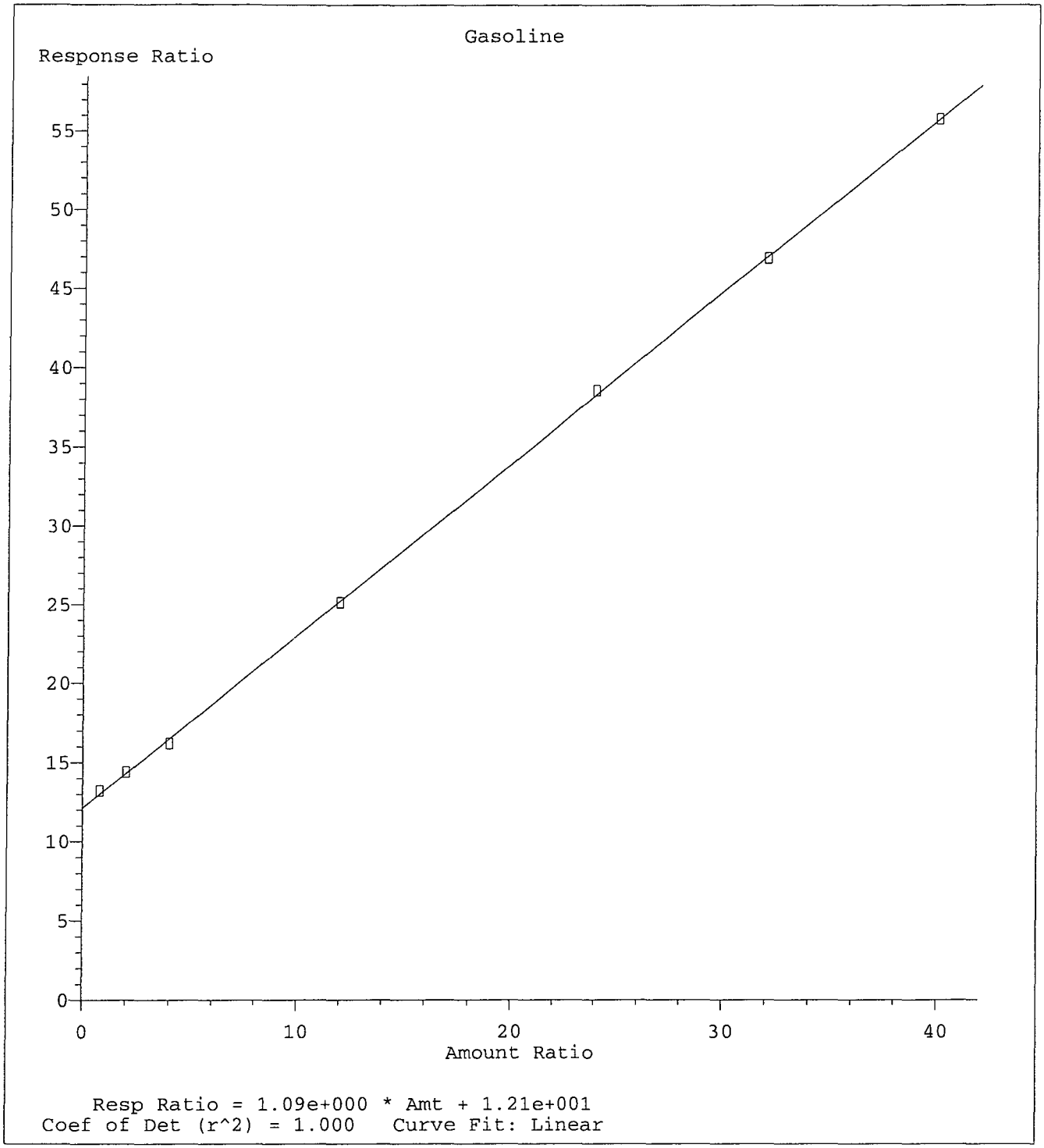
TIC: 0725T10.D

(2) Gasoline (TMHB)

8.50min 1278.3191ppb m

response 45050186

Ion	Exp%	Act%
TIC	100	100
0.00	0.50	0.23#
0.00	1.40	0.67#
0.00	0.00	0.00



Method Name: M:\THOR\DATA\T120725\TGAS.M
Calibration Table Last Updated: Wed Jul 25 16:07:29 2012

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Second Source Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68284 MPS 8/1/12
Date Analyzed: 07/25/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0725T15.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline	4.903	2.065	58	TMHBL	3.3
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
8							
9							
10							
11							
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30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 8:23 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	788179	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	879850	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1024196	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.50	TIC	19535277m	290.16403	ppb	100

(#) = qualifier out of range (m) = manual integration

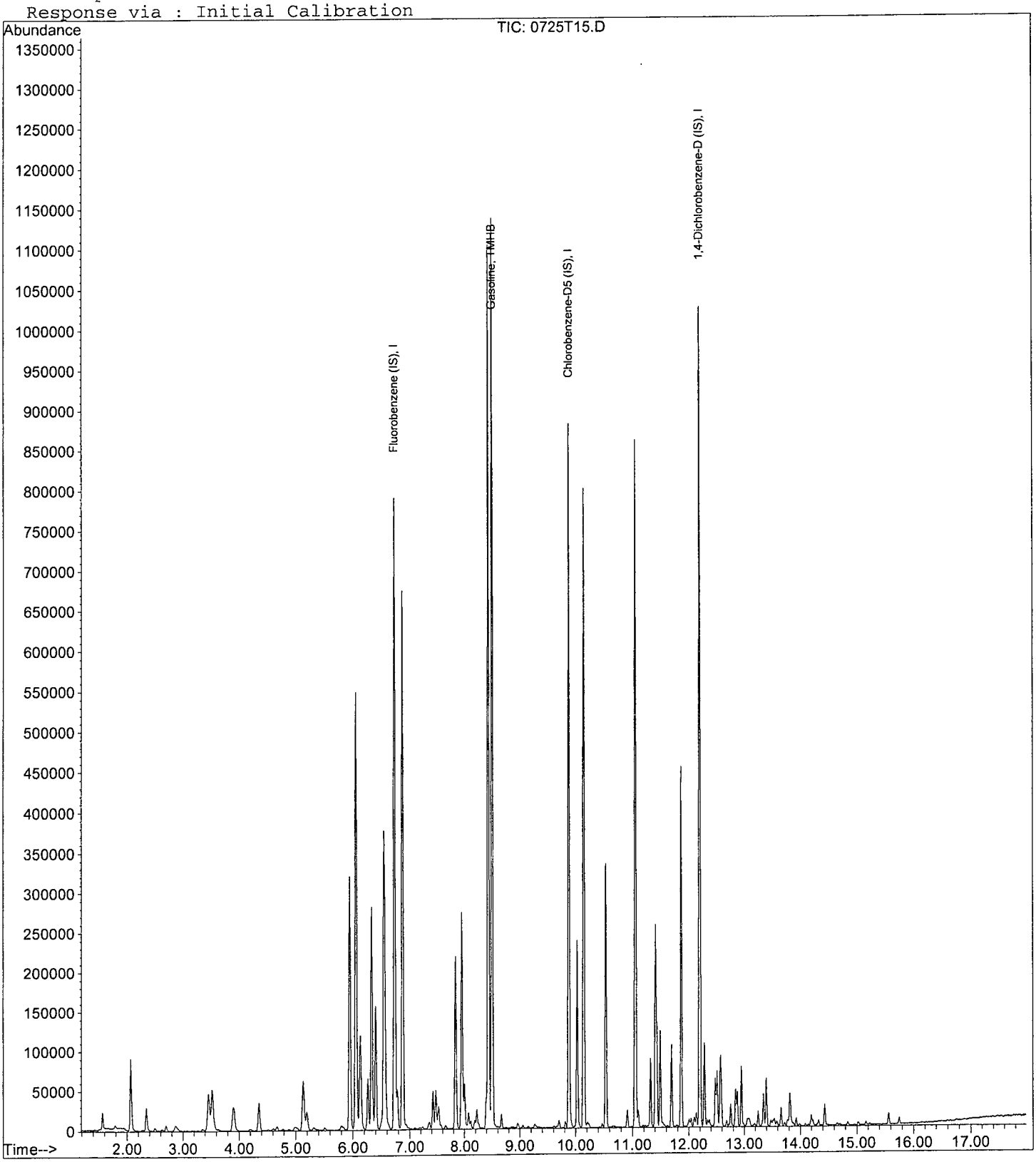
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D
Acq On : 25 Jul 12 15:55
Sample : LCS gas 300ug/L (SS)
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 14
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 8:23 2012 Quant Results File: TGAS.RES

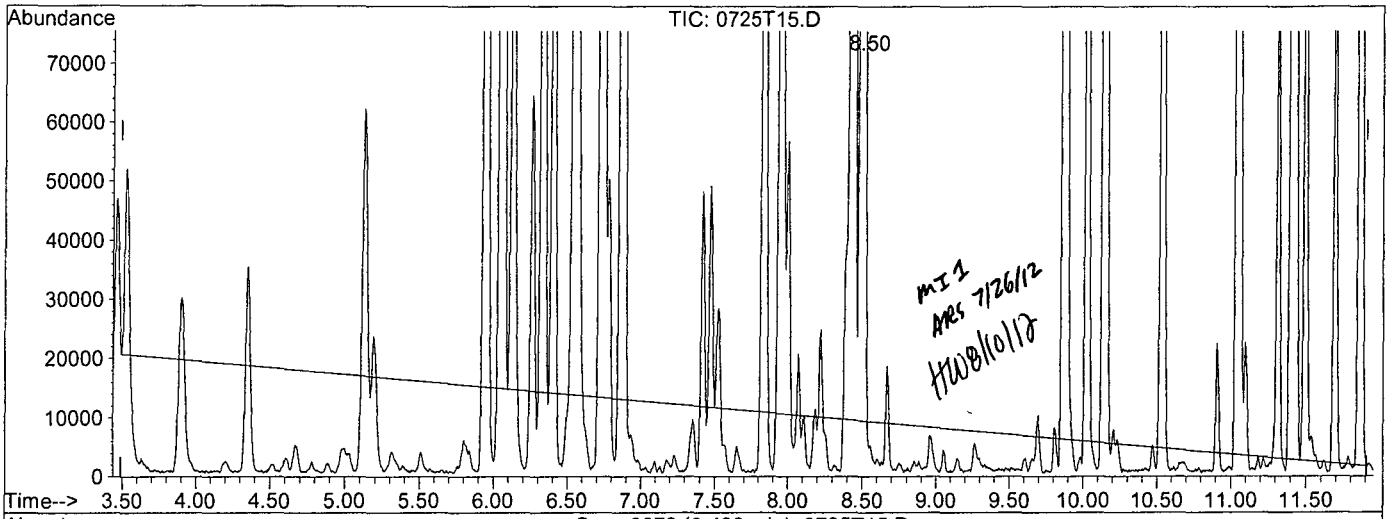
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

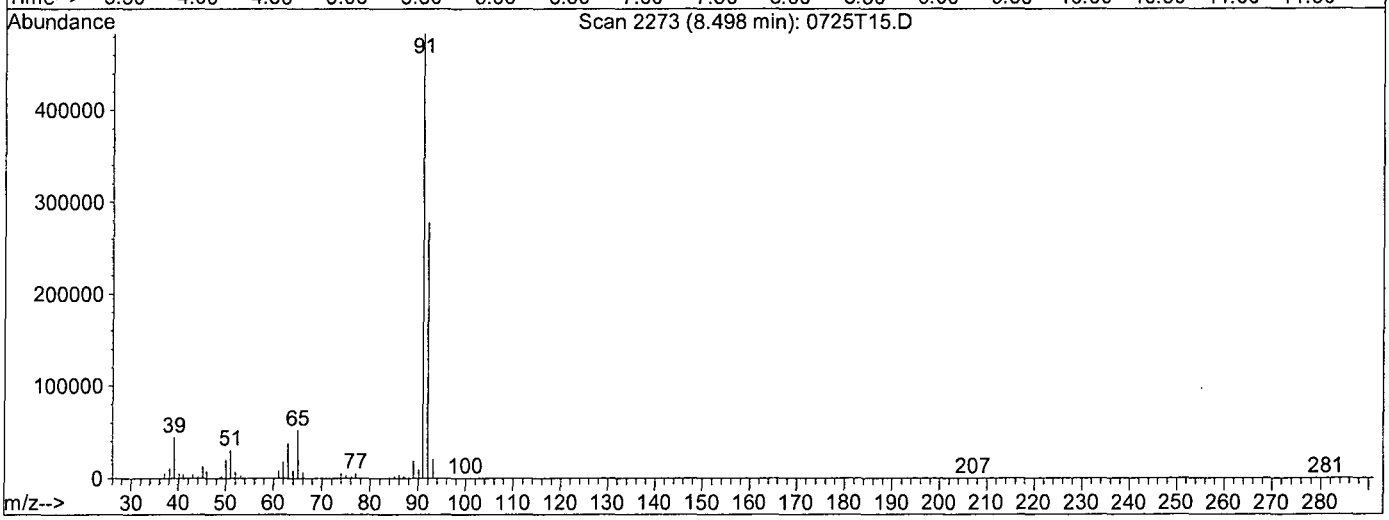


Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0725T15.D

(2) Gasoline (TMHB)

8.50min 216.4348ppb m

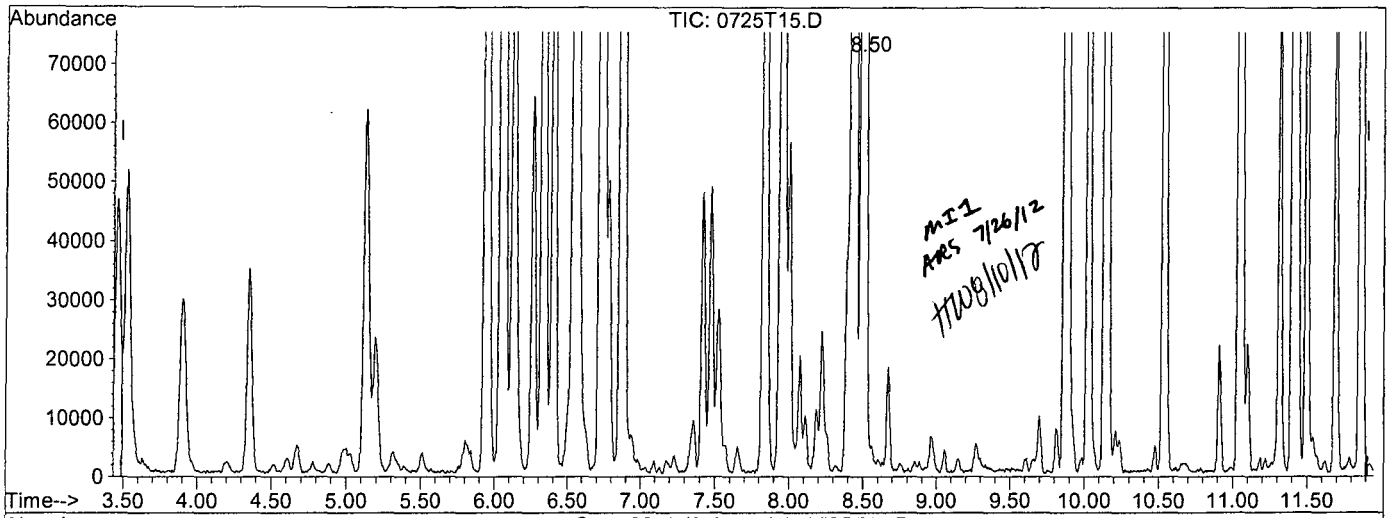
response 17002901

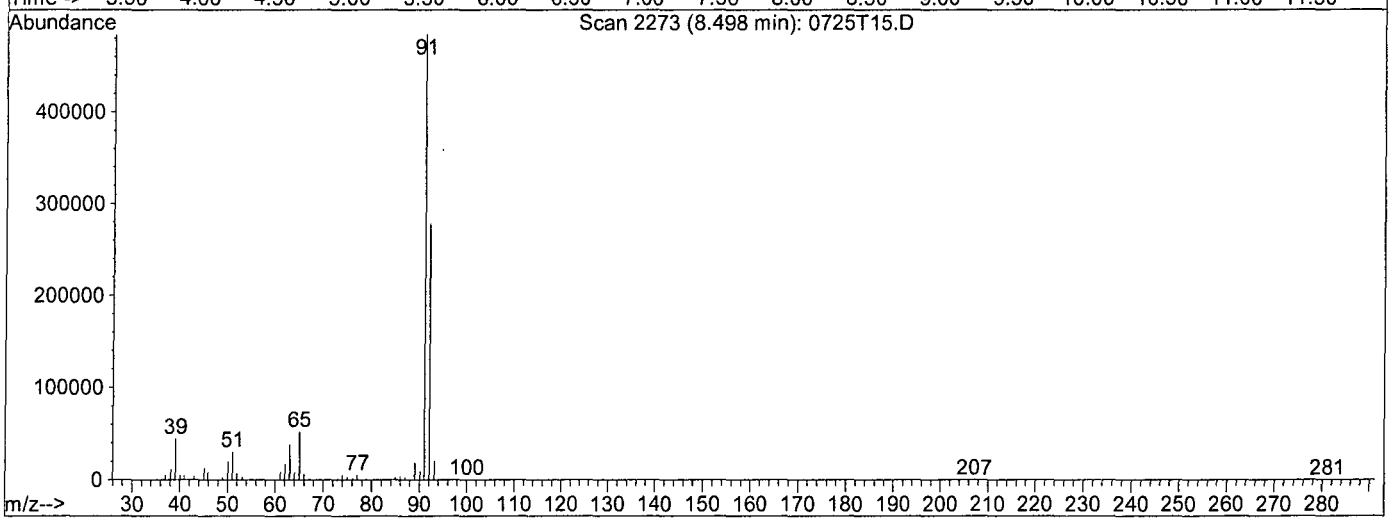
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.69#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T15.D Vial: 14
Acq On : 25 Jul 12 15:55 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L (SS) Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 8:23 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0725T15.D

(2) Gasoline (TMHB)

8.50min 290.1640ppb m

response 19535277

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.51#
0.00	0.00	1.47#
0.00	0.00	0.00

VOLATILE ORGANIC ANALYSIS BY
EPA METHOD 8260B

Form 7

Continuing Calibration

Lab Name: APPL, Inc.
Case No:
Matrix: Water

SDG No: 68284 MR 8/1/12
Date Analyzed: 07/26/12
Instrument: Thor
Initial Cal. Date: 07/25/12
Data File: 0726T06.D

		Compound	MEAN	CCRF	%D		%Drift
1	I	Fluorobenzene (IS)	ISTD			I	
2	TMHB	Gasoline	4.903	2.045	58	TMHBL	5.1
3	I	Chlorobenzene-D5 (IS)	ISTD			I	
4	I	1,4-Dichlorobenzene-D (IS)	ISTD			I	
5							
6							
7							
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33							
34							
35							
36							
37							
38							
39							
40							
		Average			58.0		

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T06.D Vial: 31
Acq On : 26 Jul 12 11:41 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 12:26 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	818998	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	915509	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1060496	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	20100949m	284.61101	ppb	100

(#) = qualifier out of range (m) = manual integration

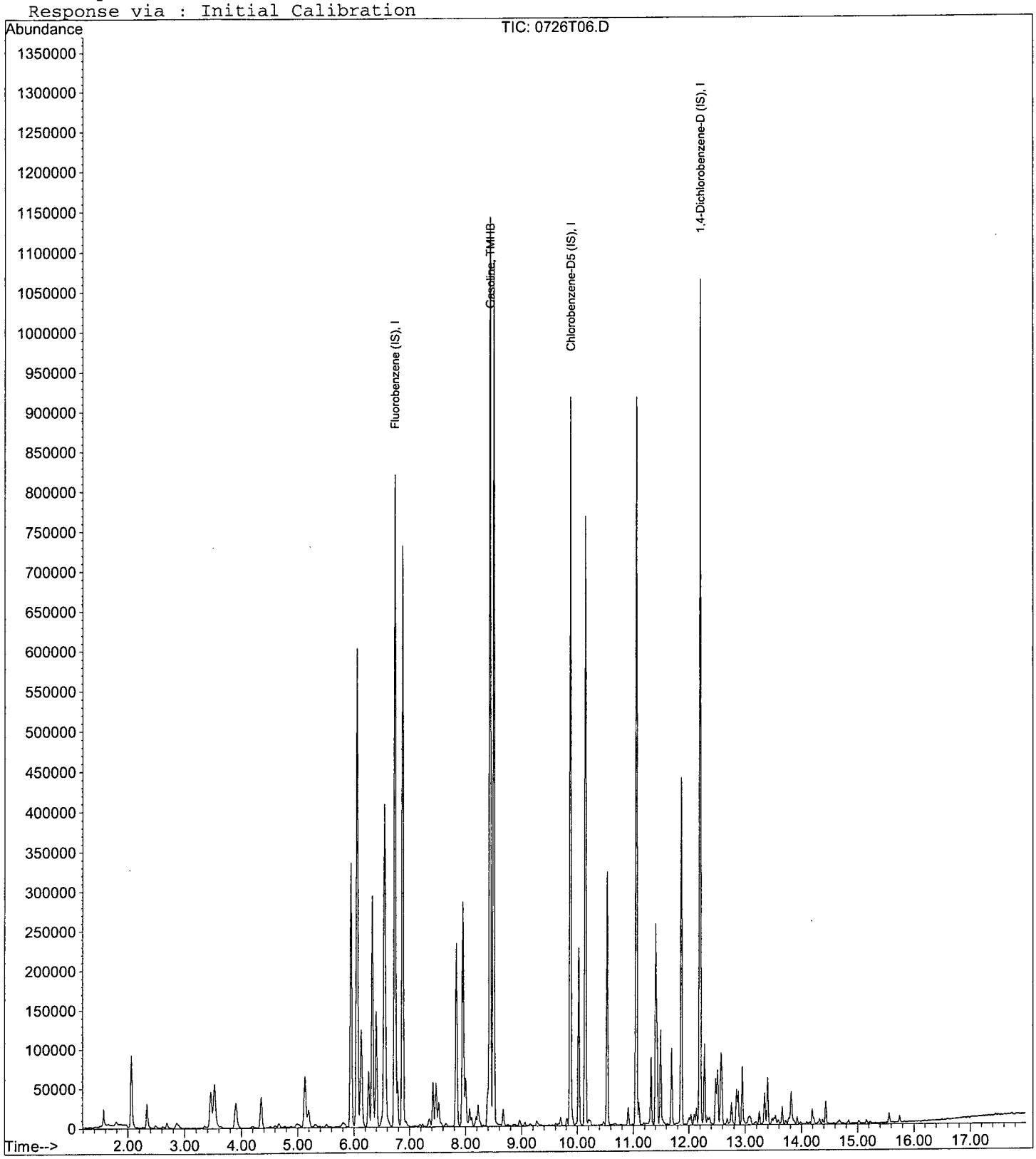
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T06.D
Acq On : 26 Jul 12 11:41
Sample : CCV gas 300ug/L
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 31
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 12:26 2012 Quant Results File: TGAS.RES

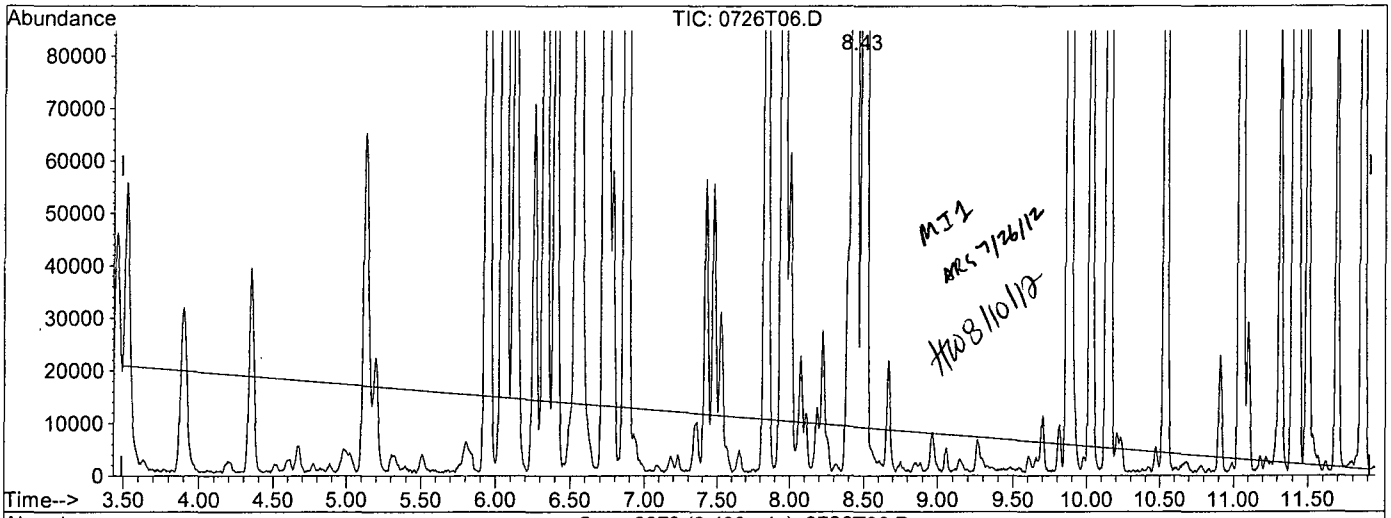
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

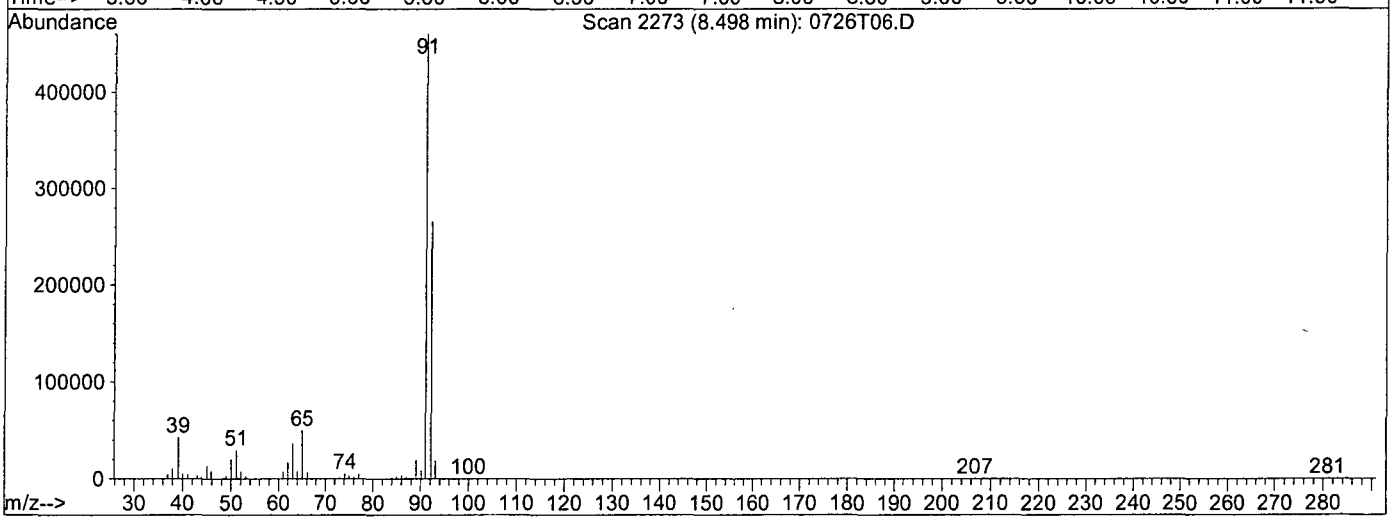


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T06.D Vial: 31
Acq On : 26 Jul 12 11:41 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 12:26 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T06.D

(2) Gasoline (TMHB)

8.50min 211.9534ppb m

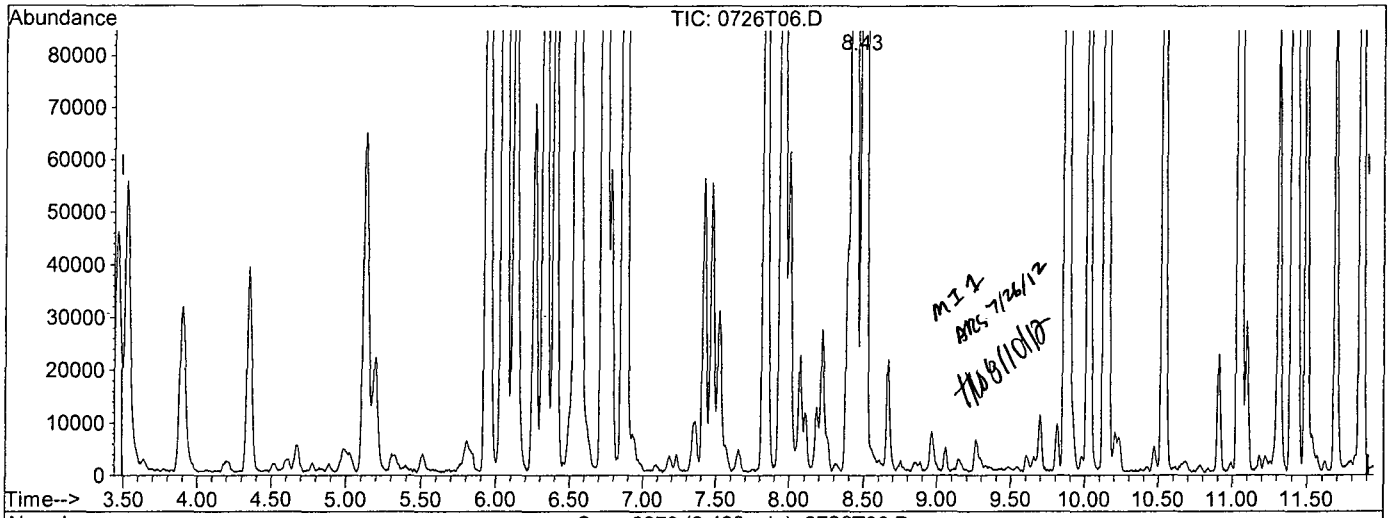
response 17507801

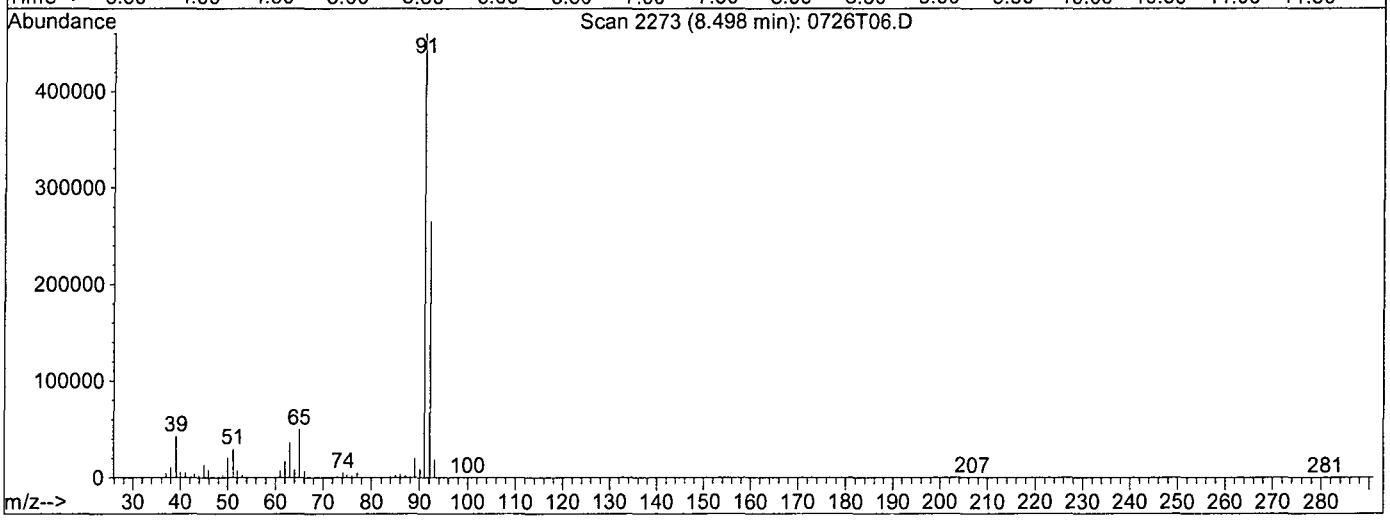
Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.72#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T06.D Vial: 31
Acq On : 26 Jul 12 11:41 Operator: DG,RS,HW,ARS,SV
Sample : CCV gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 12:26 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T06.D

(2) Gasoline (TMHB)

8.43min 284.6110ppb m

response 20100949

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.50#
0.00	0.00	1.50#
0.00	0.00	0.00

EPA METHOD 8260B
Volatile Organic Compounds
Raw Data

APPL, INC.

Method Blank
EPA 8260B VOCs + Gas Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	1,1,1,2-TETRACHLOROETHANE	0.26 U	1.0	0.26	0.13	ug/L	07/26/12	07/26/12
BLANK	1,1,1-TRICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,1,2,2-TETRACHLOROETHANE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	1,1,2-TRICHLOROETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	1,1-DICHLOROETHENE	0.60 U	1.0	0.60	0.30	ug/L	07/26/12	07/26/12
BLANK	1,2,3-TRICHLOROPROPANE	0.78 U	2.0	0.78	0.39	ug/L	07/26/12	07/26/12
BLANK	1,2,4-TRICHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMO-3-CHLOROPROPA	1.52 U	2.0	1.52	0.76	ug/L	07/26/12	07/26/12
BLANK	1,2-DIBROMOETHANE	0.40 U	1.0	0.40	0.20	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROBENZENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	1,2-DICHLOROPROPANE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROBENZENE	0.22 U	1.0	0.22	0.11	ug/L	07/26/12	07/26/12
BLANK	1,3-DICHLOROPROPENE, TOTAL	0.36 U	1.0	0.36	0.18	ug/L	07/26/12	07/26/12
BLANK	1,4-DICHLOROBENZENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	2-BUTANONE	1.20 U	10.0	1.20	0.60	ug/L	07/26/12	07/26/12
BLANK	4-METHYL-2-PENTANONE	3.80 U	10.0	3.80	1.90	ug/L	07/26/12	07/26/12
BLANK	ACETONE	1.90 U	10.0	1.90	0.95	ug/L	07/26/12	07/26/12
BLANK	BENZENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	BROMODICHLOROMETHANE	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOFORM	0.28 U	1.0	0.28	0.14	ug/L	07/26/12	07/26/12
BLANK	BROMOMETHANE	0.48 U	2.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	CARBON TETRACHLORIDE	0.20 U	1.0	0.20	0.10	ug/L	07/26/12	07/26/12
BLANK	CHLOROBENZENE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLORODIBROMOMETHANE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	CHLOROETHANE	0.42 U	1.0	0.42	0.21	ug/L	07/26/12	07/26/12
BLANK	CHLOROFORM	0.14 U	1.0	0.14	0.07	ug/L	07/26/12	07/26/12
BLANK	CHLOROMETHANE	0.84 U	1.0	0.84	0.42	ug/L	07/26/12	07/26/12
BLANK	CIS-1,2-DICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	ETHYLBENZENE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	GASOLINE	12.12 U	20.0	12.12	6.06	ug/L	07/26/12	07/26/12
BLANK	HEXACHLOROBUTADIENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	METHYL TERT-BUTYL ETHER	0.52 U	1.0	0.52	0.26	ug/L	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 10:06:16 AM
GC SC-Blank-REG MDLs

Method Blank
EPA 8260B VOCs + Gas Water

APPL Inc.
908 North Temperance Avenu
Clovis, CA 93611

Blank Name/QCG: **120726W-65167 - 169444**
Batch ID: #86RHB-120726AT

Sample Type	Analyte	Result	LOQ	LOD	DL	Units	Extraction Date	Analysis Date
BLANK	METHYLENE CHLORIDE	0.70 U	5.0	0.70	0.35	ug/L	07/26/12	07/26/12
BLANK	STYRENE	0.50 U	1.0	0.50	0.25	ug/L	07/26/12	07/26/12
BLANK	TETRACHLOROETHENE	0.48 U	1.0	0.48	0.24	ug/L	07/26/12	07/26/12
BLANK	TOLUENE	0.34 U	1.0	0.34	0.17	ug/L	07/26/12	07/26/12
BLANK	TRANS-1,2-DICHLOROETHENE	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	TRICHLOROETHENE	0.32 U	1.0	0.32	0.16	ug/L	07/26/12	07/26/12
BLANK	VINYL CHLORIDE	0.46 U	1.0	0.46	0.23	ug/L	07/26/12	07/26/12
BLANK	XYLENES (TOTAL)	0.38 U	1.0	0.38	0.19	ug/L	07/26/12	07/26/12
BLANK	SURROGATE: 1,2-DICHLOROET	102	70-120			%	07/26/12	07/26/12
BLANK	SURROGATE: 4-BROMOFLUORO	101	75-120			%	07/26/12	07/26/12
BLANK	SURROGATE: DIBROMOFLUOR	102	85-115			%	07/26/12	07/26/12
BLANK	SURROGATE: TOLUENE-D8 (S)	101	85-120			%	07/26/12	07/26/12

Quant Method: TALLW.M
Run #: 0726T11
Instrument: Thor
Sequence: T120725
Initials: ARS

Printed: 07/31/12 10:06:16 AM
GC SC-Blank-REG MDLs

Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
Acq On : 26 Jul 12 14:00 Operator: DG,RS,HW,ARS,SV
Sample : 120726A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:30 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	96	393664	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	315392	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	183424	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	201268	32.67167 ppb	0.00
Spiked Amount 31.881			Recovery = 102.480%		
36) 1,2-DCA-D4(S)	6.33	65	195966	34.22939 ppb	0.00
Spiked Amount 33.647			Recovery = 101.731%		
56) Toluene-D8(S)	8.43	98	700663	37.57779 ppb	0.00
Spiked Amount 37.345			Recovery = 100.624%		
64) 4-Bromofluorobenzene(S)	11.05	95	263252	29.85450 ppb	0.00
Spiked Amount 29.515			Recovery = 101.148%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration

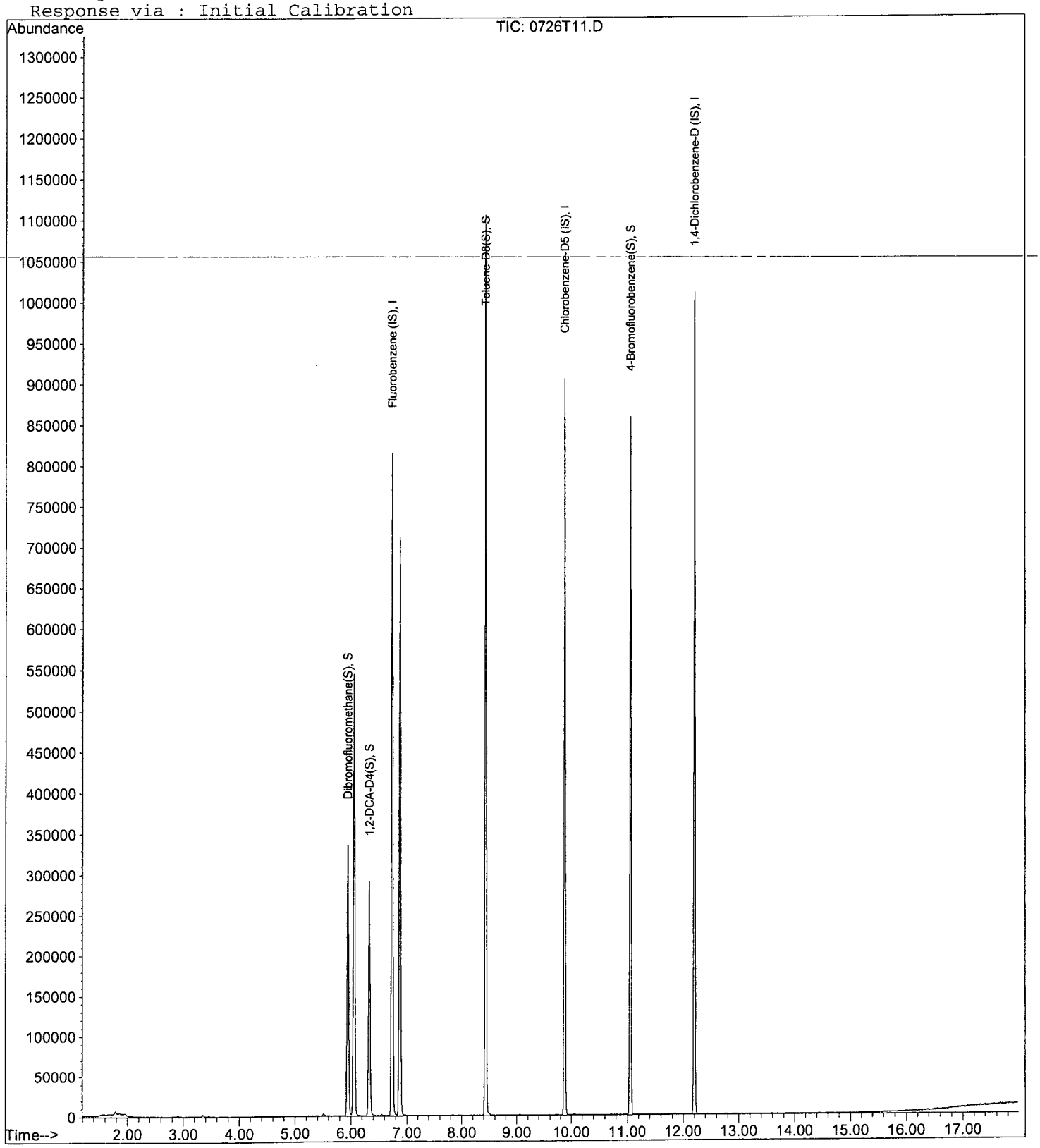
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D
Acq On : 26 Jul 12 14:00
Sample : 120726A BLK-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 36
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:30 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
Acq On : 26 Jul 12 14:00 Operator: DG,RS,HW,ARS,SV
Sample : 120726A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 14:19 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	TIC	814291	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.88	TIC	903930	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1008826	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	9968031m	2.31058	ppb	ND 100

No gasoline pattern detected.
ARS 7/26/12

(#) = qualifier out of range (m) = manual integration

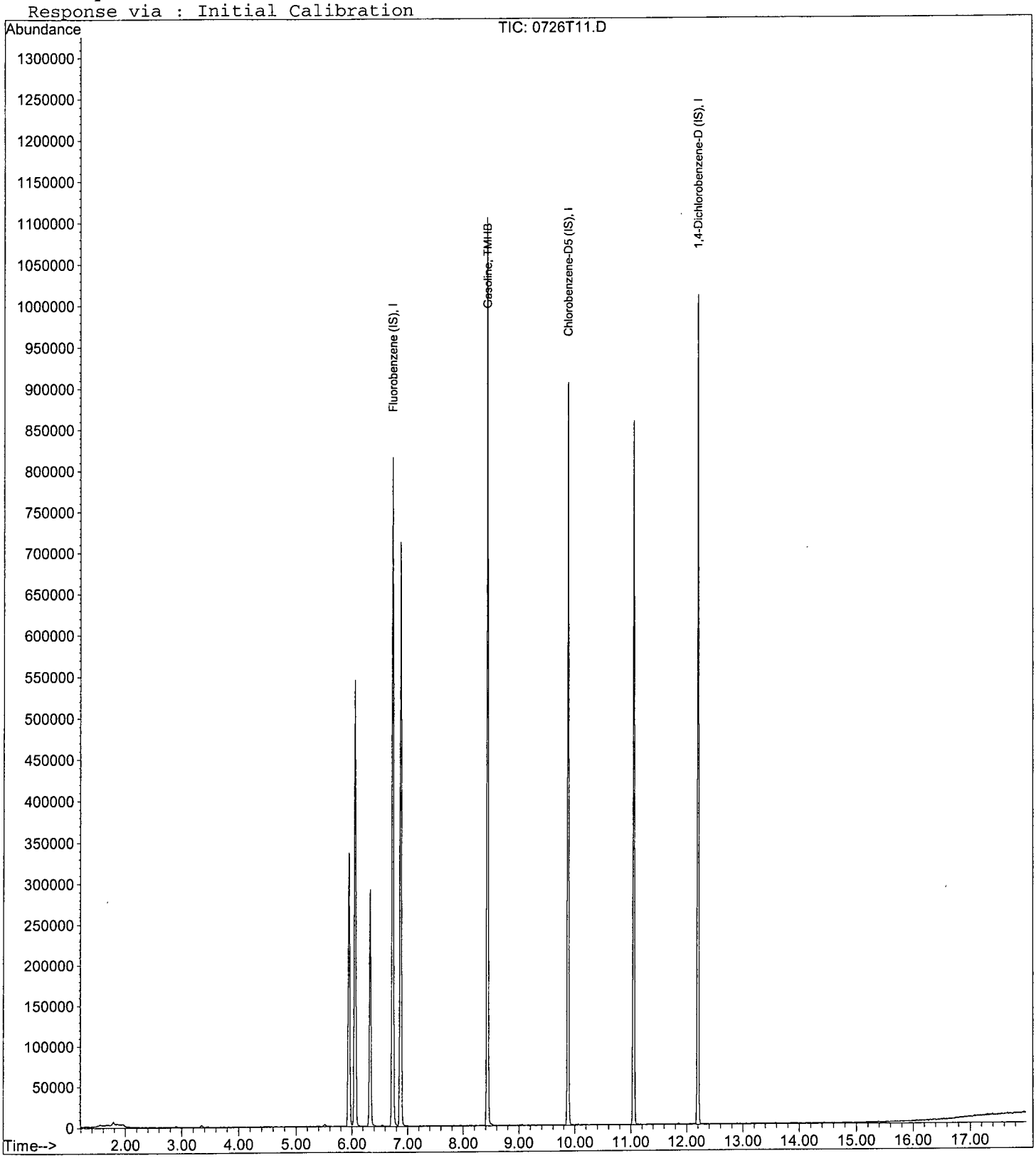
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D
Acq On : 26 Jul 12 14:00
Sample : 120726A BLK-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 36
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 14:19 2012 Quant Results File: TGAS.RES

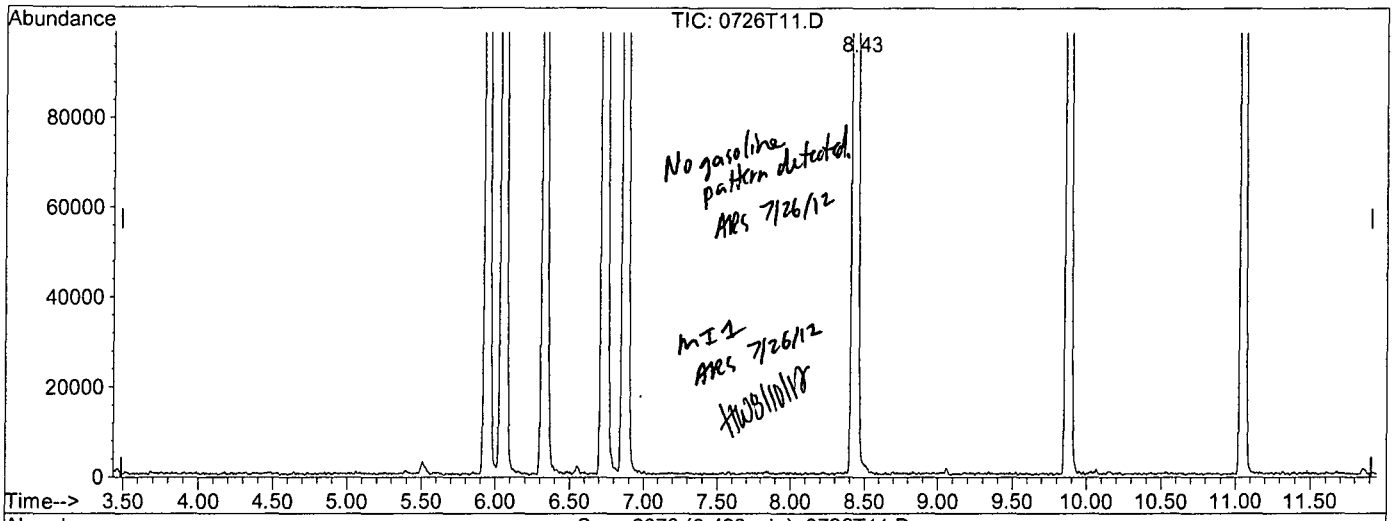
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

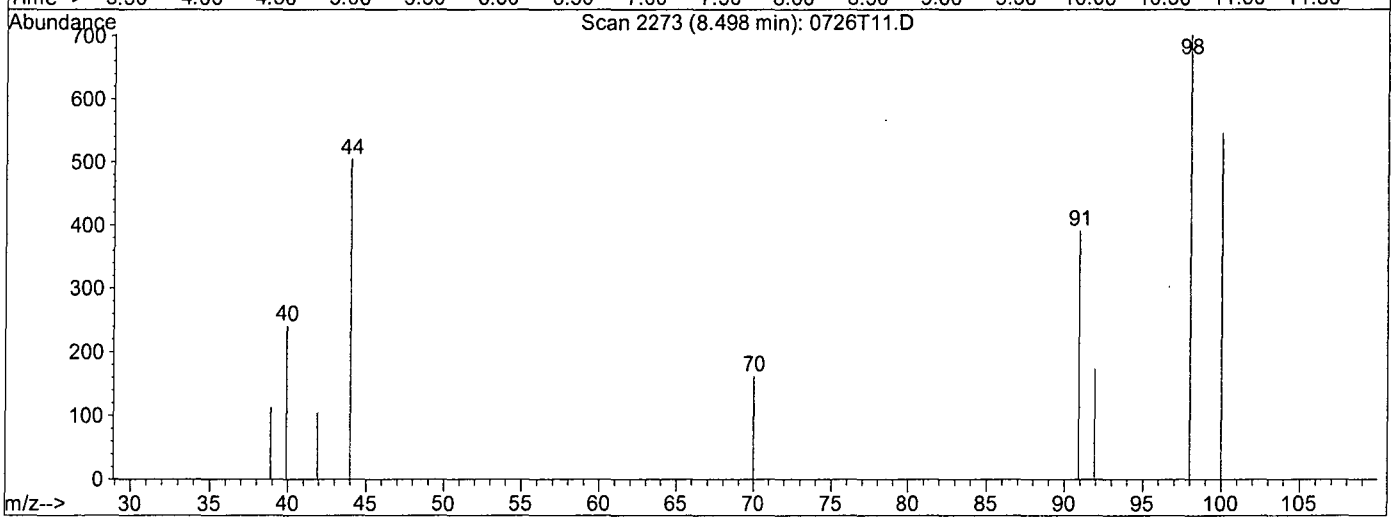


Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
Acq On : 26 Jul 12 14:00 Operator: DG,RS,HW,ARS,SV
Sample : 120726A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 14:19 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration





TIC: 0726T11.D

(2) Gasoline (TMHB)

8.43min 2.3106ppb m

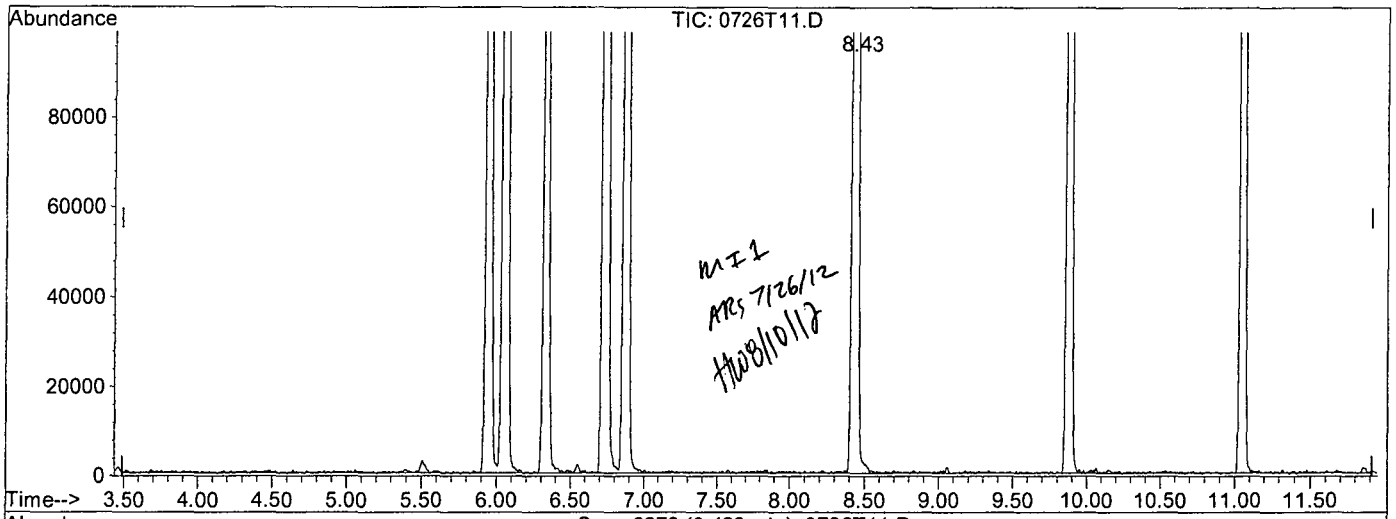
response 9968031

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.99#
0.00	0.00	2.83#
0.00	0.00	0.00

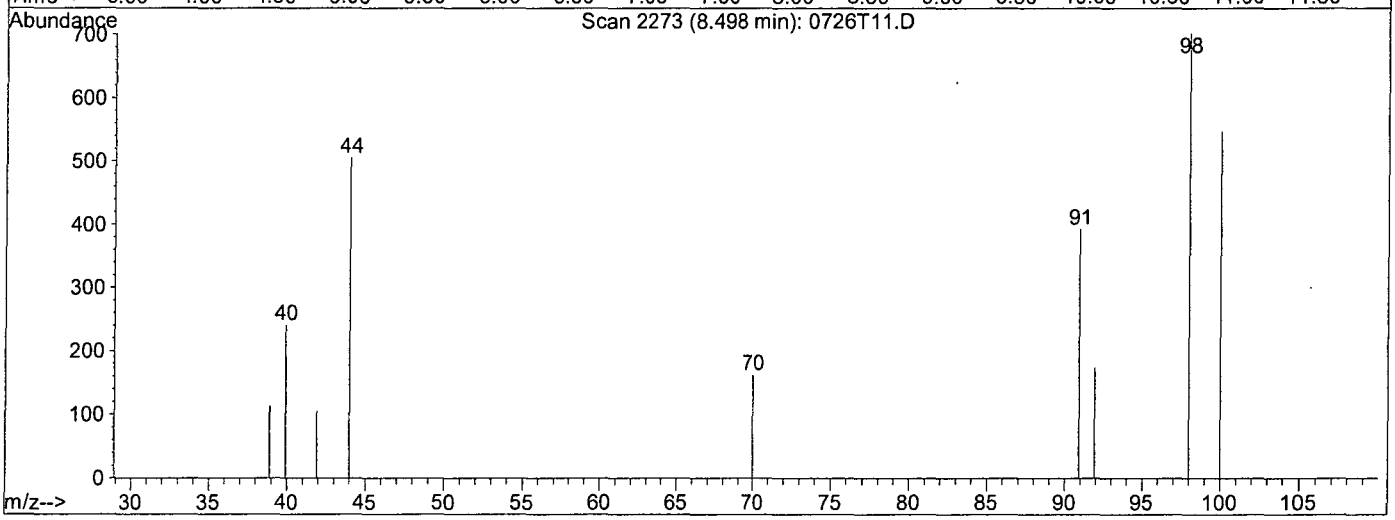
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T11.D Vial: 36
Acq On : 26 Jul 12 14:00 Operator: DG,RS,HW,ARS,SV
Sample : 120726A BLK-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 14:19 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration



MI 1
ARS 7/26/12
HW 8/10/12



TIC: 0726T11.D

(2) Gasoline (TMHB)

8.50min -59.4294ppb m

response 7777196

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	1.26#
0.00	0.00	3.63#
0.00	0.00	0.00

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 LCS - 169444**
Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
1,1,1,2-TETRACHLOROETHANE	10.00	10.3	103	80-130
1,1,1-TRICHLOROETHANE	10.00	9.87	98.7	65-130
1,1,2,2-TETRACHLOROETHANE	10.00	9.84	98.4	65-130
1,1,2-TRICHLOROETHANE	10.00	9.86	98.6	75-125
1,1-DICHLOROETHANE	10.00	10.4	104	70-135
1,1-DICHLOROETHENE	10.00	9.96	99.6	70-130
1,2,3-TRICHLOROPROPANE	10.00	10.3	103	75-125
1,2,4-TRICHLOROBENZENE	10.00	10.4	104	65-135
1,2-DIBROMO-3-CHLOROPROPANE	10.00	10.8	108	50-130
1,2-DIBROMOETHANE	10.00	9.82	98.2	70-130
1,2-DICHLOROBENZENE	10.00	9.95	99.5	70-120
1,2-DICHLOROETHANE	10.00	9.83	98.3	70-130
1,2-DICHLOROPROPANE	10.00	10.0	100	75-125
1,3-DICHLOROBENZENE	10.00	10.2	102	75-125
1,3-DICHLOROPROPENE, TOTAL	20.0	20.3	102	70-130
1,4-DICHLOROBENZENE	10.00	9.71	97.1	75-125
2-BUTANONE	10.00	9.66	96.6	30-150
4-METHYL-2-PENTANONE	10.00	9.27	92.7	60-135
ACETONE	10.00	10.9	109	40-140
BENZENE	10.00	9.55	95.5	80-120
BROMODICHLOROMETHANE	10.00	10.1	101	75-120
BROMOFORM	10.00	10.2	102	70-130
BROMOMETHANE	10.00	9.13	91.3	30-145
CARBON TETRACHLORIDE	10.00	10.3	103	65-140
CHLOROBENZENE	10.00	10.1	101	80-120
CHLORODIBROMOMETHANE	10.00	10.2	102	60-135
CHLOROETHANE	10.00	9.65	96.5	60-135
CHLOROFORM	10.00	9.96	99.6	65-135
CHLOROMETHANE	10.00	8.45	84.5	40-125
CIS-1,2-DICHLOROETHENE	10.00	10.3	103	70-125
ETHYLBENZENE	10.00	10.3	103	75-125

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Comments: _____

Printed: 07/31/12 10:06:05 AM

APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8260B VOCs + Gas Water

APPL ID: **120726W-65167 LCS - 169444**
Batch ID: #86RHB-120726AT

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
GASOLINE	300	285	95.0	75-125
HEXACHLOROBUTADIENE	10.00	10.4	104	50-140
METHYL TERT-BUTYL ETHER	10.00	9.83	98.3	65-125
METHYLENE CHLORIDE	10.00	9.48	94.8	55-140
STYRENE	10.00	10.6	106	65-135
TETRACHLOROETHENE	10.00	10.3	103	45-150
TOLUENE	10.00	10.2	102	75-120
TRANS-1,2-DICHLOROETHENE	10.00	9.17	91.7	60-140
TRICHLOROETHENE	10.00	9.73	97.3	70-125
VINYL CHLORIDE	10.00	9.58	95.8	50-145
XYLENES (TOTAL)	30.0	31.5	105	80-120
SURROGATE: 1,2-DICHLOROETHANE-D	33.6	34.2	102	70-120
SURROGATE: 4-BROMOFLUOROBENZE	29.5	30.7	104	75-120
SURROGATE: DIBROMOFLUOROMETH	31.9	32.5	102	85-115
SURROGATE: TOLUENE-D8 (S)	37.3	37.2	99.6	85-120

Comments: _____

Primary	SPK
Quant Method :	TALLW.M
Extraction Date :	07/26/12
Analysis Date :	07/26/12
Instrument :	Thor
Run :	0726T05
Initials :	ARS

Printed: 07/31/12 10:06:05 AM
APPL Standard LCS

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T05.D Vial: 30
Acq On : 26 Jul 12 11:13 Operator: DG,RS,HW,ARS,SV
Sample : 120726A LCS-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:38 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorobenzene (IS)	6.73	96	396608	25.00000 ppb	0.00
55) Chlorobenzene-D5 (IS)	9.88	117	324736	25.00000 ppb	0.00
70) 1,4-Dichlorobenzene-D (IS)	12.20	152	196096	25.00000 ppb	0.00
System Monitoring Compounds					
31) Dibromofluoromethane(S)	5.95	111	201500	32.46653 ppb	0.00
Spiked Amount 31.881			Recovery = 101.837%		
36) 1,2-DCA-D4 (S)	6.33	65	197251	34.19809 ppb	0.00
Spiked Amount 33.647			Recovery = 101.638%		
56) Toluene-D8(S)	8.43	98	713358	37.15779 ppb	0.00
Spiked Amount 37.345			Recovery = 99.500%		
64) 4-Bromofluorobenzene(S)	11.05	95	278834	30.71171 ppb	0.00
Spiked Amount 29.515			Recovery = 104.055%		
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.30	85	20992	10.44922 ppb	98
3) Freon 114	1.42	85	29813	10.74395 ppb	91
4) Chloromethane	1.45	50	42561	8.45484 ppb	94
5) Vinyl chloride	1.56	62	75106	9.58161 ppb	97
6) Bromomethane	1.87	94	45745	9.13053 ppb	99
7) Chloroethane	1.97	64	43557	9.64787 ppb	94
8) Dichlorofluoromethane	2.18	67	2861	9.58768 ppb	100
9) Trichlorofluoromethane	2.24	101	20255	12.50160 ppb	97
11) Acetone	2.89	43	15637	10.93946 ppb	97
12) Freon-113	2.85	101	35154	10.78714 ppb	98
13) 1,1-DCE	2.82	61	43546	9.95723 ppb	97
14) t-Butanol	3.69	59	16195	125.92197 ppb	99
15) Methyl Acetate	3.34	43	38826	10.17983 ppb	94
16) Iodomethane	2.98	142	38038	9.61617 ppb	96
17) Acrylonitrile	3.81	52	12741	10.17176 ppb	95
18) Methylene chloride	3.46	84	15078	9.47745 ppb	94
19) Carbon disulfide	3.06	76	3982	8.81686 ppb	92
20) Methyl t-butyl ether (MtBE	3.90	73	83011	9.83127 ppb	96
21) Trans-1,2-DCE	3.87	96	27662	9.16525 ppb	97
22) Diisopropyl Ether	4.70	59	19437	10.27894 ppb	96
23) 1,1-DCA	4.51	63	83500	10.43344 ppb	98
24) Vinyl Acetate	4.70	87	45054	9.96711 ppb	98
25) Ethyl tert Butyl Ether	5.21	59	106002	10.04146 ppb	100
26) MEK (2-Butanone)	5.38	43	18731	9.65961 ppb	99
27) Cis-1,2-DCE	5.32	96	52681	10.27571 ppb	93
28) 2,2-Dichloropropane	5.32	77	35907	11.13733 ppb	98
29) Chloroform	5.75	83	98981	9.95947 ppb	100
30) Bromochloromethane	5.62	128	25422	10.18441 ppb	99
32) 1,1,1-TCA	5.96	97	59014	9.86878 ppb	89
33) Cyclohexane	6.03	41	15888	9.79014 ppb	97
34) 1,1-Dichloropropene	6.17	75	43617	10.04365 ppb	97
35) 2,2,4-Trimethylpentane	6.55	57	64733	10.37139 ppb	98
37) Carbon Tetrachloride	6.16	117	57597	10.27670 ppb	88
38) Tert Amyl Methyl Ether	6.59	73	110559	9.83974 ppb	98
39) 1,2-DCA	6.42	62	64059	9.82891 ppb	100
40) Benzene	6.40	78	170080	9.55468 ppb	98
41) TCE	7.14	95	47064	9.72719 ppb	96
42) 2-Pentanone	7.36	43	461551	121.08490 ppb	99
43) 1,2-Dichloropropane	7.37	63	58310	10.03940 ppb	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : M:\THOR\DATA\T120725\0726T05.D Vial: 30
Acq On : 26 Jul 12 11:13 Operator: DG,RS,HW,ARS,SV
Sample : 120726A LCS-1WT Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 11:38 2012 Quant Results File: TALLW.RES

Quant Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue	
44)	Bromodichloromethane	7.68	83	81334	10.12262	ppb	99	
45)	Methyl Cyclohexane	7.36	83	33318	9.64466	ppb	91	
46)	Dibromomethane	7.49	93	31381	9.93266	ppb	95	
47)	2-Chloroethyl vinyl ether	7.99	106	1117	10.08733	ppb	100	
48)	MIBK (methyl isobutyl ket	8.33	43	25400	9.26551	ppb	93	
49)	1-Bromo-2-chloroethane	7.99	63	40824	10.10226	ppb	99	
50)	Cis-1,3-Dichloropropene	8.15	75	81069	10.19591	ppb	99	1,3-dichloropropene,total: 20.27567 ppb
51)	Toluene	8.50	91	213596	10.17008	ppb	99	
52)	Trans-1,3-Dichloropropene	8.72	75	70666	10.07976	ppb	98	
53)	1,1,2-TCA	8.90	83	46088	9.85586	ppb	98	ARS 7/27/12
54)	2-Hexanone	9.17	43	29609	9.41878	ppb	98	
57)	1,2-EDB	9.40	107	47825	9.82265	ppb	96	
58)	Tetrachloroethene	9.06	166	56570	10.27565	ppb	95	
59)	1-Chlorohexane	9.90	91	66229	10.10676	ppb	97	
60)	1,1,1,2-Tetrachloroethane	9.99	131	66238	10.29855	ppb	96	
61)	m&p-Xylene	10.14	106	209855	20.91575	ppb	100	
62)	o-Xylene	10.54	106	110351	10.63203	ppb	100	
63)	Styrene	10.55	104	186966	10.60207	ppb	99	
65)	1,3-Dichloropropane	9.07	76	85563	10.02307	ppb	99	
66)	Dibromochloromethane	9.29	129	65520	10.19444	ppb	95	
67)	Chlorobenzene	9.90	112	168953	10.06356	ppb	97	
68)	Ethylbenzene	10.03	91	270842	10.25986	ppb	99	
69)	Bromoform	10.71	173	44921	10.20780	ppb	100	
71)	Isopropylbenzene	10.91	105	264298	10.30803	ppb	99	
72)	1,1,2,2-Tetrachloroethane	11.19	83	70013	9.84064	ppb	98	
73)	1,2,3-Trichloropropane	11.23	110	20752	10.27676	ppb	91	
74)	t-1,4-Dichloro-2-Butene	11.25	53	15291	11.31489	ppb	100	
75)	Bromobenzene	11.19	156	84258	9.96856	ppb	97	
76)	n-Propylbenzene	11.32	91	341856	10.35542	ppb	98	
77)	4-Ethyltoluene	11.43	105	298803	10.53985	ppb	100	
78)	2-Chlorotoluene	11.39	91	238556	10.13378	ppb	99	
79)	1,3,5-Trimethylbenzene	11.50	105	244626	10.40926	ppb	97	
80)	4-Chlorotoluene	11.50	91	242452	10.40511	ppb	100	
81)	Tert-Butylbenzene	11.82	119	218794	10.16271	ppb	100	
82)	1,2,4-Trimethylbenzene	11.86	105	249589	10.26353	ppb	100	
83)	Sec-Butylbenzene	12.04	105	304284	10.58641	ppb	100	
84)	p-Isopropyltoluene	12.19	119	253641	10.44390	ppb	99	
85)	Benzyl Chloride	12.35	91	74989	10.33282	ppb	97	
86)	1,3-DCB	12.13	146	162751	10.18158	ppb	98	
87)	1,4-DCB	12.22	146	162560	9.71046	ppb	98	
88)	n-Butylbenzene	12.59	91	228772	10.50941	ppb	99	
89)	1,2-DCB	12.59	146	154217	9.95402	ppb	99	
90)	Hexachloroethane	12.86	117	43289	9.72856	ppb	98	
91)	1,2-Dibromo-3-chloropropan	13.35	157	14451	10.84174	ppb	85	
92)	1,2,4-Trichlorobenzene	14.19	180	73672	10.37388	ppb	97	
93)	Hexachlorobutadiene	14.38	223	30881	10.40937	ppb	97	
94)	Naphthalene	14.43	128	203098	10.24211	ppb	100	
95)	1,2,3-Trichlorobenzene	14.68	180	103520	10.23079	ppb	98	

(#) = qualifier out of range (m) = manual integration

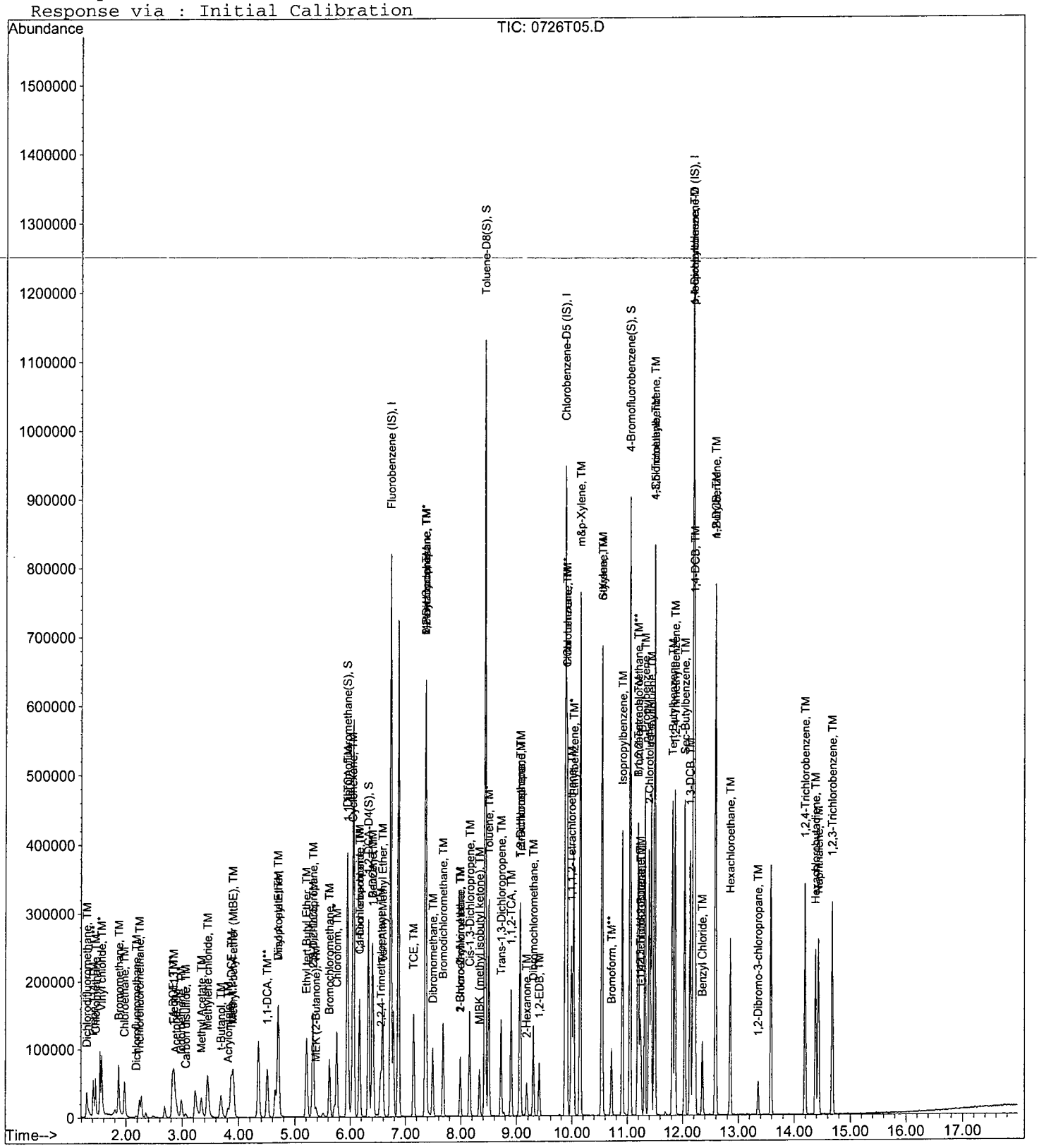
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T05.D
Acq On : 26 Jul 12 11:13
Sample : 120726A LCS-1WT
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 30
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 11:38 2012 Quant Results File: TALLW.RES

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 10:40:23 2012
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : M:\THOR\DATA\T120725\0726T07.D Vial: 32
Acq On : 26 Jul 12 12:09 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00

Quant Time: Jul 26 13:09 2012 Quant Results File: TGAS.RES

Quant Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration
DataAcq Meth : 8260_BETA

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene (IS)	6.72	TIC	811874	25.00000	ppb	0.00
3) Chlorobenzene-D5 (IS)	9.87	TIC	928441	25.00000	ppb	0.00
4) 1,4-Dichlorobenzene-D (IS)	12.20	TIC	1044824	25.00000	ppb	0.00

System Monitoring Compounds

Target Compounds						Qvalue
2) Gasoline	8.43	TIC	19927273m	284.64410	ppb	100

(#) = qualifier out of range (m) = manual integration

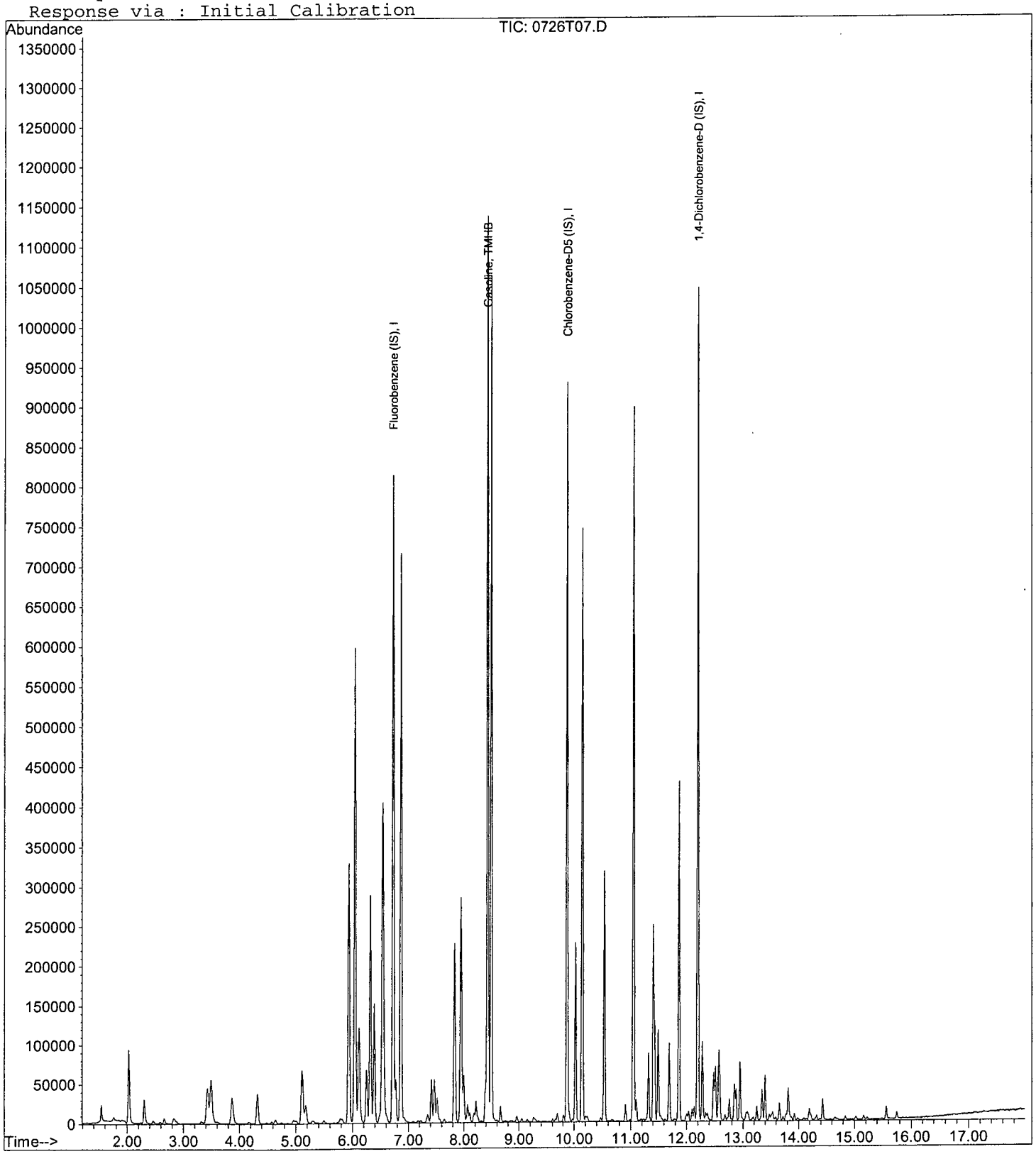
Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T07.D
Acq On : 26 Jul 12 12:09
Sample : LCS gas 300ug/L
Misc : 10ml w/5ul of IS&S: 06-7-12

Vial: 32
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Quant Time: Jul 26 13:09 2012 Quant Results File: TGAS.RES

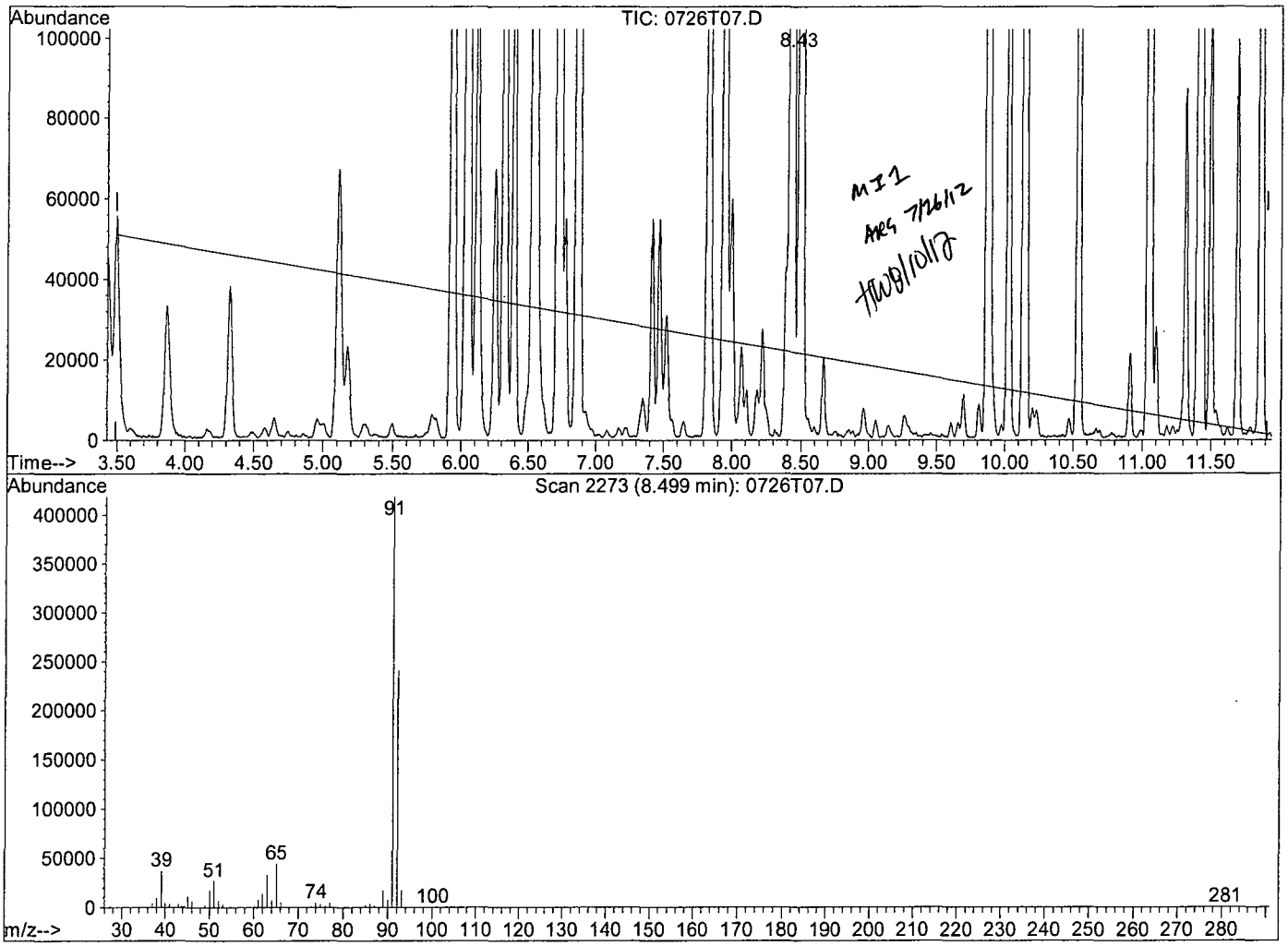
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T07.D Vial: 32
Acq On : 26 Jul 12 12:09 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 13:09 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration



TIC: 0726T07.D

(2) Gasoline (TMHB)

8.50min 210.7660ppb m

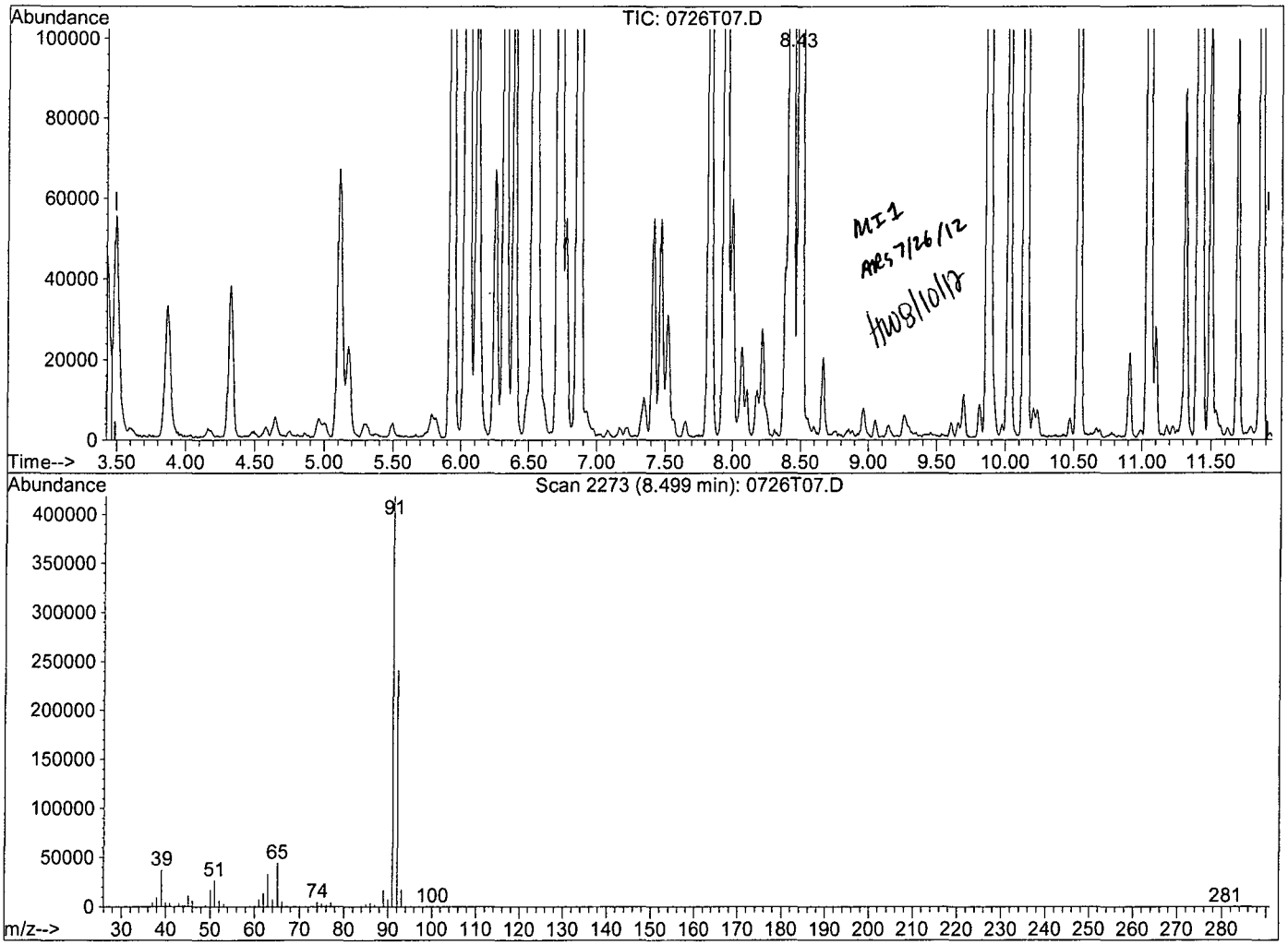
response 17313500

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.58#
0.00	0.00	1.68#
0.00	0.00	0.00

Quantitation Report

Data File : M:\THOR\DATA\T120725\0726T07.D Vial: 32
Acq On : 26 Jul 12 12:09 Operator: DG,RS,HW,ARS,SV
Sample : LCS gas 300ug/L Inst : Thor
Misc : 10ml w/5ul of IS&S: 06-7-12 Multiplr: 1.00
Quant Time: Jul 26 13:09 2012 Quant Results File: temp.res

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Multiple Level Calibration



TIC: 0726T07.D

(2) Gasoline (TMHB)

8.43min 284.6441ppb m

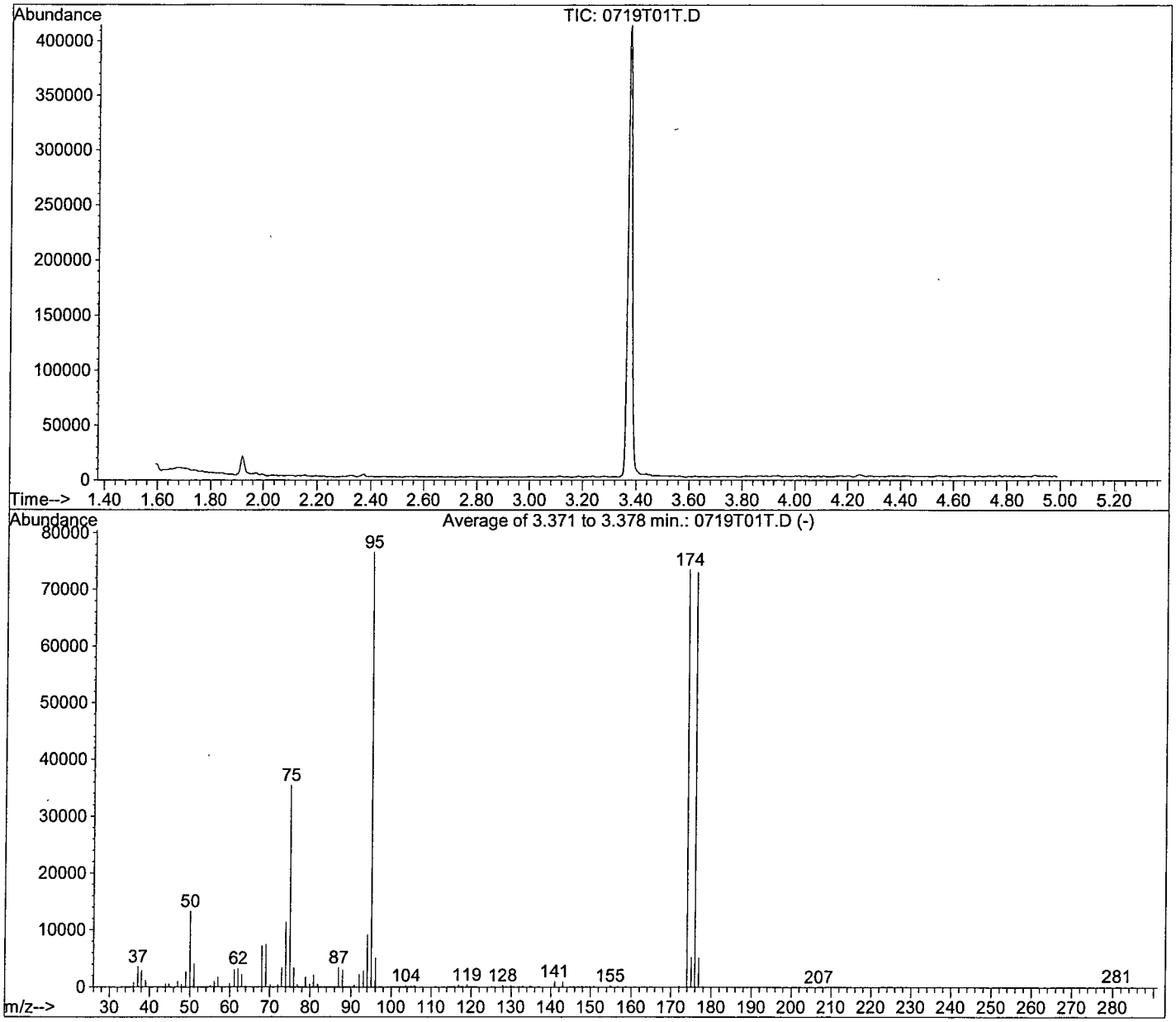
response 19927273

Ion	Exp%	Act%
TIC	100	100
0.00	0.00	0.51#
0.00	0.00	1.46#
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

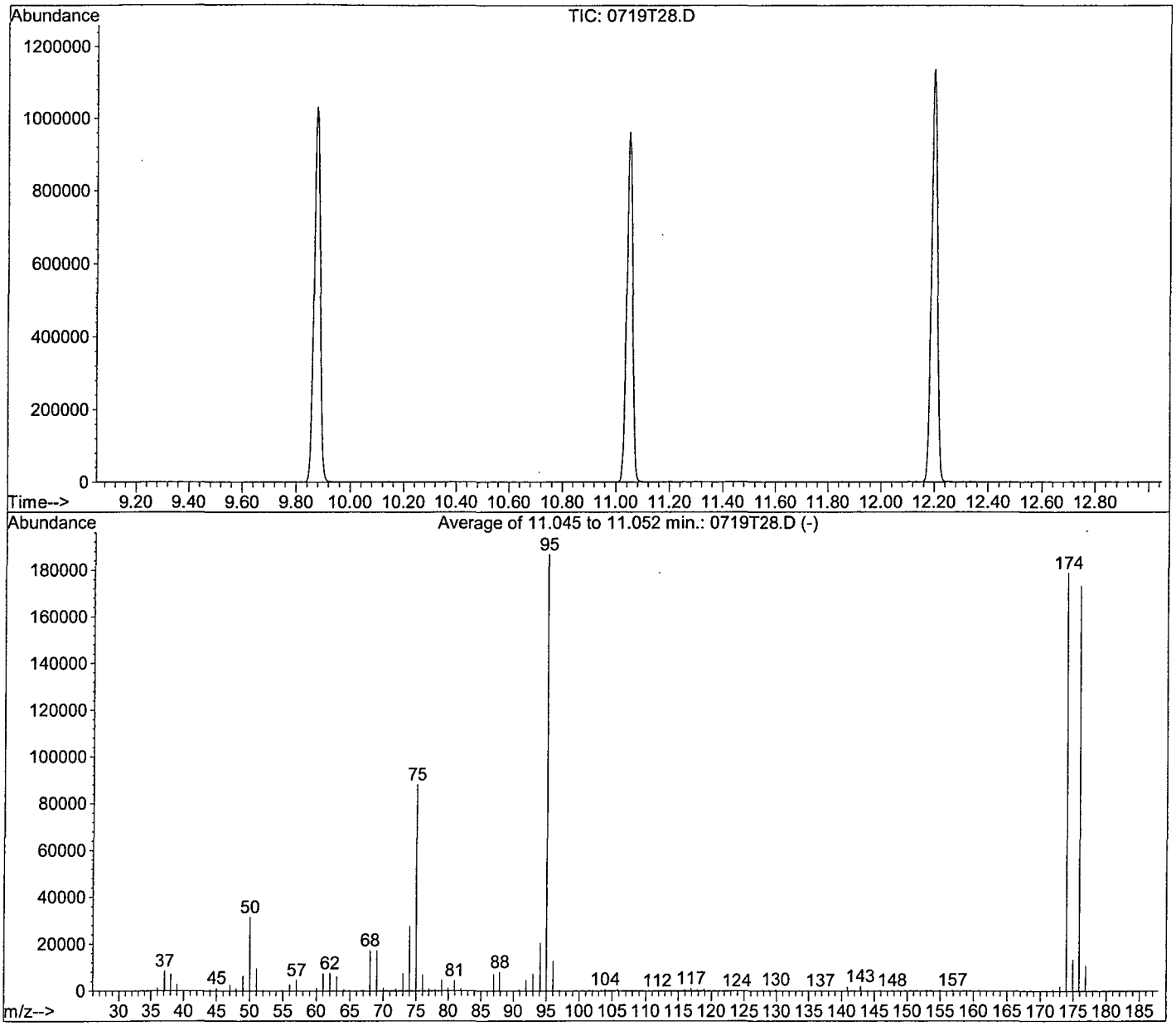
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.4	13331	PASS
75	95	30	60	46.4	35536	PASS
95	95	100	100	100.0	76600	PASS
96	95	5	9	6.7	5096	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	96.0	73547	PASS
175	174	5	9	7.2	5311	PASS
176	174	95	101	99.3	73019	PASS
177	176	5	9	7.0	5141	PASS

BFB

Data File : M:\THOR\DATA\T120719\0719T28.D
Acq On : 19 Jul 12 21:40
Sample : 5ng- BFB Std 07-16-12B
Misc : 2uL

Vial: 28
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 3065, 3066, 3067; Background Corrected with Scan 3051

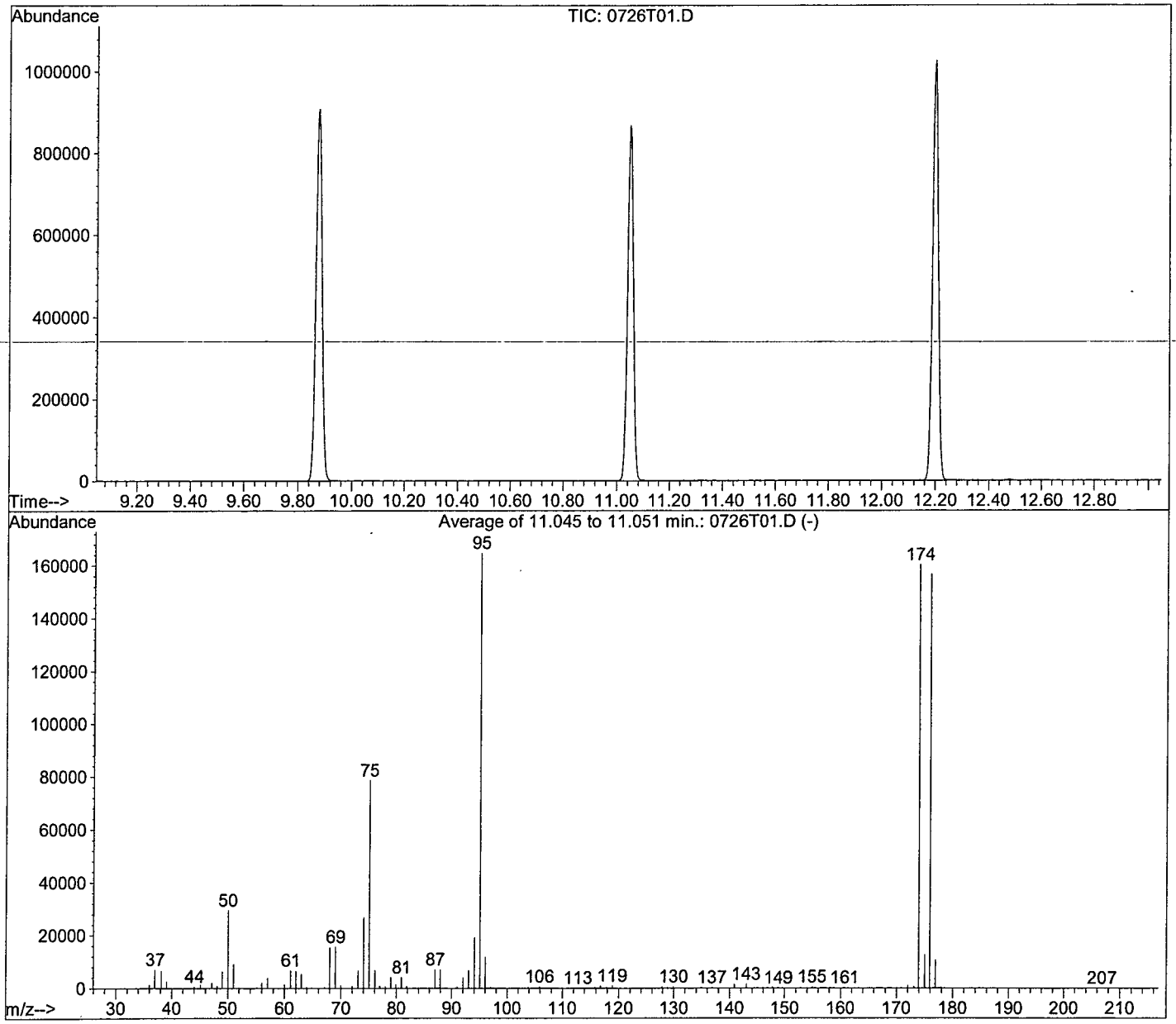
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.9	31552	PASS
75	95	30	60	47.3	88245	PASS
95	95	100	100	100.0	186709	PASS
96	95	5	9	6.8	12716	PASS
173	174	0.00	2	1.0	1785	PASS
174	95	50	100	95.8	178816	PASS
175	174	5	9	7.5	13428	PASS
176	174	95	101	96.9	173248	PASS
177	176	5	9	6.2	10814	PASS

BFB

Data File : M:\THOR\DATA\T120725\0726T01.D
Acq On : 26 Jul 12 9:22
Sample : 5-ng BFB Std 07-16-12B
Misc : 2uL

Vial: 26
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B



AutoFind: Scans 3065, 3066, 3067; Background Corrected with Scan 3051

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	29448	PASS
75	95	30	60	47.7	78560	PASS
95	95	100	100	100.0	164757	PASS
96	95	5	9	7.2	11824	PASS
173	174	0.00	2	0.4	693	PASS
174	95	50	100	97.3	160299	PASS
175	174	5	9	7.9	12626	PASS
176	174	95	101	97.8	156715	PASS
177	176	5	9	6.8	10638	PASS

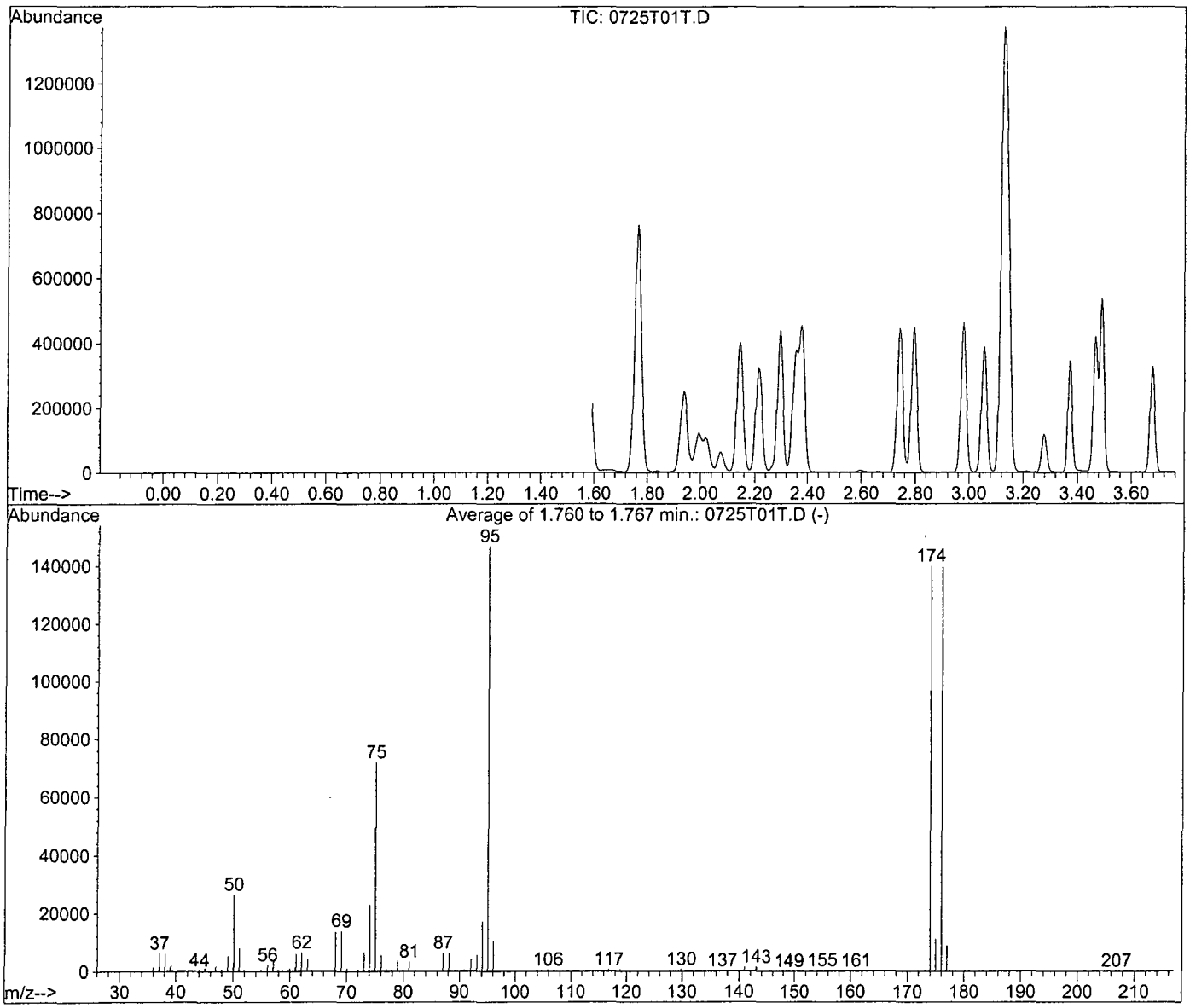
0726T01.D TALLW.M Thu Jul 26 11:20:52 2012

BFB

Data File : M:\THOR\DATA\T120725\0725T01T.D
Acq On : 25 Jul 12 9:32
Sample : 5ng- BFB STD 07-16-12B
Misc : 2ul

Vial: 1
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B



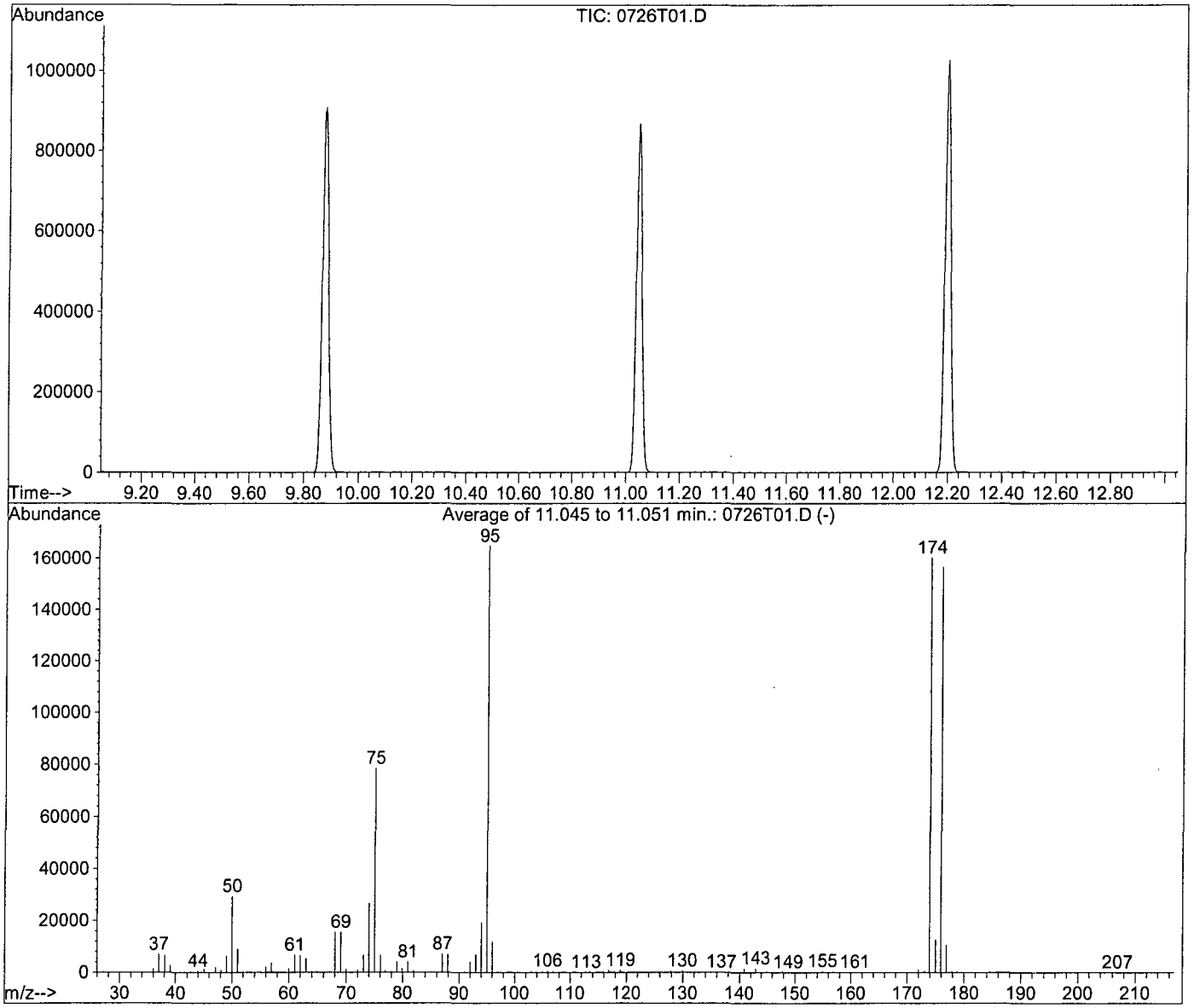
Spectrum Information: Average of 1.760 to 1.767 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.1	26589	PASS
75	95	30	60	49.1	72077	PASS
95	95	100	100	100.0	146837	PASS
96	95	5	9	7.2	10518	PASS
173	174	0.00	2	0.4	583	PASS
174	95	50	100	95.3	139968	PASS
175	174	5	9	8.0	11175	PASS
176	174	95	101	99.8	139627	PASS
177	176	5	9	6.3	8859	PASS

Data File : M:\THOR\DATA\T120725\0726T01.D
Acq On : 26 Jul 12 9:22
Sample : 5-ng BFB Std 07-16-12B
Misc : 2uL

Vial: 26
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B



Spectrum Information: Average of 11.045 to 11.051 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	29448	PASS
75	95	30	60	47.7	78560	PASS
95	95	100	100	100.0	164757	PASS
96	95	5	9	7.2	11824	PASS
173	174	0.00	2	0.4	693	PASS
174	95	50	100	97.3	160299	PASS
175	174	5	9	7.9	12626	PASS
176	174	95	101	97.8	156715	PASS
177	176	5	9	6.8	10638	PASS

GC/MS STANDARD PREPARATION BOOK # _____ PAGE # _____

6/08/12 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA										
	Expiration Date:		06/09/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12	Exp:06-09-12
06-08-12A	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
06-08-12B	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
06-08-12C	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
06-08-12D	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
06-08-12E	50	n/a	n/a	5	5	5	n/a	5	n/a	5
06-08-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	10
06-08-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	20

6/11/12 RS

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

6/11/12 RS

06-11-12A							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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:	
EXP:07-11-12			ug/ml	Lot#	CODE	Date	ul
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.

6/11/12 RS

Volatile Standard Cur	
	Expiratio
Date	Conc.
Code	µg/L
06-11-12I	0.3
06-11-12J	0.5
06-11-12K	1
06-11-12L	2
06-11-12M	5
06-11-12N	10
06-11-12O	20
06-11-12P	40
06-11-12Q	100

6/11/12 RS

6/11/12 RS. D-

Method 8260 Internal Standard Solution, 2,000 mg/L, 1 ml
120302-03
Lot# 166255 Storage ≤ -10 Degrees C Expiry 11/18/12
Solv: P/T Methanol
solutions®
R&D only, not human consump. Made in the USA

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
020132-02
Lot # 169170 Storage ≤ 6 Degrees C Expiry 2/13/14
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Fluorobenzene
Lot #: 169170 - 28869
Rec: 5/25/11 MFR exp. 02/13/14

RS

6/12/12 RS

Volatile Standard Cu	
	Expiratio
Date	Conc.
Code	µg/L
06-11-12R	2
06-11-12S	5
06-11-12T	10
06-11-12U	20
06-11-12V	50
06-11-12W	100
06-11-12X	200

#2	50µg/mL Vol Std #12
	06-02-12AB
	Exp:06-09-12
	n/a
	n/a
	n/a
	n/a
	5
	10
	20

6/11/12 RS

F-

Method 8260B Surrogate Solution, 2,000 mg/L, 1 ml

120002-01

Lot#	Storage	Expiry
185763	< -10 Degrees C	2/19/15

Solv: P/T Methanol

Method 8260B Surrogate

Lot #: 185763 - 30467

Rec: 2/20/12 MFR exp. 02/19/15

RS

mL TBA	Final Vol
-12AE	w/P&T H2O
-09-12	mL
1	5
2	5
3	5
4	5
5	5
6	5
7	5

e	ul
/12	20
/12	1980
e	ul
/12	20
/12	1980
	ul
12	20
12	1980

6/11/12 RS

6/11/12 RS

Thor

06-11-12G

50ug/ml 8260 Internal Standard			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	120302-03	Internal Standard Mix	2000	166255-29275	06-11-12D	12/13/12	375
O2SI	020132-02	Fluorobenzene Standard	2000	169170-28869	06-11-12E	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14250

06-11-12H

50ug/ml 8260B Surrogate-Thor			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
O2SI	8260B Surr	Surrogate Standards	2000	178653-30467	06-11-12F	12/13/12	375
J.T Baker		Purge & Trap MeOH		K14E06-00626	06/11/12	08/10/12	14625

6/11/12 RS

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR

Expiration Date 06/12/12

		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date	Conc.	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp 06-09-12	Exp:06-09-12	Exp.06-09-12	Exp.06-09-12	Exp 06-09-12	Exp:06-09-12	Exp.06-09-12
06-11-12I	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
06-11-12J	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
06-11-12K	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
06-11-12L	2	20	40	n/a	n/a	n/a	20	n/a	n/a	20
06-11-12M	5	n/a	n/a	5	5	10	n/a	5	5	n/a
06-11-12N	10	n/a	n/a	10	10	25	n/a	10	10	n/a
06-11-12O	20	n/a	n/a	20	20	40	n/a	20	20	n/a
06-11-12P	40	n/a	n/a	40	40	80	n/a	40	40	n/a
06-11-12Q	100	n/a	n/a	100	100	100	n/a	100	100	n/a

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

6/12/12 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

Expiration Date 06/12/12

		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc	06-02-12Z	06-02-12AD	06-02-12V	06-02-12X	06-02-12AC	06-02-12AA	06-02-12W	06-02-12Y	06-02-12AB
Code	µg/L	Exp:06-09-12	Exp:06-09-12	Exp 06-09-12	Exp:06-09-12	Exp 06-09-12	Exp:06-09-12	Exp.06-09-12	Exp.06-09-12	Exp.06-09-12
06-11-12R	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
06-11-12S	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
06-11-12T	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
06-11-12U	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
06-11-12V	50	n/a	n/a	5	5	5	n/a	5	n/a	5
06-11-12W	100	n/a	n/a	10	10	10	n/a	10	n/a	10
06-11-12X	200	n/a	n/a	20	20	20	n/a	20	n/a	20

250µg/mL TBA	Final Vol
06-02-12AE	w/P&T H2O
Exp:06-09-12	mL
1	5
2	5
3	5
4	5
5	5
6	5
7	5

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA										
Expiration Date:		07/12/12								
	5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Conc.	07-05-12I	07-05-12M	07-05-12E	07-05-12G	07-05-12L	07-05-12J	07-05-12F	07-05-12H	07-05-12K
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
2	2	n/a	n/a	n/a	n/a	2	n/a	2	n/a
5	5	n/a	n/a	n/a	n/a	5	n/a	5	n/a
10	10	n/a	n/a	n/a	n/a	10	n/a	10	n/a
20	20	n/a	n/a	n/a	n/a	20	n/a	20	n/a
n/a	n/a	5	5	5	n/a	5	n/a	n/a	5
n/a	n/a	10	10	10	n/a	10	n/a	n/a	10

250µg/mL TBA	Final Vol
07-05-12N	w/P&T H2O
Exp:07-12-12	mL
1	5
2	5
3	5
4	5
5	5
6	5

CHICO

07-12-12A

50ug/ml 524 Internal Standard w/ Surrogate

			Conc.		Date	Exp.	
			ug/ml	Lot #	Code	Date	uL
02SI	122450-02	524 Fortification Sol	1000	176776-29295	06-07-12A	10/10/12	200
J&T Baker		Purge & Trap MeOH		K14E06-00643	07/09/12	12/22/13	3800

7/12/12 RS

Volatile Standard Curve Preparation for 10mL Purge (524 water)-CHICO								
	Expiration Date:		07/13/12					
		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
Date	Conc.	07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N	w/P&T H2O
Code	µg/L	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	Exp:07-12-12	mL
07-12-12B	0.2	2	2	n/a	n/a	n/a	2	50
07-12-12C	0.5	5	5	n/a	n/a	n/a	5	50
07-12-12D	1	10	10	n/a	n/a	n/a	10	50
07-12-12E	2	20	20	n/a	n/a	n/a	15	50
07-12-12F	5	n/a	n/a	5	5	5	20	50
07-12-12G	10	n/a	n/a	10	10	10	25	50
07-12-12H	20	n/a	n/a	20	20	20	30	50
07-12-12I	40	n/a	n/a	40	40	40	35	50
07-02-12H	100	n/a	n/a	100	100	100	40	50

7/12/12 RS

4-Bromofluorobenzene
Solution, 2,500 mg/L, 1 ml

020135-03

Lot #	Storage	Expire
163173	≤-10 Degrees	8/24/13

Solv: P/T Methanol

* R&D only, not Restek commercial Made in the USA

4-Bromofluorobenzene
Lot #: 163173 - 29063
Rec: 8/1/11 MFR exp. 08/24/13

7/16/12 A- RS

07-16-12B							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12C							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12D							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980
07-16-12E							
25ug/ml BFB STD			Conc.		Date	EXP:	
EXP:08-16-12			ug/ml	Lot#	CODE	Date	ul
02SI	020135-03	4-Bromofluorobenzene	2500	163173-29063	07-16-12A	12/11/12	20
J&T Baker		Purge & Trap MeOH		K08E01-00643	07/16/12	09/28/13	1980

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7/17/12 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA										
	Expiration Date:		07/18/12							
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	07-05-12I	07-05-12M	07-05-12E	07-05-12G	07-05-12L	07-05-12J	07-05-12F	07-05-12H	07-05-12K
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	5
07-17-12F	100	n/a	n/a	10	10	10	n/a	10	n/a	10
07-17-12G	200	n/a	n/a	20	20	20	n/a	20	n/a	20

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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
7	5

— Thor 524 curve on pg. 74 RS 7/18/12 RS.

7/18/12 RS

A-

Method 8260 Gases, 2,000 mg/L, 2 X 0.6 ml
120016-03
Lot # 180013 Storage ≤ -10 Degrees C Expiry 10/17/14
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Method 8260 Gases
Lot #: 180013 - 29760
Rec: 10/24/11 MFR exp. 10/17/14

RS

7/18/12 RS

7/18/12 RS

B-

Hexachloroethane Solution, 1000 mg/L, 1 ml
020049-02
Lot # 176700 Storage ≤ -10 Degrees C Expiry 7/31/13
Solv: P/T Methanol
R&D only, not human consump. Made in the USA
solutions

Hexachloroethane
Lot #: 176700 - 30724
Rec: 5/9/12 MFR exp. 07/31/13

RS

7/18/12 RS

7/18/12 RS

C-

Benzyl Chloride Solution, 1000 mg/L, 1 ml
020228-02
Lot # 176701 Storage ≤ -10 Degrees C Expiry 7/31/13
Solv: P/T Methanol
R&D only, not human consump. Made in the USA
solutions

Benzyl Chloride
Lot #: 176701 - 31019
Rec: 6/19/12 MFR exp. 07/31/13

RS

7/18/12 RS

7/18/12 RS

D-

n-Hexane Solution, 1,000 mg/L, 1 ml
020620-02
Lot # 176773 Storage ≤ -10 Degrees C Expiry 7/30/16
Solv: P/T Methanol
R&D only, not human consump. Made in the USA
solutions

n-Hexane Solution
Lot #: 176773 - 31024
Rec: 6/19/12 MFR exp. 07/30/16

RS

E-

Heptane Solution, 1000 mg/L, 1 ml
020546-02
Lot # 169174 Storage ≤-10 Degrees C Expiry 2/18/14
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Heptane Solution
Lot #: 169174 - 31039
Rec: 6/19/12 MFR exp. 02/18/14

RS

F-

VOC Mix 4-3, 2,000 mg/L, 1 ml
120166-01
Lot # 185760 Storage ≤6 Degrees C Expiry 2/14/14
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

VOC Mix 4-3, 2000mg/L
Lot #: 185760 - 30739
Rec: 5/9/12 MFR exp. 02/14/14

RS

G-

Method 8260 Gases (Second Source), 2,000 mg/L, 2 X 0.6 ml
120016-03-SS
Lot # 187974 Storage ≤-10 Degrees C Expiry 4/8/15
Solv: P/T Methanol
R&D only, not human consump. Made in the USA

Method 8260 Gases (SS)
Lot #: 187974 - 31061
Rec: 6/19/12 MFR exp. 04/08/15

RS.

07-18-12H							
50ug/ml Vol Work Std #7							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	120016-03	Gas Mix	2000	180013-29760	07-18-12A	07/25/12	100
02SI	020049-02	HEXACHLOROETHANE	1000	176700-30724	07-18-12B	08/08/12	200
02SI	020228-02	Benzyl Chloride	1000	176701-31019	07-18-12C	08/08/12	200
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3500
07-18-12I							
50ug/ml Vol Work Std #1							
Exp:07/25/12							
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	020145-02-02	2-CEVE	2000	176770-29827	06-19-12D	08/08/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1950
07-18-12J							
50ug/ml Vol Work Std #8							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul
02SI	122039-02	Volatile Mix, 20-29	2000	180114-29786	06-19-12E	08/08/12	100
02SI	120023-03	VOC'S-54 COMP	2000	176392-29207	06-19-12F	08/08/12	100
O2SI	020232-02	Vinyl Acetate	2000	189764-30727	06-19-12G	05/13/12	100
O2SI	020620-02	n-Hexane	1000	176773-31024	07-18-12D	08/08/12	200
02SI	020546-02	Heptane	1000	169174-31039	07-18-12E	08/08/12	200
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3300
07-18-12K							
50ug/ml Vol Work Std #2							
Exp:07/25/12							
Supplier	ID #	ID	ug/ml				
02SI	121020-05	HSL'S-Ketone Solution	2000	163375-27145	06-19-12J	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3900

		07-18-12L	Exp:	07/25/12			
		5ug/ml Vol Work Std #9					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #7		07-18-12H	07/25/12	200	
		50ug/ml Vol Work Std #8		07-18-12J	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1600	
		07-18-12M	Exp:	07/25/12			
		5ug/ml Vol Work Std #10					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #1		07-18-12I	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1800	
		07-18-12N	Exp:	07/25/12			
		5ug/ml Vol Work Std #12					
		SOURCES	**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml Vol Work Std #2		07-18-12K	07/25/12	200	
		J&T Brand		06/18/12	10/08/12	1800	
07-18-12O							
50ug/ml 8260 Surrogate			Conc.		Date	Exp.	
Exp:07/25/12			ug/ml	Lot #	Code	Date	ul
O2SI	120002-01	8260B Surr Solution	2000	185763-30471	07-05-12B	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3900
07-18-12P			Exp:	07/25/12			
5.0ug/ml 8260 Surrogate			**Lot**	**APPL Code**	APPL Exp Date	ul	
		50ug/ml 8260 Surrogate		07-18-12O	07/25/12	200	
J&T Brand		Purge & Trap MeOH		06/18/12	10/08/12	1800	
07-18-12Q							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:07/25/12			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL/L
O2SI	120166-01	Volatile Mix 4-3	2000	185760-30739	07-18-12F	08/08/12	500
O2SI	020229-09	Acrolein	10000	191590-39077	06-19-12L	07/21/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	3400

7/18/12 RS

07-18-12R							
50ug/ml VOC Std#5							
Exp:07/25/12							
			Conc.		Date	Exp.	
Supplier	ID #	ID	ug/ml	Lot #	Code	Date	ul/L
O2SI	120016-03-SS	8260 Gases(SS)	2000	187974-31061	07-18-12G	07/25/12	50
O2SI	020145-02-02-S	2-CEVE	2000	181404-30001	06-19-12N	08/08/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1900
07-18-12S							
50ug/ml VOC Std#6							
Exp:07/25/12							
	ID #	ID	ug/ml	Lot #	Code	Date	ul/L
O2SI	120023-03-SS	VOC'S 54 COMP.	2000	176822-29269	06-19-12O	08/08/12	50
O2SI	120296-01	Custom 8260 Solution	2000	185766-60426	06-19-12P	08/08/12	50
O2SI	020232-02-SS	Vinyl Acetate(SS)	2000	189765-30729	05-08-12J	08/12/12	50
O2SI	020620-02-SS	n-HEXANE	1000	179199-29616	05-15-12K	08/08/12	100
O2SI	020049-02-SS	HEXACHLOROETHANE	1000	183795-30438	05-15-12L	08/08/12	100
O2SI	020546-02-SS	Heptane(SS)	1000	185762-30448	05-15-12M	08/08/12	100
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1550
07-18-12T							
250ug/ml TBA/IBA/Acetonitrile/Cyclohexanone/Acrolein/2-P							
Exp:07/25/12			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL/L
O2SI	120166-01-SS	VOC Mix 4-3 (SS)	2000	163778-29840	06-19-12Q	08/08/12	250
O2SI	020229-09-SS	Acrolein SOLUTION (SS)	10000	151591-30979	06-19-12R	07/21/12	50
J&T Brand		Purge & Trap MeOH		K14E06-00640	07/18/12	10/08/12	1700

7/18/12 RS

Volatile Standard Curve Preparation for 10mL Purge (524 water)-THOR

	Expiration Date:		07/18/12					Final Vol
		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	w/P&T H2O
Date	Conc.	07-05-12I	07-05-12K	07-05-12E	07-05-12G	07-05-12H	07-05-12N	mL
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	50
07-17-12A	0.2	2	2	n/a	n/a	n/a	n/a	50
07-17-12B	0.5	5	5	n/a	n/a	n/a	n/a	50
07-17-12C	1	10	10	n/a	n/a	n/a	10	50
07-17-12D	2	20	20	n/a	n/a	n/a	15	50
07-17-12E	5	n/a	n/a	5	5	5	20	50
07-17-12F	10	n/a	n/a	10	10	10	25	50
07-17-12G	40	n/a	n/a	40	40	40	35	50
07-17-12H	100	n/a	n/a	100	100	100	40	50

7/18/12 RS.

07/19/12A							
2000ug/ml Gasoline						APPL	
			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Supelco	LB82077	Gasoline	20,000	LB82077-29979	01-26-12A	02/01/14	200
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13	1800
07/19/12B							
2000ug/ml Unleaded Gasoline						APPL	
			Conc.		Date	Exp.	
Supplier	ID #		ug/ml	Lot #	Code	Date	uL
Restek	30205	Unleaded Gasoline	50,000	A081012-29980	01-26-12B	02/01/14	80
J&T Brand		Purge & Trap MeOH		K08E01-00640	07/18/12	08/02/13	1920

Volatile Standard Curve Preparation for 10mL Purge (8260 water)-THOR

Expiration Date:		07/20/12								
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-18-12A	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
07-18-12B	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
07-18-12C	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
07-18-12E	2	20	40	n/a	n/a	n/a	20	n/a	n/a	20
07-18-12G	5	n/a	n/a	5	5	10	n/a	5	5	n/a
07-18-12H	10	n/a	n/a	10	10	25	n/a	10	10	n/a
07-18-12I	20	n/a	n/a	20	20	40	n/a	20	20	n/a
07-18-12J	40	n/a	n/a	40	40	80	n/a	40	40	n/a
07-18-12K	100	n/a	n/a	100	100	100	n/a	100	100	n/a

250µg/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
		50µg/mL Gasoline	Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/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								
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-19-12S	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a
07-19-12T	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a
07-19-12U	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a
07-19-12V	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a
07-19-12W	50	n/a	n/a	5	5	5	n/a	5	n/a	5
07-19-12X	100	n/a	n/a	10	10	10	n/a	10	n/a	10
07-19-12Y	200	n/a	n/a	20	20	20	n/a	20	n/a	20

250µg/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								
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	50µg/mL Vol Std #2	5µg/mL Vol Std #12
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N
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	Exp:07-25-12
07-23-12A	0.3	3	6	n/a	n/a	n/a	3	n/a	n/a	3
07-23-12B	0.5	5	10	n/a	n/a	n/a	5	n/a	n/a	5
07-23-12C	1	10	20	n/a	n/a	n/a	10	n/a	n/a	10
07-23-12D	5	n/a	n/a	5	5	10	n/a	5	5	n/a
07-23-12F	10	n/a	n/a	10	10	25	n/a	10	10	n/a
07-23-12G	20	n/a	n/a	20	20	40	n/a	20	20	n/a
07-23-12G	40	n/a	n/a	40	40	80	n/a	40	40	n/a
07-23-12H	100	n/a	n/a	100	100	100	n/a	100	100	n/a
07-23-12I	200	n/a	n/a	200	200	125	n/a	200	200	n/a

250µg/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

Neo 524							
07-24-12A							
10ug/ml Neo-524 Internal Standard w/ Surrogate			Conc.		Date	Exp.	
			ug/ml	Lot #	Code	Date	
02SI	122450-02	524 Fortification Sol	1000	176776-29295	06-07-12A	09/10/12	
J.T.Baker		Purge & Trap MeOH		K08E01-00645	07/20/12	12/12/12	

7/24/12 RS

Volatile Standard Curve Preparation for 10mL Purge (524 water)-NEO

		Expiration Date:	07/25/12						
		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	
Date	Conc.	07-18-12L	07-18-12N	07-18-12H	07-18-12J	07-18-12K	07-18-12O	w/P&T H2O	
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	mL	
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	15	50	
07-24-12F	5	n/a	n/a	5	5	5	20	50	
07-24-12G	10	n/a	n/a	10	10	10	25	50	
07-24-12H	40	n/a	n/a	40	40	40	35	50	

7/24/12 RS

Volatile Standard Curve Preparation for 5mL Purge (8260 soil)-SWEETPEA

		Expiration Date:	07/25/12								
		5µg/mL Vol Std #9	5µg/mL Surr	50µg/mL Vol Std #7	50µg/mL Vol Std #8	50µg/mL Surr	5µg/mL Vol Std #10	50µg/mL Vol Std #1	5µg/mL Vol Std #2	50µg/mL Vol Std #12	
Date	Conc.	07-18-12L	07-18-12P	07-18-12H	07-18-12J	07-18-12O	07-18-12M	07-18-12I	07-18-12K	07-18-12N	
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	Exp:07-25-12	
07-24-12I	2	2	2	n/a	n/a	n/a	2	n/a	2	n/a	
07-24-12J	5	5	5	n/a	n/a	n/a	5	n/a	5	n/a	
07-24-12K	10	10	10	n/a	n/a	n/a	10	n/a	10	n/a	
07-24-12L	20	20	20	n/a	n/a	n/a	20	n/a	20	n/a	
07-24-12M	50	n/a	n/a	5	5	5	n/a	5	n/a	5	
07-24-12N	100	n/a	n/a	10	10	10	n/a	10	n/a	10	
07-24-12O	200	n/a	n/a	20	20	20	n/a	20	n/a	20	

			250µg/mL TAPD	Final Vol
			07-18-12O	w/P&T H2O
			Exp:07-25-12	mL
			1	50
			2	50
			3	50
			4	50
			5	50
			6	50
			7	50

7/24/12 RS

Gasoline Curve Preparation for 100mL Purge (water)-THOR

		Expiration Date:	07/25/12
		50µg/mL Gasoline	Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/L	Exp.01-03-13	mL
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

7/25/12 RS

Gasoline Curve Preparation for 100mL Purge (water)-THOR

		Expiration Date:	07/26/12
		50µg/mL Gasoline	Final Vol
Date	Conc.	07-19-12A	w/P&T H2O
Code	µg/L	Exp.01-03-13	mL
07-25-12A	20	1	100
07-25-12B	50	2.5	100
07-25-12C	100	5	100
07-25-12D	300	15	100
07-25-12E	600	30	100
07-25-12F	800	40	100
07-25-12G	1000	50	100

Custom VOC Mix, 16-4, 100 mg/L, 4 x 1 ml

122725-03-4PAK

Lot#	Storage	Expiry
181120	≤ -10 Degrees C	11/6/13

Solv: P/T Methanol

R&D only, not human consump. Made in the USA

Custom VOC Mix 16-4

Lot #: 181120 - 30032

Rec: 11/16/11 MFR exp. 11/06/13

Injection Log

Directory: M:\THOR\DATA\T120719

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0719T01T.D	1	5ng- BFB STD 07-16-12B	2ul	07/19/2012 09:15
2	5	0719T05.D	1	0.3ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:01
3	6	0719T06.D	1	0.5ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:29
4	7	0719T07.D	1	1.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 11:57
5	8	0719T08.D	1	2.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:25
6	9	0719T09.D	1	5.0ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 12:53
7	10	0719T10.D	1	10ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:20
8	11	0719T11.D	1	20ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 13:48
9	12	0719T12.D	1	40ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:16
10	13	0719T13.D	1	100ug/L Vol Std 07-19-12	10ml w/5ul of IS&S: 06-7	07/19/2012 14:44
11	28	0719T28.D	1	5ng- BFB Std 07-16-12B	2uL	07/19/2012 21:40
12	31	0719T31.D	1	120719A LCS-1WT (SS)	10ml w/5ul of IS&S: 06-7	07/19/2012 23:03

Injection Log

Directory: M:\THOR\DATA\T120725

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	26	0726T01.D	1	5-ng BFB Std 07-16-12B	2uL	07/26/2012 09:22
2	29	0726T04.D	1	10ug/L Vol Std 07-26-12	10ml w/5ul of IS&S: 06-7	07/26/2012 10:46
3	30	0726T05.D	1	120726A LCS-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 11:13
4	36	0726T11.D	1	120726A BLK-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 14:00
5	38	0726T13.D	1	AY65219W01	10ml w/5ul of IS&S: 06-7	07/26/2012 14:55
6	44	0726T19.D	1	AY65220W01	10ml w/5ul of IS&S: 06-7	07/26/2012 17:41

Injection Log

Directory: M:\THOR\DATA\T120725

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0725T01T.D	1	5ng- BFB STD 07-16-12B	2ul	07/25/2012 09:32
2	2	0725T03.D	1	VOC MIX MARKER	10ml w/5ul of IS&S: 06-7	07/25/2012 10:22
3	3	0725T04.D	1	20ug/L Vol Std 07-25-12	10ml w/5ul of IS&S: 06-7	07/25/2012 10:50
4	4	0725T05.D	1	50ug/L Vol Std 07-25-12	10ml w/5ul of IS&S: 06-7	07/25/2012 11:17
5	5	0725T06.D	1	100ug/L Vol Std 07-25-12	10ml w/5ul of IS&S: 06-7	07/25/2012 11:45
6	6	0725T07.D	1	300ug/L Vol Std 07-25-13	10ml w/5ul of IS&S: 06-7	07/25/2012 12:13
7	7	0725T08.D	1	600ug/L Vol Std 07-25-14	10ml w/5ul of IS&S: 06-7	07/25/2012 12:41
8	8	0725T09.D	1	800ug/L Vol Std 07-25-15	10ml w/5ul of IS&S: 06-7	07/25/2012 13:08
9	9	0725T10.D	1	1000ug/L Vol Std 07-25-16	10ml w/5ul of IS&S: 06-7	07/25/2012 13:36
10	14	0725T15.D	1	LCS gas 300ug/L (SS)	10ml w/5ul of IS&S: 06-7	07/25/2012 15:55
11	26	0726T01.D	1	5-ng BFB Std 07-16-12B	2uL	07/26/2012 09:22
12	31	0726T06.D	1	CCV gas 300ug/L	10ml w/5ul of IS&S: 06-7	07/26/2012 11:41
13	32	0726T07.D	1	LCS gas 300ug/L	10ml w/5ul of IS&S: 06-7	07/26/2012 12:09
14	36	0726T11.D	1	120726A BLK-1WT	10ml w/5ul of IS&S: 06-7	07/26/2012 14:00
15	38	0726T13.D	1	AY65219W01	10ml w/5ul of IS&S: 06-7	07/26/2012 14:55
16	44	0726T19.D	1	AY65220W01	10ml w/5ul of IS&S: 06-7	07/26/2012 17:41

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	07/30/12	07/30/12	#602D-120730A-AY65220

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	54.6	109	80-120	07/30/12	07/30/12	#602D-120730A-AY65220

Comments: _____

Matrix Spike Recoveries

METALS

APPL ID: **120730W-65220 MS - 169505**

Sample ID: AY65220

Client ID: ES088

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
6020	LEAD (PB) (DISSOLVE	50.0	0.60	56.7	56.0	112	111	1.2	20	80-120	07/30/12	07/30/12	07/30/12	07/30/12	169505	AY65220

Comments: _____

_____

_____

Printed: 07/31/12 10:02:58 AM
APPL MSD SCII

METALS
Sample Data

APPL, INC.

Metals Analysis

Environet, Inc.
650 Iwilei Rd, #204
Honolulu, HI 96817

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Max Solmssen
Project: LTM Red Hill /1022-024
Sample ID: ES088
Sample Collection Date: 07/20/12

ARF: 68284
APPL ID: AY65220

Method	Analyte	Result	LOQ	LOD	DL	Units	DF	Prep Date	Analysis Date
6020	LEAD (PB) (DISSOLVED)	0.60	0.5	0.22	0.11	ug/L	1	07/30/12	07/30/12

Sample QC Report

Data File:	C:\ICPCHEM\1\DATA\12G30k00.B\038SMPL.D\038SMPL.D#
Date Acquired:	Jul 30 2012 02:34 pm
Operator:	NBS
Sample Name:	AY65220W08
Misc Info:	120730A-3015
Vial Number:	3111
Current Method:	C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File:	C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update:	Jul 30 2012 11:15 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	54.79	1000	
11 B	64.01 ug/l	71.12	1.48	1000	
23 Na	32280.00 ug/l	35863.08	0.60	25000	>Cal
24 Mg	9422.00 ug/l	10467.84	0.67	50000	
27 Al	11.36 ug/l	12.62	3.35	20000	
39 K	1935.00 ug/l	2149.79	0.03	20000	
44 Ca	12320.00 ug/l	13687.52	0.58	50000	
47 Ti	1.74 ug/l	1.93	11.85	1000	
51 V	0.27 ug/l	0.30	9.10	1000	
52 Cr	0.24 ug/l	0.27	5.21	1000	
55 Mn	694.30 ug/l	771.37	0.84	1000	
56 Fe	420.60 ug/l	467.29	0.32	20000	
59 Co	1.08 ug/l	1.20	1.86	1000	
60 Ni	1.43 ug/l	1.59	4.41	1000	
63 Cu	0.75 ug/l	0.83	0.29	1000	
65 Cu	0.75 ug/l	0.84	2.79	1000	
66 Zn	9.23 ug/l	10.26	2.29	1000	
75 As	0.09 ug/l	0.11	14.91	1000	
78 Se	0.04 ug/l	0.04	58.77	1000	
78 Se	0.34 ug/l	0.38	22.16	1000	
88 Sr	79.76 ug/l	88.61	0.96	1000	
88 Sr	79.27 ug/l	88.07	0.51	1000	
95 Mo	0.21 ug/l	0.23	5.96	1000	
106 (Cd)	-------- ug/l	#VALUE!	--------	#######	
107 Ag	0.00 ug/l	0.00	244.51	500	
108 (Cd)	-------- ug/l	#VALUE!	--------	#######	
111 Cd	0.13 ug/l	0.14	5.98	1000	
118 Sn	0.11 ug/l	0.12	12.24	#######	
118 Sn	0.13 ug/l	0.14	11.05	#######	
118 Sn	0.13 ug/l	0.14	10.54	1000	
121 Sb	0.11 ug/l	0.12	13.84	1000	
137 Ba	9.92 ug/l	11.02	1.10	1000	
205 Tl	0.09 ug/l	0.10	6.93	1000	
206 (Pb)	-------- ug/l	#VALUE!	--------	#######	
207 (Pb)	-------- ug/l	#VALUE!	--------	#######	
208 Pb	0.54 ug/l	0.60	0.32	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-52997.22	6.10	-58574.40	90.5	70 - 120	IS Fai
45 Sc	2563793.00	0.99	2785824.00	92.0	70 - 120	
45 Sc	368986.13	0.25	395513.41	93.3	70 - 120	
45 Sc	7785720.00	0.52	8489632.00	91.7	70 - 120	
72 Ge	634020.81	0.24	703318.88	90.1	70 - 120	
72 Ge	238599.33	2.30	262176.69	91.0	70 - 120	
72 Ge	1637281.90	0.98	1815062.40	90.2	70 - 120	
115 In	4598004.50	0.98	5132442.00	89.6	70 - 120	
115 In	2569346.00	0.60	2771271.30	92.7	70 - 120	
115 In	10752195.00	0.33	11756014.00	91.5	70 - 120	
159 Tb	14628012.00	0.34	15745004.00	92.9	70 - 120	
165 Ho	14210382.00	0.64	15341548.00	92.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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
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: 68284 SDG: 68284
Initial Calibration Source: CPI
Continuing Calibration Source: Environmental Express
Analysis Date: 07/30/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:18	%R(1)	True CCV1	Found 11:38	%R(1)	True CCV1	Found 12:24	%R(1)	
Lead (Pb)	100	100.9	101	50	52.58	105	50	52.28	105	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.

ARF No: 68284 SDG: 68284

Initial Calibration Source: CPI

Continuing Calibration Source: Environmental Express

Analysis Date: 07/30/12 Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration						M
	True	Found 11:18	%R(1)	True CCV1	Found 13:30	%R(1)	True CCV1	Found 15:07	%R(1)	
Lead (Pb)	100	100.9	101	50	53.26	107	50	53.19	106	P

(1) Control Limits: Metals 90-110

ILM02.0

A.P.P.L. INC.
3
BLANKS

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.

ARF No.: 68284 SDG: 68284

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 07/30/12

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank		M
		C	1	C	2	C	3	C		C			
	11:31		11:45		12:37		13:48		13:54				
Lead (Pb)	.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.: 68284 SDG: 68284

Preparation Blank Matrix (soil/water): water

Preparation Blank Concentration Units (ug/L or mg/kg): ug/L

Analysis Date: 07/30/12

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
	11:31		15:20						13:54		
Lead (Pb)	.50	U	.50	U					.50	U	P

A.P.P.L. INC.

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name:	A.P.P.L. INC.	Contract:	Environet, Inc.
ARF No.:	68284	SDG:	68284
ICP ID Number:	Optimus	ICS Source:	Environmental Express

Analysis Date: 07/30/12 Concentration Units: ug/L

Analyte	True		Initial Found		
	Sol A	Sol AB	Sol A 12:04	Sol AB 12:11	%R(1)
Lead (Pb)		500	0.4437	427.5	85.5

(1) Control Limits: Metals 80-120

A.P.P.L. INC.

5B

POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

ES088

Lab Name: A.P.P.L. INC. Contract: Environet, Inc.

ARF No.: 68284 SDG: 68284

Analysis Date: 07/30/12 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	248.307		0.595404		277.500	89.3		

Comments:

07/30/12 14:34 AY65220W08

07/30/12 14:54 AY65220W08-A

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G30k00.B\041SMPL.D\041SMPL.D#
Date Acquired: Jul 30 2012 02:54 pm
Operator: NBS
Sample Name: AY65220W08-A
Misc Info: 120730A-3015
Vial Number: 3202
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	44.75	ug/l	49.72	1.32	1000	
11 B	298.90	ug/l	332.08	1.24	1000	
23 Na	53590.00	ug/l	59538.49	0.45	25000	>Cal
24 Mg	31010.00	ug/l	34452.11	1.47	50000	
27 Al	1967.00	ug/l	2185.34	0.68	20000	
39 K	6314.00	ug/l	7014.85	0.53	20000	
44 Ca	36810.00	ug/l	40895.91	1.55	50000	
47 Ti	250.50	ug/l	278.31	1.23	1000	
51 V	242.70	ug/l	269.64	0.36	1000	
52 Cr	240.00	ug/l	266.64	0.50	1000	
55 Mn	889.60	ug/l	988.35	0.33	1000	
56 Fe	1320.00	ug/l	1466.52	0.36	20000	
59 Co	208.80	ug/l	231.98	1.12	1000	
60 Ni	227.50	ug/l	252.75	0.09	1000	
63 Cu	224.00	ug/l	248.86	0.28	1000	
65 Cu	224.20	ug/l	249.09	0.25	1000	
66 Zn	447.40	ug/l	497.06	0.44	1000	
75 As	229.90	ug/l	255.42	0.42	1000	
78 Se	215.60	ug/l	239.53	0.89	1000	
78 Se	221.30	ug/l	245.86	0.87	1000	
88 Sr	302.50	ug/l	336.08	0.61	1000	
88 Sr	316.70	ug/l	351.85	1.45	1000	
95 Mo	228.30	ug/l	253.64	0.65	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	78.32	ug/l	87.01	10.53	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	46.59	ug/l	51.76	0.79	1000	
118 Sn	258.20	ug/l	286.86	0.62	#######	
118 Sn	255.80	ug/l	284.19	0.46	#######	
118 Sn	232.30	ug/l	258.09	0.73	1000	
121 Sb	236.50	ug/l	262.75	0.57	1000	
137 Ba	232.90	ug/l	258.75	0.84	1000	
205 Tl	229.90	ug/l	255.42	0.90	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	223.70	ug/l	248.53	0.50	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-52971.20	3.44	-58574.40	90.4	70 - 120	IS Fai
45 Sc	2574260.30	0.37	2785824.00	92.4	70 - 120	
45 Sc	372670.81	0.49	395513.41	94.2	70 - 120	
45 Sc	7613086.00	0.66	8489632.00	89.7	70 - 120	
72 Ge	626635.00	0.23	703318.88	89.1	70 - 120	
72 Ge	236533.67	0.99	262176.69	90.2	70 - 120	
72 Ge	1603724.00	0.63	1815062.40	88.4	70 - 120	
115 In	4574471.50	1.51	5132442.00	89.1	70 - 120	
115 In	2512816.80	0.13	2771271.30	90.7	70 - 120	
115 In	10501647.00	0.60	11756014.00	89.3	70 - 120	
159 Tb	14529252.00	0.41	15745004.00	92.3	70 - 120	
165 Ho	14035154.00	0.75	15341548.00	91.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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

Calibration Blank QC Report

Data File:	C:\ICPCHEM\1\DATA\12G30k00.B\004CAL
Date Acquired:	Jul 30 2012 10:45 am
Operator:	NBS
Sample Name:	Calibration Blank
Misc Info:	
Vial Number:	1102
Current Method:	C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File:	C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update:	Jul 30 2012 10:42 am
Sample Type:	CalBlk
Total Dil Factor:	1.00

QC&ISTD Elements

Element		CPS Mean		SD	RSD(%)
6	Li	-58574.40	A	3422.00	5.84
7	(Li)	5012730.00	A	35270.00	0.70
9	Be	96.67	P	10.00	10.34
11	B	12723.57	P	69.21	0.54
23	Na	46465.33	P	355.70	0.77
24	Mg	271.12	P	25.02	9.23
27	Al	117.79	P	51.90	44.06
39	K	36141.68	P	916.70	2.54
44	Ca	159.08	P	8.41	5.29
45	Sc	2785824.00	A	10220.00	0.37
45	Sc	395513.41	A	1027.00	0.26
45	Sc	8489632.00	A	117700.00	1.39
47	Ti	1.33	P	0.00	0.00
51	V	44.89	P	6.30	14.04
52	Cr	929.82	P	55.82	6.00
55	Mn	370.68	P	5.81	1.57
56	Fe	3956.14	P	93.07	2.35
59	Co	106.22	P	13.88	13.07
60	Ni	258.67	P	27.55	10.65
63	Cu	222.67	P	4.81	2.16
65	Cu	118.22	P	8.88	7.51
66	Zn	208.89	P	23.86	11.42
72	Ge	703318.88	A	2738.00	0.39
72	Ge	262176.69	A	3668.00	1.40
72	Ge	1815062.00	A	14780.00	0.81
75	As	24.44	P	3.42	14.00
78	Se	19.00	P	2.96	15.60
78	Se	140.11	P	1.95	1.39
88	Sr	135.56	P	19.53	14.41
88	Sr	633.37	P	77.97	12.31
95	Mo	90.00	P	27.28	30.31
106	(Cd)	2.22	P	1.93	86.62
107	Ag	173.34	P	52.39	30.22
108	(Cd)	15.56	P	5.09	32.73
111	Cd	6.00	P	10.35	172.43
115	In	5132442.00	A	12690.00	0.25
115	In	2771271.00	A	36300.00	1.31
115	In	11756010.00	A	39820.00	0.34
118	Sn	193.34	P	43.34	22.42
118	Sn	108.89	P	13.47	12.37
118	Sn	433.36	P	49.11	11.33
121	Sb	144.45	P	29.12	20.16
137	Ba	54.45	P	10.18	18.70
159	Tb	15745000.00	A	19860.00	0.13
165	Ho	15341550.00	A	56310.00	0.37
205	Tl	230.01	P	14.53	6.32
206	(Pb)	386.69	P	14.53	3.76
207	(Pb)	356.69	P	29.63	8.31
208	Pb	1555.65	P	44.39	2.85

Calibration Standard QC Report

Data File: C:\ICPCHEM\1\DATA\12G30k00.B\005CALS.D\005CALS.D#
Date Acquired: Jul 30 2012 10:51 am
Operator: NBS
Sample Name: 120730 Standard 1
Misc Info:
Vial Number: 1103
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 10:48 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-53385.30	A	2945.00	5.52	0.0000
7 (Li)	5220669.00	A	45060.00	0.86	0.0000
9 Be	507.80	P	30.97	6.10	0.0000
11 B	15230.42	P	209.70	1.38	0.0000
23 Na	45639.32	P	619.10	1.36	0.0000
24 Mg	1377.89	P	16.44	1.19	0.0000
27 Al	340.02	P	26.46	7.78	0.0000
39 K	37908.13	P	649.10	1.71	0.0000
44 Ca	294.56	P	17.24	5.85	0.0000
45 Sc	2787915.00	A	25300.00	0.91	0.0000
45 Sc	391933.19	A	6215.00	1.59	0.0000
45 Sc	8560416.00	A	30700.00	0.36	0.0000
47 Ti	13.33	P	5.81	43.59	0.0000
51 V	411.57	P	9.46	2.30	0.0000
52 Cr	1284.07	P	32.74	2.55	0.0000
55 Mn	596.91	P	14.63	2.45	0.0000
56 Fe	10701.37	P	179.80	1.68	0.0000
59 Co	591.58	P	18.10	3.06	0.0000
60 Ni	407.57	P	6.84	1.68	0.0000
63 Cu	788.48	P	6.71	0.85	0.0000
65 Cu	363.12	P	32.56	8.97	0.0000
66 Zn	352.45	P	32.12	9.11	0.0000
72 Ge	709196.38	A	3260.00	0.46	0.0000
72 Ge	258991.41	A	7009.00	2.71	0.0000
72 Ge	1851851.00	A	12350.00	0.67	0.0000
75 As	86.33	P	1.67	1.93	0.0000
78 Se	43.67	P	4.37	10.01	0.0000
78 Se	140.11	P	4.54	3.24	0.0000
88 Sr	585.59	P	39.49	6.74	0.0000
88 Sr	4431.96	P	106.30	2.40	0.0000
95 Mo	672.26	P	80.65	12.00	0.0000
106 (Cd)	37.78	P	8.39	22.21	0.0000
107 Ag	1061.19	P	28.35	2.67	0.0000
108 (Cd)	28.89	P	10.18	35.24	0.0000
111 Cd	384.81	P	43.92	11.41	0.0000
115 In	5091351.00	A	31460.00	0.62	0.0000
115 In	2720113.00	A	13560.00	0.50	0.0000
115 In	11723560.00	A	57120.00	0.49	0.0000
118 Sn	844.50	P	20.09	2.38	0.0000
118 Sn	524.47	P	22.20	4.23	0.0000
118 Sn	1841.30	P	100.30	5.45	0.0000
121 Sb	1995.77	P	27.97	1.40	0.0000
137 Ba	634.48	P	41.68	6.57	0.0000
159 Tb	15723850.00	A	99360.00	0.63	0.0000
165 Ho	15312380.00	A	141300.00	0.92	0.0000
205 Tl	3073.81	P	124.90	4.06	0.0000
206 (Pb)	1166.77	P	48.42	4.15	0.0000
207 (Pb)	1070.08	P	110.20	10.30	0.0000
208 Pb	4749.40	P	99.14	2.09	0.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-53385.30	5.52	-58574.40	91.1	70 -	120	IS Fail
45 Sc	2787915.50	0.91	2785824.00	100.1	70 -	120	
45 Sc	391933.22	1.59	395513.41	99.1	70 -	120	
45 Sc	8560416.00	0.36	8489632.00	100.8	70 -	120	
72 Ge	709196.38	0.46	703318.88	100.8	70 -	120	
72 Ge	258991.38	2.71	262176.69	98.8	70 -	120	
72 Ge	1851850.80	0.67	1815062.40	102.0	70 -	120	
115 In	5091351.50	0.62	5132442.00	99.2	70 -	120	
115 In	2720113.00	0.50	2771271.30	98.2	70 -	120	
115 In	11723563.00	0.49	11756014.00	99.7	70 -	120	
159 Tb	15723846.00	0.63	15745004.00	99.9	70 -	120	
165 Ho	15312384.00	0.92	15341548.00	99.8	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\006CALS.D\006CALS.D#
Date Acquired: Jul 30 2012 10:58 am
Operator: NBS
Sample Name: 120730 Standard 2
Misc Info:
Vial Number: 1104
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 10:55 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-54319.96	A	4395.00	8.09	0.0000
7 (Li)	5263910.00	A	26230.00	0.50	1.0000
9 Be	4700.88	P	99.44	2.12	1.0000
11 B	17255.92	P	184.90	1.07	1.0000
23 Na	54631.85	P	296.30	0.54	-1.0000
24 Mg	10761.99	P	229.00	2.13	1.0000
27 Al	2051.33	P	141.50	6.90	1.0000
39 K	43678.57	P	686.30	1.57	1.0000
44 Ca	862.73	P	29.15	3.38	1.0000
45 Sc	2804012.00	A	36970.00	1.32	0.0000
45 Sc	395467.41	A	3132.00	0.79	0.0000
45 Sc	8619782.00	A	12600.00	0.15	0.0000
47 Ti	98.67	P	4.81	4.87	1.0000
51 V	2684.73	P	45.94	1.71	1.0000
52 Cr	3931.25	P	53.28	1.36	1.0000
55 Mn	2546.93	P	59.08	2.32	1.0000
56 Fe	61570.19	P	651.50	1.06	1.0000
59 Co	4518.98	P	80.04	1.77	1.0000
60 Ni	1400.98	P	14.69	1.05	1.0000
63 Cu	3399.56	P	160.10	4.71	1.0000
65 Cu	1620.56	P	34.32	2.12	1.0000
66 Zn	927.15	P	46.04	4.97	1.0000
72 Ge	711525.13	A	13800.00	1.94	0.0000
72 Ge	257072.41	A	3421.00	1.33	0.0000
72 Ge	1862199.00	A	4540.00	0.24	0.0000
75 As	530.12	P	13.59	2.56	1.0000
78 Se	241.00	P	7.84	3.25	1.0000
78 Se	200.67	P	5.18	2.58	1.0000
88 Sr	4340.81	P	187.80	4.33	1.0000
88 Sr	33428.90	P	170.60	0.51	1.0000
95 Mo	6090.39	P	262.70	4.31	1.0000
106 (Cd)	320.01	P	31.80	9.94	1.0000
107 Ag	8087.05	P	60.08	0.74	1.0000
108 (Cd)	253.34	P	3.33	1.32	1.0000
111 Cd	3455.47	P	150.20	4.35	1.0000
115 In	5130986.00	A	51620.00	1.01	0.0000
115 In	2739517.00	A	17840.00	0.65	0.0000
115 In	11834320.00	A	88380.00	0.75	0.0000
118 Sn	4370.85	P	38.45	0.88	1.0000
118 Sn	2528.10	P	185.50	7.34	1.0000
118 Sn	10080.66	P	217.20	2.15	1.0000
121 Sb	13651.56	P	356.00	2.61	1.0000
137 Ba	4858.82	P	147.00	3.03	1.0000
159 Tb	15725640.00	A	98610.00	0.63	0.0000
165 Ho	15323270.00	A	73650.00	0.48	0.0000
205 Tl	28974.62	P	420.20	1.45	1.0000
206 (Pb)	9967.42	P	66.94	0.67	1.0000
207 (Pb)	8583.11	P	98.24	1.14	1.0000
208 Pb	39427.61	P	251.90	0.64	1.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-54319.97	8.09	-58574.40	92.7	70 -	120	IS Fail
45 Sc	2804011.50	1.32	2785824.00	100.7	70 -	120	
45 Sc	395467.38	0.79	395513.41	100.0	70 -	120	
45 Sc	8619782.00	0.15	8489632.00	101.5	70 -	120	
72 Ge	711525.13	1.94	703318.88	101.2	70 -	120	
72 Ge	257072.39	1.33	262176.69	98.1	70 -	120	
72 Ge	1862199.10	0.24	1815062.40	102.6	70 -	120	
115 In	5130986.50	1.01	5132442.00	100.0	70 -	120	
115 In	2739516.50	0.65	2771271.30	98.9	70 -	120	
115 In	11834323.00	0.75	11756014.00	100.7	70 -	120	
159 Tb	15725636.00	0.63	15745004.00	99.9	70 -	120	
165 Ho	15323269.00	0.48	15341548.00	99.9	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\007CALS.D\007CALS.D#
Date Acquired: Jul 30 2012 11:05 am
Operator: NBS
Sample Name: 120730 Standard 3
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:02 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-58313.86	A	2106.00	3.61	0.0000
7 (Li)	5270673.00	A	27080.00	0.51	0.7006
9 Be	228051.30	P	1245.00	0.55	1.0000
11 B	150823.50	P	299.60	0.20	0.8782
23 Na	541414.88	P	3587.00	0.66	0.9912
24 Mg	524473.69	P	3262.00	0.62	1.0000
27 Al	90970.77	P	581.10	0.64	0.9999
39 K	329043.81	P	1875.00	0.57	0.9828
44 Ca	36330.90	P	295.30	0.81	0.9955
45 Sc	2776465.00	A	12370.00	0.45	0.0000
45 Sc	390334.59	A	5974.00	1.53	0.0000
45 Sc	8614041.00	A	108100.00	1.25	0.0000
47 Ti	4717.71	P	132.80	2.81	0.9997
51 V	127914.70	P	369.70	0.29	0.9992
52 Cr	150110.00	P	1193.00	0.79	0.9998
55 Mn	107878.40	P	1724.00	1.60	1.0000
56 Fe	2523166.00	A	22860.00	0.91	0.9998
59 Co	216461.09	P	2249.00	1.04	0.9999
60 Ni	54351.60	P	423.60	0.78	0.9995
63 Cu	145367.59	P	1072.00	0.74	0.9969
65 Cu	70730.04	P	641.60	0.91	0.9980
66 Zn	30544.67	P	267.60	0.88	0.9945
72 Ge	703925.50	A	10080.00	1.43	0.0000
72 Ge	262845.50	A	981.60	0.37	0.0000
72 Ge	1842828.00	A	27090.00	1.47	0.0000
75 As	24011.61	P	52.28	0.22	0.9997
78 Se	10355.27	P	83.27	0.80	0.9999
78 Se	2691.37	P	4.34	0.16	0.9985
88 Sr	203131.41	P	1120.00	0.55	1.0000
88 Sr	1464568.00	A	16480.00	1.13	0.9999
95 Mo	295924.09	P	2975.00	1.01	1.0000
106 (Cd)	15099.62	P	398.00	2.64	0.9999
107 Ag	384451.00	P	2466.00	0.64	0.9999
108 (Cd)	11201.48	P	194.80	1.74	0.9992
111 Cd	164827.30	P	1311.00	0.80	0.9999
115 In	5067691.00	A	48870.00	0.96	0.0000
115 In	2721660.00	A	15280.00	0.56	0.0000
115 In	11846000.00	A	54610.00	0.46	0.0000
118 Sn	190091.91	P	3194.00	1.68	0.9984
118 Sn	110958.40	P	363.60	0.33	0.9974
118 Sn	458259.09	P	1592.00	0.35	0.9989
121 Sb	656987.19	P	1506.00	0.23	0.9993
137 Ba	241380.41	P	3130.00	1.30	0.9998
159 Tb	15849340.00	A	74410.00	0.47	0.0000
165 Ho	15483980.00	A	118200.00	0.76	0.0000
205 Tl	1277438.00	A	8546.00	0.67	1.0000
206 (Pb)	481405.59	P	4715.00	0.98	0.9998
207 (Pb)	403490.31	P	2359.00	0.58	0.9999
208 Pb	1886737.00	P	10850.00	0.58	0.9999

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-58313.87	3.61	-58574.40	99.6	70 -	120	IS Fail
45 Sc	2776465.00	0.45	2785824.00	99.7	70 -	120	
45 Sc	390334.59	1.53	395513.41	98.7	70 -	120	
45 Sc	8614041.00	1.25	8489632.00	101.5	70 -	120	
72 Ge	703925.44	1.43	703318.88	100.1	70 -	120	
72 Ge	262845.47	0.37	262176.69	100.3	70 -	120	
72 Ge	1842828.30	1.47	1815062.40	101.5	70 -	120	
115 In	5067691.50	0.96	5132442.00	98.7	70 -	120	
115 In	2721660.50	0.56	2771271.30	98.2	70 -	120	
115 In	11845998.00	0.46	11756014.00	100.8	70 -	120	
159 Tb	15849345.00	0.47	15745004.00	100.7	70 -	120	
165 Ho	15483980.00	0.76	15341548.00	100.9	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\008CALS.D\008CALS.D#
Date Acquired: Jul 30 2012 11:11 am
Operator: NBS
Sample Name: 120730 Standard 4
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:08 am
Sample Type: CalStd
Total Dil Factor: 1.00

QC&ISTD Elements

Element	CPS Mean		SD	RSD(%)	Cal Coef
6 Li	-48464.45	A	4183.00	8.63	0.0000
7 (Li)	5179757.00	A	40020.00	0.77	0.4429
9 Be	457152.59	P	2431.00	0.53	1.0000
11 B	289740.09	P	3041.00	1.05	0.9999
23 Na	1026032.00	A	14950.00	1.46	1.0000
24 Mg	1001093.00	A	12860.00	1.28	1.0000
27 Al	182670.91	P	868.50	0.48	1.0000
39 K	618221.31	P	1259.00	0.20	1.0000
44 Ca	72668.17	P	300.20	0.41	1.0000
45 Sc	2781877.00	A	30750.00	1.11	0.0000
45 Sc	387784.50	A	1503.00	0.39	0.0000
45 Sc	8562247.00	A	44640.00	0.52	0.0000
47 Ti	9297.71	P	40.70	0.44	1.0000
51 V	255696.41	P	1335.00	0.52	1.0000
52 Cr	294965.09	P	2616.00	0.89	1.0000
55 Mn	213799.00	P	2398.00	1.12	1.0000
56 Fe	4871326.00	A	58620.00	1.20	1.0000
59 Co	427635.69	P	4503.00	1.05	1.0000
60 Ni	106965.90	P	1195.00	1.12	1.0000
63 Cu	289522.19	P	2567.00	0.89	1.0000
65 Cu	140960.91	P	1135.00	0.81	1.0000
66 Zn	59859.09	P	130.10	0.22	1.0000
72 Ge	720840.88	A	14050.00	1.95	0.0000
72 Ge	258005.20	A	3471.00	1.35	0.0000
72 Ge	1825173.00	A	4815.00	0.26	0.0000
75 As	47936.04	P	350.00	0.73	1.0000
78 Se	20824.85	P	114.20	0.55	1.0000
78 Se	5174.16	P	43.04	0.83	1.0000
88 Sr	402906.81	P	1589.00	0.39	1.0000
88 Sr	2868761.00	A	12840.00	0.45	1.0000
95 Mo	590211.50	P	1537.00	0.26	1.0000
106 (Cd)	30069.39	P	324.80	1.08	1.0000
107 Ag	765514.31	P	2939.00	0.38	1.0000
108 (Cd)	22376.17	P	154.00	0.69	1.0000
111 Cd	329890.31	P	2036.00	0.62	1.0000
115 In	5053971.00	A	97150.00	1.92	0.0000
115 In	2702437.00	A	25420.00	0.94	0.0000
115 In	11694990.00	A	53400.00	0.46	0.0000
118 Sn	387528.41	P	3646.00	0.94	1.0000
118 Sn	221214.00	P	1808.00	0.82	1.0000
118 Sn	919478.31	P	7260.00	0.79	1.0000
121 Sb	1194712.00	A	8325.00	0.70	1.0000
137 Ba	479582.31	P	3311.00	0.69	1.0000
159 Tb	15761570.00	A	221800.00	1.41	0.0000
165 Ho	15411020.00	A	130500.00	0.85	0.0000
205 Tl	2499670.00	A	5139.00	0.21	1.0000
206 (Pb)	954805.81	P	1609.00	0.17	1.0000
207 (Pb)	803558.19	P	3990.00	0.50	1.0000
208 Pb	3542529.00	A	24170.00	0.68	1.0000

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-48464.46	8.63	-58574.40	82.7	70 -	120	IS Fail
45 Sc	2781876.80	1.11	2785824.00	99.9	70 -	120	
45 Sc	387784.47	0.39	395513.41	98.0	70 -	120	
45 Sc	8562247.00	0.52	8489632.00	100.9	70 -	120	
72 Ge	720840.94	1.95	703318.88	102.5	70 -	120	
72 Ge	258005.25	1.35	262176.69	98.4	70 -	120	
72 Ge	1825172.80	0.26	1815062.40	100.6	70 -	120	
115 In	5053971.50	1.92	5132442.00	98.5	70 -	120	
115 In	2702437.50	0.94	2771271.30	97.5	70 -	120	
115 In	11694988.00	0.46	11756014.00	99.5	70 -	120	
159 Tb	15761566.00	1.41	15745004.00	100.1	70 -	120	
165 Ho	15411025.00	0.85	15341548.00	100.5	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\009_QCS.D\009_QCS.D#
Date Acquired: Jul 30 2012 11:18 am
Operator: NBS
Sample Name: ICV 120730
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 am
Sample Type: QCS
Total Dil Factor: 1.00

QC Elements

Element	Conc.		RSD(%)	Expected	QC Range(%)	Flag
7 (Li)	--------	ug/l	--------	100.00	90 - 110	
9 Be	100.60	ug/l	0.60	100.00	90 - 110	
11 B	100.20	ug/l	0.77	100.00	90 - 110	
23 Na	2448.00	ug/l	1.11	2500.00	90 - 110	
24 Mg	2548.00	ug/l	0.92	2500.00	90 - 110	
27 Al	2463.00	ug/l	0.37	2500.00	90 - 110	
39 K	2502.00	ug/l	0.74	2500.00	90 - 110	
44 Ca	2423.00	ug/l	1.45	2500.00	90 - 110	
47 Ti	96.61	ug/l	1.16	100.00	90 - 110	
51 V	102.20	ug/l	0.26	100.00	90 - 110	
52 Cr	102.40	ug/l	0.62	100.00	90 - 110	
55 Mn	102.50	ug/l	0.72	100.00	90 - 110	
56 Fe	2459.00	ug/l	0.49	2500.00	90 - 110	
59 Co	100.50	ug/l	0.43	100.00	90 - 110	
60 Ni	102.10	ug/l	0.67	100.00	90 - 110	
63 Cu	99.90	ug/l	1.13	100.00	90 - 110	
65 Cu	99.72	ug/l	0.83	100.00	90 - 110	
66 Zn	100.50	ug/l	1.05	100.00	90 - 110	
75 As	98.82	ug/l	0.47	100.00	90 - 110	
78 Se	100.40	ug/l	0.66	100.00	90 - 110	
78 Se	99.93	ug/l	1.01	100.00	90 - 110	
88 Sr	98.22	ug/l	1.13	100.00	90 - 110	
88 Sr	98.20	ug/l	0.69	100.00	90 - 110	
95 Mo	98.76	ug/l	0.67	100.00	90 - 110	
106 (Cd)	--------	ug/l	--------	100.00	90 - 110	
107 Ag	50.00	ug/l	0.69	50.00	90 - 110	
108 (Cd)	--------	ug/l	--------	100.00	90 - 110	
111 Cd	99.46	ug/l	0.82	100.00	90 - 110	
118 Sn	52.11	ug/l	12.03	50.00	90 - 110	
118 Sn	49.97	ug/l	2.11	50.00	90 - 110	
118 Sn	49.25	ug/l	2.39	50.00	90 - 110	
121 Sb	99.86	ug/l	0.92	100.00	90 - 110	
137 Ba	97.77	ug/l	0.14	100.00	90 - 110	
205 Tl	99.56	ug/l	0.27	100.00	90 - 110	
206 (Pb)	--------	ug/l	--------	100.00	90 - 110	
207 (Pb)	--------	ug/l	--------	100.00	90 - 110	
208 Pb	100.90	ug/l	0.55	100.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-52926.22	4.78	-58574.40	90.4	70 - 120	IS Fail
45 Sc	2764064.30	0.78	2785824.00	99.2	70 - 120	
45 Sc	384039.38	0.61	395513.41	97.1	70 - 120	
45 Sc	8556452.00	0.63	8489632.00	100.8	70 - 120	
72 Ge	717645.63	0.74	703318.88	102.0	70 - 120	
72 Ge	261098.16	0.25	262176.69	99.6	70 - 120	
72 Ge	1829417.30	0.51	1815062.40	100.8	70 - 120	
115 In	5070432.50	1.09	5132442.00	98.8	70 - 120	
115 In	2698854.00	0.65	2771271.30	97.4	70 - 120	
115 In	11715721.00	0.14	11756014.00	99.7	70 - 120	
159 Tb	15628168.00	0.51	15745004.00	99.3	70 - 120	
165 Ho	15172297.00	0.51	15341548.00	98.9	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\011_CCB.D\011_CCB.D#
Date Acquired: Jul 30 2012 11:31 am
Operator: NBS
Sample Name: ICB 120730
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	200.64	0.12	
11 B	0.28 ug/l	43.37	15.00	
23 Na	0.75 ug/l	159.31	77.10	
24 Mg	-0.14 ug/l	69.55	7.50	
27 Al	0.03 ug/l	961.93	3.96	
39 K	4.47 ug/l	65.71	19.20	
44 Ca	-0.82 ug/l	363.09	90.00	
47 Ti	0.01 ug/l	225.33	0.78	
51 V	0.01 ug/l	71.65	0.21	
52 Cr	-0.03 ug/l	71.17	0.12	
55 Mn	-0.01 ug/l	86.16	0.18	
56 Fe	0.32 ug/l	16.52	40.80	
59 Co	0.00 ug/l	111.12	0.09	
60 Ni	0.00 ug/l	668.69	0.48	
63 Cu	0.00 ug/l	706.10	0.39	
65 Cu	-0.01 ug/l	87.51	0.39	
66 Zn	0.07 ug/l	42.10	6.90	
75 As	0.01 ug/l	161.86	0.27	
78 Se	0.00 ug/l	415.36	0.30	
78 Se	-0.11 ug/l	99.12	0.30	
88 Sr	0.01 ug/l	70.61	0.03	
88 Sr	0.00 ug/l	69.45	0.03	
95 Mo	0.03 ug/l	16.19	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	240.87	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.01 ug/l	109.57	0.06	
118 Sn	0.04 ug/l	28.32	#######	
118 Sn	0.05 ug/l	65.60	#######	
118 Sn	0.02 ug/l	22.45	0.30	
121 Sb	0.02 ug/l	0.59	0.03	
137 Ba	0.00 ug/l	72.76	0.12	
205 Tl	0.01 ug/l	33.27	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.01 ug/l	71.22	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-62203.32	8.27	-58574.40	106.2	70 - 120	IS Fai
45 Sc	2764883.50	1.10	2785824.00	99.2	70 - 120	
45 Sc	391780.94	0.83	395513.41	99.1	70 - 120	
45 Sc	8279305.00	0.15	8489632.00	97.5	70 - 120	
72 Ge	700270.19	0.99	703318.88	99.6	70 - 120	
72 Ge	256700.83	0.32	262176.69	97.9	70 - 120	
72 Ge	1804709.10	0.76	1815062.40	99.4	70 - 120	
115 In	5067238.00	0.40	5132442.00	98.7	70 - 120	
115 In	2711252.00	0.69	2771271.30	97.8	70 - 120	
115 In	11560451.00	1.25	11756014.00	98.3	70 - 120	
159 Tb	15451302.00	0.10	15745004.00	98.1	70 - 120	
165 Ho	15005759.00	0.25	15341548.00	97.8	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.B\004CALB.D\004CALB.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Fail

CCV QC Report

Data File: C:\ICPCHEM\1\DATA\12G30k00.B\012_CCV.D\012_CCV.D#
Date Acquired: Jul 30 2012 11:38 am
Operator: NBS
Sample Name: CCV 120730
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	1.14	50.00	90 - 110	
11 B	49.84	ug/l	1.70	50.00	90 - 110	
23 Na	1263.00	ug/l	1.31	1250.00	90 - 110	
24 Mg	2593.00	ug/l	2.17	2500.00	90 - 110	
27 Al	1012.00	ug/l	1.67	1000.00	90 - 110	
39 K	1014.00	ug/l	2.11	1000.00	90 - 110	
44 Ca	2506.00	ug/l	1.32	2500.00	90 - 110	
47 Ti	49.89	ug/l	1.87	50.00	90 - 110	
51 V	49.70	ug/l	1.44	50.00	90 - 110	
52 Cr	50.10	ug/l	1.81	50.00	90 - 110	
55 Mn	49.68	ug/l	1.74	50.00	90 - 110	
56 Fe	1020.00	ug/l	0.59	1000.00	90 - 110	
59 Co	50.14	ug/l	1.25	50.00	90 - 110	
60 Ni	50.22	ug/l	1.14	50.00	90 - 110	
63 Cu	49.56	ug/l	1.37	50.00	90 - 110	
65 Cu	49.91	ug/l	2.27	50.00	90 - 110	
66 Zn	50.19	ug/l	2.59	50.00	90 - 110	
75 As	49.71	ug/l	2.17	50.00	90 - 110	
78 Se	50.44	ug/l	1.15	50.00	90 - 110	
78 Se	50.42	ug/l	0.82	50.00	90 - 110	
88 Sr	49.81	ug/l	0.95	50.00	90 - 110	
88 Sr	51.12	ug/l	0.68	50.00	90 - 110	
95 Mo	50.12	ug/l	0.29	50.00	90 - 110	
106 (Cd)	--------	ug/l	--------	50.00	90 - 110	
107 Ag	25.32	ug/l	0.51	25.00	90 - 110	
108 (Cd)	--------	ug/l	--------	50.00	90 - 110	
111 Cd	50.23	ug/l	0.45	50.00	90 - 110	
118 Sn	49.72	ug/l	1.75	---	##### - #####	
118 Sn	49.69	ug/l	0.89	---	##### - #####	
118 Sn	49.69	ug/l	0.93	50.00	90 - 110	
121 Sb	53.59	ug/l	0.12	50.00	90 - 110	
137 Ba	50.16	ug/l	0.76	50.00	90 - 110	
205 Tl	50.84	ug/l	0.26	50.00	90 - 110	
206 (Pb)	--------	ug/l	--------	50.00	90 - 110	
207 (Pb)	--------	ug/l	--------	50.00	90 - 110	
208 Pb	52.58	ug/l	1.11	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-57948.08	9.46	-58574.40	98.9	70 - 120	IS Fail
45 Sc	2727276.00	0.97	2785824.00	97.9	70 - 120	
45 Sc	379397.72	1.09	395513.41	95.9	70 - 120	
45 Sc	8551942.00	1.25	8489632.00	100.7	70 - 120	
72 Ge	696732.38	0.32	703318.88	99.1	70 - 120	
72 Ge	255572.11	2.30	262176.69	97.5	70 - 120	
72 Ge	1845855.80	1.06	1815062.40	101.7	70 - 120	
115 In	4937804.00	1.76	5132442.00	96.2	70 - 120	
115 In	2671454.50	2.00	2771271.30	96.4	70 - 120	
115 In	11760441.00	0.68	11756014.00	100.0	70 - 120	
159 Tb	15800918.00	0.78	15745004.00	100.4	70 - 120	
165 Ho	15260333.00	0.86	15341548.00	99.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\013_CCB.D\013_CCB.D#
Date Acquired: Jul 30 2012 11:45 am
Operator: NBS
Sample Name: CCB 120730
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	114.38	0.12	
11 B	0.47 ug/l	7.22	15.00	
23 Na	-0.51 ug/l	287.75	77.10	
24 Mg	0.13 ug/l	148.60	7.50	
27 Al	0.01 ug/l	6533.00	3.96	
39 K	7.51 ug/l	32.28	19.20	
44 Ca	-1.63 ug/l	27.30	90.00	
47 Ti	0.01 ug/l	1.36	0.78	
51 V	0.02 ug/l	25.21	0.21	
52 Cr	-0.01 ug/l	33.73	0.12	
55 Mn	0.00 ug/l	602.46	0.18	
56 Fe	0.46 ug/l	7.94	40.80	
59 Co	0.01 ug/l	19.37	0.09	
60 Ni	0.04 ug/l	60.68	0.48	
63 Cu	0.00 ug/l	193.30	0.39	
65 Cu	-0.01 ug/l	114.57	0.39	
66 Zn	0.03 ug/l	129.25	6.90	
75 As	0.01 ug/l	42.51	0.27	
78 Se	0.01 ug/l	38.45	0.30	
78 Se	0.11 ug/l	14.43	0.30	
88 Sr	0.01 ug/l	21.50	0.03	
88 Sr	0.00 ug/l	96.66	0.03	
95 Mo	0.03 ug/l	17.24	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	109.57	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.01 ug/l	70.71	0.06	
118 Sn	0.10 ug/l	10.01	#######	
118 Sn	0.09 ug/l	23.32	#######	
118 Sn	0.05 ug/l	7.46	0.30	
121 Sb	0.08 ug/l	1.51	0.03	Fail
137 Ba	0.01 ug/l	61.83	0.12	
205 Tl	0.01 ug/l	16.38	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.01 ug/l	26.91	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-57230.45	6.23	-58574.40	97.7	70 - 120	IS Fail
45 Sc	2695866.50	0.44	2785824.00	96.8	70 - 120	
45 Sc	382675.06	0.70	395513.41	96.8	70 - 120	
45 Sc	7887338.50	1.13	8489632.00	92.9	70 - 120	
72 Ge	678966.31	1.43	703318.88	96.5	70 - 120	
72 Ge	248608.06	0.79	262176.69	94.8	70 - 120	
72 Ge	1696510.90	1.06	1815062.40	93.5	70 - 120	
115 In	4954661.00	0.87	5132442.00	96.5	70 - 120	
115 In	2649755.50	0.33	2771271.30	95.6	70 - 120	
115 In	11038492.00	0.65	11756014.00	93.9	70 - 120	
159 Tb	14629988.00	0.88	15745004.00	92.9	70 - 120	
165 Ho	14221743.00	1.21	15341548.00	92.7	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\016SMPL.D\016SMPL.D#
Date Acquired: Jul 30 2012 12:04 pm
Operator: NBS
Sample Name: ICSA 120730
Misc Info:
Vial Number: 2102
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	0.05 ug/l	0.05	26.78	1000	
11 B	7.42 ug/l	7.42	2.81	1000	
23 Na	90840.00 ug/l	90840.00	1.91	25000	>Cal
24 Mg	89210.00 ug/l	89210.00	1.57	50000	>Cal
27 Al	88950.00 ug/l	88950.00	1.84	20000	>Cal
39 K	88390.00 ug/l	88390.00	1.04	20000	>Cal
44 Ca	91820.00 ug/l	91820.00	1.88	50000	>Cal
47 Ti	1741.00 ug/l	1741.00	1.47	1000	>Cal
51 V	0.13 ug/l	0.13	12.87	1000	
52 Cr	1.92 ug/l	1.92	41.91	1000	
55 Mn	6.04 ug/l	6.04	2.10	1000	
56 Fe	91440.00 ug/l	91440.00	1.91	20000	>Cal
59 Co	2.01 ug/l	2.01	2.61	1000	
60 Ni	1.93 ug/l	1.93	2.84	1000	
63 Cu	0.81 ug/l	0.81	6.08	1000	
65 Cu	0.83 ug/l	0.83	3.22	1000	
66 Zn	1.44 ug/l	1.44	3.21	1000	
75 As	0.32 ug/l	0.32	1.78	1000	
78 Se	0.23 ug/l	0.23	9.03	1000	
78 Se	0.77 ug/l	0.77	25.05	1000	
88 Sr	1.30 ug/l	1.30	2.21	1000	
88 Sr	1.44 ug/l	1.44	1.88	1000	
95 Mo	1865.00 ug/l	1865.00	0.37	1000	>Cal
106 (Cd)	-------- ug/l	#VALUE!	--------	#######	
107 Ag	1.61 ug/l	1.61	4.69	500	
108 (Cd)	-------- ug/l	#VALUE!	--------	#######	
111 Cd	0.91 ug/l	0.91	7.45	1000	
118 Sn	0.77 ug/l	0.77	7.56	#######	
118 Sn	0.86 ug/l	0.86	7.67	#######	
118 Sn	0.72 ug/l	0.72	3.25	1000	
121 Sb	1.58 ug/l	1.58	1.13	1000	
137 Ba	2.61 ug/l	2.61	0.94	1000	
205 Tl	0.09 ug/l	0.09	2.09	1000	
206 (Pb)	-------- ug/l	#VALUE!	--------	#######	
207 (Pb)	-------- ug/l	#VALUE!	--------	#######	
208 Pb	0.44 ug/l	0.44	2.46	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-53392.42	6.17	-58574.40	91.2	70 - 120	IS Fai
45 Sc	2669506.30	0.69	2785824.00	95.8	70 - 120	
45 Sc	377833.34	1.75	395513.41	95.5	70 - 120	
45 Sc	7891813.50	0.51	8489632.00	93.0	70 - 120	
72 Ge	659091.38	1.21	703318.88	93.7	70 - 120	
72 Ge	244975.88	0.79	262176.69	93.4	70 - 120	
72 Ge	1705685.40	1.46	1815062.40	94.0	70 - 120	
115 In	4605073.00	0.57	5132442.00	89.7	70 - 120	
115 In	2459350.80	0.23	2771271.30	88.7	70 - 120	
115 In	10279541.00	0.79	11756014.00	87.4	70 - 120	
159 Tb	14429153.00	1.10	15745004.00	91.6	70 - 120	
165 Ho	14011419.00	1.74	15341548.00	91.3	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\017ICSB.D\017ICSB.D#
Date Acquired: Jul 30 2012 12:11 pm
Acq. Method: 62A0730A.M
Operator: NBS
Sample Name: ICSAB 120730
Misc Info:
Vial Number: 2103
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal. Update: Jul 30 2012 11:15 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	229.00	1.40	250	91.6	80 - 120	
11 B	45	3	5.64	1.09	---		-	
23 Na	45	2	89590.00	1.29	---		-	
24 Mg	45	2	88700.00	1.44	---		-	
27 Al	45	2	87670.00	1.03	---		-	
39 K	45	2	87340.00	1.00	---		-	
44 Ca	45	2	91400.00	0.74	---		-	
47 Ti	45	2	1718.00	0.87	2000	85.9	80 - 120	
51 V	45	2	252.70	0.98	250	101.1	80 - 120	
52 Cr	45	2	240.20	0.68	250	96.1	80 - 120	
55 Mn	45	2	244.80	0.30	250	97.9	80 - 120	
56 Fe	45	2	90410.00	1.19	---		-	
59 Co	45	2	211.60	1.04	250	84.6	80 - 120	
60 Ni	45	2	449.70	1.08	500	89.9	80 - 120	
63 Cu	45	2	219.30	0.91	250	87.7	80 - 120	
65 Cu	45	2	219.70	0.69	250	87.9	80 - 120	
66 Zn	115	2	486.10	0.22	500	97.2	80 - 120	
75 As	115	2	263.50	0.33	250	105.4	80 - 120	
78 Se	115	1	252.60	1.07	250	101.0	80 - 120	
78 Se	115	2	254.10	0.21	250	101.6	80 - 120	
88 Sr	115	2	1.32	1.17	---		-	
88 Sr	115	3	1.42	0.56	---		-	
95 Mo	115	3	2062.00	0.30	2000	103.1	80 - 120	
106 (Cd)	---	3	---	---	---		-	
107 Ag	115	3	441.50	3.82	500	88.3	80 - 120	
108 (Cd)	---	3	---	---	---		-	
111 Cd	115	3	440.70	0.28	500	88.1	80 - 120	
118 Sn	115	1	0.49	1.43	---		-	
118 Sn	115	2	0.53	10.48	---		-	
118 Sn	115	3	0.50	3.41	---		-	
121 Sb	115	3	247.30	0.67	250	98.9	80 - 120	
137 Ba	115	3	237.10	0.78	250	94.8	80 - 120	
205 Tl	159	3	223.50	0.41	250	89.4	80 - 120	
206 (Pb)	---	3	---	---	---		-	
207 (Pb)	---	3	---	---	---		-	
208 Pb	159	3	427.50	0.46	500	85.5	80 - 120	

ISTD Elements

Element	Tune	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	3	-51947	5.06	-58574	88.7	70 - 120	IS Fail
45 Sc	1	2699830	0.50	2785824	96.9	70 - 120	
45 Sc	2	382692	1.05	395513	96.8	70 - 120	
45 Sc	3	8020975	0.43	8489632	94.5	70 - 120	
72 Ge	1	666575	1.13	703319	94.8	70 - 120	
72 Ge	2	241108	0.84	262177	92.0	70 - 120	
72 Ge	3	1733549	0.64	1815062	95.5	70 - 120	
115 In	1	4660038	0.65	5132442	90.8	70 - 120	
115 In	2	2456459	0.24	2771271	88.6	70 - 120	
115 In	3	10409916	0.61	11756014	88.5	70 - 120	
159 Tb	3	14524894	0.51	15745004	92.3	70 - 120	
165 Ho	3	14073279	0.52	15341548	91.7	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\12G30k00.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\12G30k00.B\019_CCV.D\019_CCV.D#
Date Acquired: Jul 30 2012 12:24 pm
Operator: NBS
Sample Name: CCV 120730
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	47.98	ug/l	0.56	50.00	90 - 110	
11 B	51.01	ug/l	1.69	50.00	90 - 110	
23 Na	1262.00	ug/l	0.95	1250.00	90 - 110	
24 Mg	2575.00	ug/l	0.80	2500.00	90 - 110	
27 Al	1009.00	ug/l	1.69	1000.00	90 - 110	
39 K	1035.00	ug/l	1.18	1000.00	90 - 110	
44 Ca	2508.00	ug/l	0.63	2500.00	90 - 110	
47 Ti	50.39	ug/l	2.79	50.00	90 - 110	
51 V	50.02	ug/l	0.76	50.00	90 - 110	
52 Cr	49.62	ug/l	0.35	50.00	90 - 110	
55 Mn	49.57	ug/l	0.62	50.00	90 - 110	
56 Fe	1016.00	ug/l	0.65	1000.00	90 - 110	
59 Co	49.57	ug/l	1.36	50.00	90 - 110	
60 Ni	49.43	ug/l	1.71	50.00	90 - 110	
63 Cu	49.26	ug/l	1.13	50.00	90 - 110	
65 Cu	49.49	ug/l	1.21	50.00	90 - 110	
66 Zn	50.01	ug/l	0.77	50.00	90 - 110	
75 As	50.62	ug/l	1.36	50.00	90 - 110	
78 Se	50.33	ug/l	0.79	50.00	90 - 110	
78 Se	51.75	ug/l	1.93	50.00	90 - 110	
88 Sr	50.55	ug/l	0.17	50.00	90 - 110	
88 Sr	50.88	ug/l	0.83	50.00	90 - 110	
95 Mo	50.30	ug/l	0.50	50.00	90 - 110	
106 (Cd)	--------	ug/l	--------	50.00	90 - 110	
107 Ag	26.95	ug/l	0.45	25.00	90 - 110	
108 (Cd)	--------	ug/l	--------	50.00	90 - 110	
111 Cd	50.02	ug/l	0.84	50.00	90 - 110	
118 Sn	50.53	ug/l	1.13	---	##### - #####	
118 Sn	50.61	ug/l	0.67	---	##### - #####	
118 Sn	50.42	ug/l	1.42	50.00	90 - 110	
121 Sb	54.70	ug/l	1.10	50.00	90 - 110	
137 Ba	50.10	ug/l	1.00	50.00	90 - 110	
205 Tl	49.76	ug/l	0.31	50.00	90 - 110	
206 (Pb)	--------	ug/l	--------	50.00	90 - 110	
207 (Pb)	--------	ug/l	--------	50.00	90 - 110	
208 Pb	52.28	ug/l	0.33	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-54939.30	2.05	-58574.40	93.8	70 - 120	IS Fail
45 Sc	2701416.50	0.34	2785824.00	97.0	70 - 120	
45 Sc	382502.97	0.34	395513.41	96.7	70 - 120	
45 Sc	8022860.00	0.38	8489632.00	94.5	70 - 120	
72 Ge	681314.13	0.73	703318.88	96.9	70 - 120	
72 Ge	250391.50	1.66	262176.69	95.5	70 - 120	
72 Ge	1738107.40	0.60	1815062.40	95.8	70 - 120	
115 In	4910216.00	0.40	5132442.00	95.7	70 - 120	
115 In	2638894.00	0.64	2771271.30	95.2	70 - 120	
115 In	11129053.00	0.79	11756014.00	94.7	70 - 120	
159 Tb	14923061.00	0.53	15745004.00	94.8	70 - 120	
165 Ho	14396544.00	0.50	15341548.00	93.8	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\021_CCB.D\021_CCB.D#
Date Acquired: Jul 30 2012 12:37 pm
Operator: NBS
Sample Name: CCB 120730
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	47.77	0.12	
11 B	2.15 ug/l	5.81	15.00	
23 Na	-6.04 ug/l	31.96	77.10	
24 Mg	1.15 ug/l	5.15	7.50	
27 Al	0.28 ug/l	58.41	3.96	
39 K	8.80 ug/l	21.79	19.20	
44 Ca	-1.76 ug/l	100.91	90.00	
47 Ti	0.04 ug/l	32.55	0.78	
51 V	0.00 ug/l	100.14	0.21	
52 Cr	-0.16 ug/l	7.37	0.12	
55 Mn	-0.07 ug/l	1.37	0.18	
56 Fe	0.71 ug/l	10.14	40.80	
59 Co	0.00 ug/l	199.17	0.09	
60 Ni	-0.10 ug/l	16.64	0.48	
63 Cu	-0.01 ug/l	32.74	0.39	
65 Cu	-0.02 ug/l	45.70	0.39	
66 Zn	0.02 ug/l	170.33	6.90	
75 As	0.00 ug/l	8538.90	0.27	
78 Se	-0.01 ug/l	286.16	0.30	
78 Se	0.31 ug/l	21.07	0.30	Fail
88 Sr	0.00 ug/l	85.46	0.03	
88 Sr	0.00 ug/l	210.50	0.03	
95 Mo	0.09 ug/l	4.22	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.14 ug/l	4.85	0.09	Fail
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.01 ug/l	107.50	0.06	
118 Sn	0.08 ug/l	11.31	#######	
118 Sn	0.09 ug/l	26.02	#######	
118 Sn	0.06 ug/l	19.94	0.30	
121 Sb	0.09 ug/l	5.58	0.03	Fail
137 Ba	0.01 ug/l	51.61	0.12	
205 Tl	0.01 ug/l	48.20	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.01 ug/l	29.54	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-52019.07	7.09	-58574.40	88.8	70 - 120	IS Fail
45 Sc	2762767.00	0.52	2785824.00	99.2	70 - 120	
45 Sc	392029.59	1.57	395513.41	99.1	70 - 120	
45 Sc	8153093.00	1.05	8489632.00	96.0	70 - 120	
72 Ge	693517.94	0.77	703318.88	98.6	70 - 120	
72 Ge	254846.06	0.66	262176.69	97.2	70 - 120	
72 Ge	1766832.30	1.00	1815062.40	97.3	70 - 120	
115 In	5032572.50	0.13	5132442.00	98.1	70 - 120	
115 In	2711617.80	0.55	2771271.30	97.8	70 - 120	
115 In	11379383.00	0.24	11756014.00	96.8	70 - 120	
159 Tb	15022815.00	0.85	15745004.00	95.4	70 - 120	
165 Ho	14672028.00	0.09	15341548.00	95.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.B\004CALB.D\004CALB.D#

3 :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\12G30k00.B\029_CCV.D\029_CCV.D#
Date Acquired: Jul 30 2012 01:30 pm
Operator: NBS
Sample Name: CCV 120730
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	48.64	ug/l	0.75	50.00	90 - 110	
11 B	52.54	ug/l	1.36	50.00	90 - 110	
23 Na	1247.00	ug/l	0.90	1250.00	90 - 110	
24 Mg	2571.00	ug/l	0.93	2500.00	90 - 110	
27 Al	1010.00	ug/l	0.25	1000.00	90 - 110	
39 K	1016.00	ug/l	0.23	1000.00	90 - 110	
44 Ca	2503.00	ug/l	0.76	2500.00	90 - 110	
47 Ti	49.36	ug/l	1.23	50.00	90 - 110	
51 V	49.81	ug/l	0.71	50.00	90 - 110	
52 Cr	49.32	ug/l	1.20	50.00	90 - 110	
55 Mn	49.39	ug/l	0.96	50.00	90 - 110	
56 Fe	1007.00	ug/l	0.93	1000.00	90 - 110	
59 Co	49.53	ug/l	1.21	50.00	90 - 110	
60 Ni	48.96	ug/l	0.59	50.00	90 - 110	
63 Cu	48.86	ug/l	0.69	50.00	90 - 110	
65 Cu	48.95	ug/l	0.75	50.00	90 - 110	
66 Zn	49.85	ug/l	1.59	50.00	90 - 110	
75 As	50.36	ug/l	1.26	50.00	90 - 110	
78 Se	49.78	ug/l	0.92	50.00	90 - 110	
78 Se	51.01	ug/l	1.21	50.00	90 - 110	
88 Sr	50.97	ug/l	0.46	50.00	90 - 110	
88 Sr	50.85	ug/l	1.10	50.00	90 - 110	
95 Mo	50.02	ug/l	0.40	50.00	90 - 110	
106 (Cd)	--------	ug/l	--------	50.00	90 - 110	
107 Ag	25.23	ug/l	0.07	25.00	90 - 110	
108 (Cd)	--------	ug/l	--------	50.00	90 - 110	
111 Cd	50.00	ug/l	0.50	50.00	90 - 110	
118 Sn	50.07	ug/l	1.50	---	##### - #####	
118 Sn	50.55	ug/l	0.90	---	##### - #####	
118 Sn	50.15	ug/l	0.49	50.00	90 - 110	
121 Sb	54.18	ug/l	0.05	50.00	90 - 110	
137 Ba	50.53	ug/l	0.50	50.00	90 - 110	
205 Tl	51.01	ug/l	1.04	50.00	90 - 110	
206 (Pb)	--------	ug/l	--------	50.00	90 - 110	
207 (Pb)	--------	ug/l	--------	50.00	90 - 110	
208 Pb	53.26	ug/l	1.23	50.00	90 - 110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-49981.00	5.45	-58574.40	85.3	70 - 120	IS Fail
45 Sc	2653292.00	1.05	2785824.00	95.2	70 - 120	
45 Sc	378914.75	0.98	395513.41	95.8	70 - 120	
45 Sc	7955191.00	0.85	8489632.00	93.7	70 - 120	
72 Ge	674380.19	0.78	703318.88	95.9	70 - 120	
72 Ge	250141.44	0.93	262176.69	95.4	70 - 120	
72 Ge	1723275.50	0.95	1815062.40	94.9	70 - 120	
115 In	4823762.50	1.07	5132442.00	94.0	70 - 120	
115 In	2605639.00	0.69	2771271.30	94.0	70 - 120	
115 In	11032758.00	0.16	11756014.00	93.8	70 - 120	
159 Tb	14794552.00	0.93	15745004.00	94.0	70 - 120	
165 Ho	14324687.00	0.27	15341548.00	93.4	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\031_CCB.D\031_CCB.D#
Date Acquired: Jul 30 2012 01:48 pm
Operator: NBS
Sample Name: CCB 120730
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	23.08	0.12	
11 B	2.76 ug/l	2.39	15.00	
23 Na	-4.83 ug/l	32.62	77.10	
24 Mg	-0.06 ug/l	90.56	7.50	
27 Al	0.16 ug/l	69.62	3.96	
39 K	9.07 ug/l	16.11	19.20	
44 Ca	-2.24 ug/l	111.85	90.00	
47 Ti	0.03 ug/l	98.74	0.78	
51 V	0.01 ug/l	80.17	0.21	
52 Cr	-0.18 ug/l	5.41	0.12	
55 Mn	-0.05 ug/l	19.28	0.18	
56 Fe	0.18 ug/l	16.47	40.80	
59 Co	0.00 ug/l	387.55	0.09	
60 Ni	-0.11 ug/l	11.03	0.48	
63 Cu	-0.01 ug/l	55.93	0.39	
65 Cu	-0.02 ug/l	18.75	0.39	
66 Zn	0.03 ug/l	124.68	6.90	
75 As	0.01 ug/l	55.72	0.27	
78 Se	-0.01 ug/l	303.92	0.30	
78 Se	0.13 ug/l	41.22	0.30	
88 Sr	0.00 ug/l	115.65	0.03	
88 Sr	0.00 ug/l	720.59	0.03	
95 Mo	0.02 ug/l	45.42	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.00 ug/l	19.81	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.01 ug/l	29.00	0.06	
118 Sn	0.03 ug/l	23.63	#######	
118 Sn	0.03 ug/l	25.31	#######	
118 Sn	0.02 ug/l	10.92	0.30	
121 Sb	0.04 ug/l	9.35	0.03	Fail
137 Ba	0.01 ug/l	55.52	0.12	
205 Tl	0.01 ug/l	11.97	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.01 ug/l	12.40	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-50598.22	5.05	-58574.40	86.4	70 - 120	IS Fail
45 Sc	2704614.50	0.07	2785824.00	97.1	70 - 120	
45 Sc	383974.50	0.24	395513.41	97.1	70 - 120	
45 Sc	7837775.00	0.81	8489632.00	92.3	70 - 120	
72 Ge	679625.00	1.02	703318.88	96.6	70 - 120	
72 Ge	253487.41	0.77	262176.69	96.7	70 - 120	
72 Ge	1712112.00	0.90	1815062.40	94.3	70 - 120	
115 In	4942468.00	0.43	5132442.00	96.3	70 - 120	
115 In	2699049.50	0.54	2771271.30	97.4	70 - 120	
115 In	11130012.00	0.79	11756014.00	94.7	70 - 120	
159 Tb	14791269.00	1.31	15745004.00	93.9	70 - 120	
165 Ho	14355906.00	0.51	15341548.00	93.6	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\043_CCV.D\043_CCV.D#
Date Acquired: Jul 30 2012 03:07 pm
Operator: NBS
Sample Name: CCV 120730
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	48.28	ug/l	0.72	50.00	90 -	110	
11 B	52.49	ug/l	1.73	50.00	90 -	110	
23 Na	1246.00	ug/l	0.40	1250.00	90 -	110	
24 Mg	2583.00	ug/l	0.75	2500.00	90 -	110	
27 Al	1019.00	ug/l	0.27	1000.00	90 -	110	
39 K	1014.00	ug/l	0.48	1000.00	90 -	110	
44 Ca	2476.00	ug/l	1.54	2500.00	90 -	110	
47 Ti	48.93	ug/l	1.39	50.00	90 -	110	
51 V	48.59	ug/l	0.12	50.00	90 -	110	
52 Cr	48.37	ug/l	0.31	50.00	90 -	110	
55 Mn	49.19	ug/l	0.71	50.00	90 -	110	
56 Fe	994.40	ug/l	0.62	1000.00	90 -	110	
59 Co	48.46	ug/l	0.40	50.00	90 -	110	
60 Ni	48.09	ug/l	0.49	50.00	90 -	110	
63 Cu	47.91	ug/l	0.38	50.00	90 -	110	
65 Cu	48.09	ug/l	0.62	50.00	90 -	110	
66 Zn	49.06	ug/l	0.59	50.00	90 -	110	
75 As	49.90	ug/l	0.18	50.00	90 -	110	
78 Se	48.93	ug/l	0.78	50.00	90 -	110	
78 Se	50.80	ug/l	0.76	50.00	90 -	110	
88 Sr	51.31	ug/l	0.91	50.00	90 -	110	
88 Sr	50.37	ug/l	0.46	50.00	90 -	110	
95 Mo	49.49	ug/l	1.14	50.00	90 -	110	
106 (Cd)	--------	ug/l	--------	50.00	90 -	110	
107 Ag	25.35	ug/l	0.53	25.00	90 -	110	
108 (Cd)	--------	ug/l	--------	50.00	90 -	110	
111 Cd	49.80	ug/l	0.40	50.00	90 -	110	
118 Sn	50.21	ug/l	0.66	---	##### -	#####	
118 Sn	50.26	ug/l	0.63	---	##### -	#####	
118 Sn	49.65	ug/l	0.78	50.00	90 -	110	
121 Sb	53.75	ug/l	0.76	50.00	90 -	110	
137 Ba	50.37	ug/l	0.40	50.00	90 -	110	
205 Tl	50.72	ug/l	0.22	50.00	90 -	110	
206 (Pb)	--------	ug/l	--------	50.00	90 -	110	
207 (Pb)	--------	ug/l	--------	50.00	90 -	110	
208 Pb	53.19	ug/l	0.12	50.00	90 -	110	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)		Flag
6 Li	-51770.85	3.04	-58574.40	88.4	70 -	120	IS Fail
45 Sc	2623661.30	0.84	2785824.00	94.2	70 -	120	
45 Sc	385446.94	0.34	395513.41	97.5	70 -	120	
45 Sc	7831350.00	1.09	8489632.00	92.2	70 -	120	
72 Ge	662217.38	1.14	703318.88	94.2	70 -	120	
72 Ge	248293.75	1.41	262176.69	94.7	70 -	120	
72 Ge	1694259.40	1.06	1815062.40	93.3	70 -	120	
115 In	4757342.50	0.52	5132442.00	92.7	70 -	120	
115 In	2628605.00	0.23	2771271.30	94.9	70 -	120	
115 In	11058923.00	0.49	11756014.00	94.1	70 -	120	
159 Tb	14723756.00	0.33	15745004.00	93.5	70 -	120	
165 Ho	14276697.00	0.55	15341548.00	93.1	70 -	120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\045_CCB.D\045_CCB.D#
Date Acquired: Jul 30 2012 03:20 pm
Operator: NBS
Sample Name: CCB 120730
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	1035.30	0.12	
11 B	2.10 ug/l	6.28	15.00	
23 Na	-4.03 ug/l	23.87	77.10	
24 Mg	-0.35 ug/l	31.03	7.50	
27 Al	0.13 ug/l	112.68	3.96	
39 K	2.64 ug/l	106.02	19.20	
44 Ca	-1.75 ug/l	139.67	90.00	
47 Ti	0.02 ug/l	42.56	0.78	
51 V	0.01 ug/l	9.76	0.21	
52 Cr	-0.19 ug/l	5.81	0.12	
55 Mn	0.04 ug/l	31.84	0.18	
56 Fe	0.20 ug/l	19.95	40.80	
59 Co	0.01 ug/l	35.80	0.09	
60 Ni	-0.09 ug/l	13.03	0.48	
63 Cu	-0.02 ug/l	27.05	0.39	
65 Cu	-0.02 ug/l	36.74	0.39	
66 Zn	0.07 ug/l	42.08	6.90	
75 As	0.01 ug/l	15.86	0.27	
78 Se	0.00 ug/l	295.64	0.30	
78 Se	0.25 ug/l	72.56	0.30	
88 Sr	0.01 ug/l	71.97	0.03	
88 Sr	0.00 ug/l	104.66	0.03	
95 Mo	0.02 ug/l	14.63	0.21	
106 (Cd)	-------- ug/l	--------	#######	
107 Ag	0.01 ug/l	30.70	0.09	
108 (Cd)	-------- ug/l	--------	#######	
111 Cd	0.00 ug/l	71.26	0.06	
118 Sn	0.04 ug/l	9.31	#######	
118 Sn	0.05 ug/l	11.75	#######	
118 Sn	0.04 ug/l	9.08	0.30	
121 Sb	0.04 ug/l	8.70	0.03	Fail
137 Ba	0.01 ug/l	35.96	0.12	
205 Tl	0.01 ug/l	34.29	0.03	
206 (Pb)	-------- ug/l	--------	#######	
207 (Pb)	-------- ug/l	--------	#######	
208 Pb	-0.01 ug/l	24.13	0.33	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-56063.04	5.40	-58574.40	95.7	70 - 120	IS Fail
45 Sc	2640593.00	0.75	2785824.00	94.8	70 - 120	
45 Sc	387428.47	1.09	395513.41	98.0	70 - 120	
45 Sc	7753232.00	0.41	8489632.00	91.3	70 - 120	
72 Ge	662588.88	0.33	703318.88	94.2	70 - 120	
72 Ge	253247.41	1.10	262176.69	96.6	70 - 120	
72 Ge	1706421.40	0.28	1815062.40	94.0	70 - 120	
115 In	4869272.50	0.55	5132442.00	94.9	70 - 120	
115 In	2675486.80	0.87	2771271.30	96.5	70 - 120	
115 In	11165653.00	0.83	11756014.00	95.0	70 - 120	
159 Tb	14841276.00	0.11	15745004.00	94.3	70 - 120	
165 Ho	14349621.00	0.65	15341548.00	93.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.B\004CALB.D\004CALB.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
1 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Fail

METALS
Raw Data

APPL, INC.

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	LOQ	LOD	DL	Units	Prep Date	Analysis Date	QC Group
6020	LEAD (PB) (DISSOL	0.22 U	0.5	0.22	0.11	ug/L	07/30/12	07/30/12	#602D-120730A-AY65220

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G30k00.B\032SMPL.D\032SMPL.D#
Date Acquired: Jul 30 2012 01:54 pm
Operator: NBS
Sample Name: 120730A-3015-BLK
Misc Info: 120730A-3015
Vial Number: 3107
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 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	54.82	1000	
11 B	2.97 ug/l	3.30	9.06	1000	
23 Na	-10.81 ug/l	-12.01	3.59	25000	
24 Mg	0.71 ug/l	0.79	15.45	50000	
27 Al	0.76 ug/l	0.85	55.93	20000	
39 K	4.36 ug/l	4.84	53.29	20000	
44 Ca	1.33 ug/l	1.47	106.49	50000	
47 Ti	0.11 ug/l	0.12	21.64	1000	
51 V	0.01 ug/l	0.01	20.54	1000	
52 Cr	-0.04 ug/l	-0.05	14.11	1000	
55 Mn	-0.03 ug/l	-0.04	29.03	1000	
56 Fe	1.21 ug/l	1.35	8.09	20000	
59 Co	0.30 ug/l	0.34	10.21	1000	
60 Ni	-0.11 ug/l	-0.13	3.62	1000	
63 Cu	0.02 ug/l	0.02	70.87	1000	
65 Cu	0.01 ug/l	0.02	88.13	1000	
66 Zn	0.11 ug/l	0.12	30.35	1000	
75 As	0.01 ug/l	0.01	130.25	1000	
78 Se	-0.02 ug/l	-0.02	59.42	1000	
78 Se	0.50 ug/l	0.55	40.71	1000	
88 Sr	0.01 ug/l	0.01	47.69	1000	
88 Sr	0.00 ug/l	0.00	1464.30	1000	
95 Mo	0.02 ug/l	0.03	2.63	1000	
106 (Cd)	-------- ug/l	#VALUE!	--------	#######	
107 Ag	0.07 ug/l	0.08	9.11	500	
108 (Cd)	-------- ug/l	#VALUE!	--------	#######	
111 Cd	0.04 ug/l	0.04	14.04	1000	
118 Sn	0.27 ug/l	0.30	6.06	#######	
118 Sn	0.24 ug/l	0.27	4.41	#######	
118 Sn	0.20 ug/l	0.23	2.16	1000	
121 Sb	0.11 ug/l	0.12	4.34	1000	
137 Ba	0.01 ug/l	0.01	48.85	1000	
205 Tl	0.09 ug/l	0.10	3.09	1000	
206 (Pb)	-------- ug/l	#VALUE!	--------	#######	
207 (Pb)	-------- ug/l	#VALUE!	--------	#######	
208 Pb	-0.01 ug/l	-0.01	13.99	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-52172.91	13.57	-58574.40	89.1	70 - 120	IS Fai
45 Sc	2559468.00	0.78	2785824.00	91.9	70 - 120	
45 Sc	368607.66	1.03	395513.41	93.2	70 - 120	
45 Sc	7786951.50	0.59	8489632.00	91.7	70 - 120	
72 Ge	635868.50	1.28	703318.88	90.4	70 - 120	
72 Ge	238521.95	0.59	262176.69	91.0	70 - 120	
72 Ge	1653169.10	0.90	1815062.40	91.1	70 - 120	
115 In	4651868.50	0.56	5132442.00	90.6	70 - 120	
115 In	2539813.80	0.45	2771271.30	91.6	70 - 120	
115 In	10908015.00	0.33	11756014.00	92.8	70 - 120	
159 Tb	14784044.00	1.23	15745004.00	93.9	70 - 120	
165 Ho	14370691.00	0.62	15341548.00	93.7	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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	54.6	109	80-120	07/30/12	07/30/12	#602D-120730A-AY65220

Comments: _____

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G30k00.B\033SMPL.D\033SMPL.D#
Date Acquired: Jul 30 2012 02:01 pm
Operator: NBS
Sample Name: 120730A-3015-LCS
Misc Info: 120730A-3015
Vial Number: 3108
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	8.51	ug/l	9.46	1.37	1000	
11 B	45.77	ug/l	50.85	0.40	1000	
23 Na	4334.00	ug/l	4815.07	1.10	25000	
24 Mg	4419.00	ug/l	4909.51	0.23	50000	
27 Al	368.30	ug/l	409.18	0.40	20000	
39 K	918.40	ug/l	1020.34	0.84	20000	
44 Ca	4694.00	ug/l	5215.03	0.57	50000	
47 Ti	45.56	ug/l	50.62	2.58	1000	
51 V	46.25	ug/l	51.38	1.55	1000	
52 Cr	45.81	ug/l	50.89	0.91	1000	
55 Mn	46.63	ug/l	51.81	1.19	1000	
56 Fe	205.70	ug/l	228.53	1.09	20000	
59 Co	44.93	ug/l	49.92	0.99	1000	
60 Ni	44.38	ug/l	49.31	1.11	1000	
63 Cu	43.20	ug/l	48.00	1.10	1000	
65 Cu	43.30	ug/l	48.11	0.90	1000	
66 Zn	87.17	ug/l	96.85	0.77	1000	
75 As	42.75	ug/l	47.50	2.05	1000	
78 Se	40.11	ug/l	44.56	0.88	1000	
78 Se	41.73	ug/l	46.36	0.64	1000	
88 Sr	47.08	ug/l	52.31	1.33	1000	
88 Sr	46.75	ug/l	51.94	0.75	1000	
95 Mo	45.41	ug/l	50.45	0.34	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	18.15	ug/l	20.16	0.43	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	8.81	ug/l	9.79	0.62	1000	
118 Sn	47.75	ug/l	53.05	0.31	#######	
118 Sn	47.62	ug/l	52.91	1.70	#######	
118 Sn	47.82	ug/l	53.13	0.45	1000	
121 Sb	48.92	ug/l	54.35	0.61	1000	
137 Ba	45.90	ug/l	50.99	0.48	1000	
205 Tl	46.32	ug/l	51.46	0.42	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	49.14	ug/l	54.59	0.06	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-51966.74	11.44	-58574.40	88.7	70 - 120	IS Fai
45 Sc	2548892.80	0.81	2785824.00	91.5	70 - 120	
45 Sc	375905.00	0.37	395513.41	95.0	70 - 120	
45 Sc	7669282.00	0.51	8489632.00	90.3	70 - 120	
72 Ge	637299.44	1.66	703318.88	90.6	70 - 120	
72 Ge	240486.19	0.93	262176.69	91.7	70 - 120	
72 Ge	1660060.90	0.98	1815062.40	91.5	70 - 120	
115 In	4670955.50	0.81	5132442.00	91.0	70 - 120	
115 In	2579663.00	1.50	2771271.30	93.1	70 - 120	
115 In	10847527.00	0.19	11756014.00	92.3	70 - 120	
159 Tb	14610523.00	0.21	15745004.00	92.8	70 - 120	
165 Ho	14196172.00	0.55	15341548.00	92.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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: **120730W-65220 MS - 169505**

Sample ID: AY65220

Client ID: ES088

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % Recovery	DUP % Recovery	RPD	RPD Max	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
6020	LEAD (PB) (DISSOLVE	50.0	0.60	56.7	56.0	112	111	1.2	20	80-120	07/30/12	07/30/12	07/30/12	07/30/12	169505	AY65220

Comments: _____

Sample QC Report

Data File: C:\ICPCHEM\1\DATA\12G30k00.B\039SMPL.D\039SMPL.D#
Date Acquired: Jul 30 2012 02:41 pm
Operator: NBS
Sample Name: AY65220W08 MS
Misc Info: 120730A-3015
Vial Number: 3112
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	8.77	ug/l	9.74	0.68	1000	
11 B	108.00	ug/l	119.99	0.27	1000	
23 Na	35980.00	ug/l	39973.78	0.55	25000	>Cal
24 Mg	13450.00	ug/l	14942.95	1.02	50000	
27 Al	390.60	ug/l	433.96	0.83	20000	
39 K	2686.00	ug/l	2984.15	1.55	20000	
44 Ca	16830.00	ug/l	18698.13	0.73	50000	
47 Ti	47.66	ug/l	52.95	0.67	1000	
51 V	46.78	ug/l	51.97	0.74	1000	
52 Cr	46.57	ug/l	51.74	0.94	1000	
55 Mn	718.40	ug/l	798.14	0.77	1000	
56 Fe	596.80	ug/l	663.04	0.44	20000	
59 Co	46.20	ug/l	51.33	0.98	1000	
60 Ni	46.33	ug/l	51.47	1.08	1000	
63 Cu	44.74	ug/l	49.71	1.31	1000	
65 Cu	44.80	ug/l	49.77	1.43	1000	
66 Zn	97.90	ug/l	108.77	0.53	1000	
75 As	44.54	ug/l	49.48	0.33	1000	
78 Se	41.29	ug/l	45.87	0.66	1000	
78 Se	43.05	ug/l	47.83	0.82	1000	
88 Sr	129.20	ug/l	143.54	0.21	1000	
88 Sr	125.30	ug/l	139.21	0.56	1000	
95 Mo	46.50	ug/l	51.66	0.91	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	18.13	ug/l	20.14	1.07	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	9.06	ug/l	10.06	1.61	1000	
118 Sn	48.84	ug/l	54.26	0.66	#######	
118 Sn	49.32	ug/l	54.79	0.61	#######	
118 Sn	48.63	ug/l	54.03	1.11	1000	
121 Sb	49.60	ug/l	55.11	0.92	1000	
137 Ba	56.62	ug/l	62.90	0.58	1000	
205 Tl	47.90	ug/l	53.22	0.91	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	51.01	ug/l	56.67	0.87	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-50864.13	9.73	-58574.40	86.8	70 - 120	IS Fai
45 Sc	2581661.30	0.92	2785824.00	92.7	70 - 120	
45 Sc	382114.56	0.82	395513.41	96.6	70 - 120	
45 Sc	7743239.50	0.64	8489632.00	91.2	70 - 120	
72 Ge	636370.44	1.44	703318.88	90.5	70 - 120	
72 Ge	240910.94	1.20	262176.69	91.9	70 - 120	
72 Ge	1634054.50	1.09	1815062.40	90.0	70 - 120	
115 In	4656009.50	0.10	5132442.00	90.7	70 - 120	
115 In	2563741.00	0.16	2771271.30	92.5	70 - 120	
115 In	10829638.00	0.60	11756014.00	92.1	70 - 120	
159 Tb	14528563.00	1.03	15745004.00	92.3	70 - 120	
165 Ho	14267211.00	0.92	15341548.00	93.0	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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\12G30k00.B\040SMPL.D\040SMPL.D#
Date Acquired: Jul 30 2012 02:47 pm
Operator: NBS
Sample Name: AY65220W08 MSD
Misc Info: 120730A-3015
Vial Number: 3201
Current Method: C:\ICPCHEM\1\METHODS\62A0730A.M
Calibration File: C:\ICPCHEM\1\CALIB\62A0730A.C
Last Cal Update: Jul 30 2012 11:15 am
Sample Type: Sample
Prep Dil Factor: 1.11
Total Dil Factor: 1.11

QC Elements

Element	Conc.		Corr. Conc.	RSD(%)	High Limit	Flag
7 (Li)	--------	ug/l	#VALUE!	--------	0	
9 Be	8.71	ug/l	9.68	0.98	1000	
11 B	107.80	ug/l	119.77	1.14	1000	
23 Na	36050.00	ug/l	40051.55	2.01	25000	>Cal
24 Mg	13470.00	ug/l	14965.17	1.41	50000	
27 Al	421.50	ug/l	468.29	1.45	20000	
39 K	2704.00	ug/l	3004.14	1.13	20000	
44 Ca	16840.00	ug/l	18709.24	1.55	50000	
47 Ti	51.97	ug/l	57.74	4.65	1000	
51 V	46.93	ug/l	52.14	1.75	1000	
52 Cr	46.47	ug/l	51.63	1.79	1000	
55 Mn	720.50	ug/l	800.48	1.73	1000	
56 Fe	604.70	ug/l	671.82	1.94	20000	
59 Co	46.25	ug/l	51.38	1.89	1000	
60 Ni	45.33	ug/l	50.36	2.20	1000	
63 Cu	44.12	ug/l	49.02	1.70	1000	
65 Cu	44.49	ug/l	49.43	2.98	1000	
66 Zn	97.09	ug/l	107.87	0.85	1000	
75 As	44.31	ug/l	49.23	1.02	1000	
78 Se	41.47	ug/l	46.07	0.50	1000	
78 Se	43.26	ug/l	48.06	0.48	1000	
88 Sr	130.40	ug/l	144.87	0.50	1000	
88 Sr	126.30	ug/l	140.32	0.91	1000	
95 Mo	46.60	ug/l	51.77	0.49	1000	
106 (Cd)	--------	ug/l	#VALUE!	--------	#######	
107 Ag	18.33	ug/l	20.36	0.92	500	
108 (Cd)	--------	ug/l	#VALUE!	--------	#######	
111 Cd	9.08	ug/l	10.09	0.76	1000	
118 Sn	49.28	ug/l	54.75	0.55	#######	
118 Sn	48.91	ug/l	54.34	0.58	#######	
118 Sn	49.12	ug/l	54.57	0.49	1000	
121 Sb	50.19	ug/l	55.76	0.74	1000	
137 Ba	57.25	ug/l	63.60	0.88	1000	
205 Tl	46.95	ug/l	52.16	0.07	1000	
206 (Pb)	--------	ug/l	#VALUE!	--------	#######	
207 (Pb)	--------	ug/l	#VALUE!	--------	#######	
208 Pb	50.36	ug/l	55.95	0.38	1000	

ISTD Elements

Element	CPS Mean	RSD(%)	Ref Value	Rec(%)	QC Range(%)	Flag
6 Li	-52865.68	10.11	-58574.40	90.3	70 - 120	IS Fai
45 Sc	2593865.00	1.04	2785824.00	93.1	70 - 120	
45 Sc	384000.66	2.16	395513.41	97.1	70 - 120	
45 Sc	7779703.00	0.72	8489632.00	91.6	70 - 120	
72 Ge	631099.63	1.38	703318.88	89.7	70 - 120	
72 Ge	239159.64	1.01	262176.69	91.2	70 - 120	
72 Ge	1641881.90	0.33	1815062.40	90.5	70 - 120	
115 In	4666041.50	0.32	5132442.00	90.9	70 - 120	
115 In	2569584.50	0.63	2771271.30	92.7	70 - 120	
115 In	10754610.00	0.79	11756014.00	91.5	70 - 120	
159 Tb	14702534.00	0.40	15745004.00	93.4	70 - 120	
165 Ho	14342799.00	0.48	15341548.00	93.5	70 - 120	

ISTD Ref File : C:\ICPCHEM\1\DATA\12G30k00.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

e # 060

Metals Standards Log Book # 35 Page # 061

RJS 7/25/12

Hg WORKING STANDARD

1ml X 10ug/ml Hg STOCK STD. (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
1ml X 10ug/ml Hg STOCK ICV (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
Final concentration is 50 ug/L. Expires.....7/25/12.....

BC 7/25/12

1%HNO3 / 5%HCl BLK					6010B/6010C ICSA				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
100 mL	HCL	EMD	51258	07/13/12	1mL	Al	CPI	11J015-30092	05/28/13
20 mL	HNO3	JT BAKER	L10023	07/12/12	1mL	Ca	CPI	11J031-29989	05/14/13
Prepared in 2000 ml DI Water					1mL	Mg	CPI	11K178-30093	05/28/13
STD 1 / LDL 6010B/6010C					1mL	Fe	O2SI	1030787-30616	05/17/13
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	Prepared in 50 ml 1%HNO3/5%HCl				
0.5 mL	6010 LDL	ABSOLUTE	091409-25205	09/14/12	6010B/6010C ICSAB				
Prepared in 50 ml 1%HNO3/5%HCl					1mL	Al	CPI	11J015-30092	05/28/13
STD 3 / HDL 6010B/6010C					1mL	Ca	CPI	11J031-29989	05/14/13
1ML	CCV-A	ABSOLUTE	012512-30306	01/25/15	1mL	Mg	CPI	11K178-30093	05/28/13
1ML	CCV-B	ABSOLUTE	021312-30339	02/13/15	1mL	Fe	O2SI	1030787-30616	05/17/13
1ML	CCV-C	ABSOLUTE	012512-30307	01/25/15	0.5mL	INT SPECIAL MIX	O2SI	1032370-30265	02/01/13
Prepared in 100 ml 1%HNO3 / 5%HCl					Prepared in 50 ml 1%HNO3/5%HCl				
STD 2 / CCV1 6010B/6010C/6010C					6010B/6010C ICV				
AMOUNT	STD	PREP DATE	EXP DATE		0.5ML	QCS ICV A	CPI	12C184-30611	09/20/13
25mL	STD 3	Today	1 week		0.5ML	QCS ICV B	CPI	12C184-30612	09/20/13
25mL	1%HNO3/5%HCl	Today	1 week		Prepared in 50ml 1%HNO3/5%HCl				
CCV2 6010B/6010C									
AMOUNT	STD	PREP DATE	EXP DATE						
15mL	STD 3	Today	1 week						
25mL	1%HNO3/5%HCl	Today	1 week						

BC 7/26/12

2%HNO3 / 2%HCl BLK					200.7 ICV				
AMOUNT	REAGENT	MANUFACTURER	LOT	OPEN DATE	AMOUNT	STD	MANUFACTURER	LOT	EXP DATE
40 mL	HCL	BDH	51258	07/13/12	0.25ML	QCS ICV A	CPI	12C184-30611	09/20/13
40 mL	HNO3	JT BAKER	L10023	07/12/12	0.25ML	QCS ICV B	CPI	12C184-30612	09/20/13
Prepared in 2000 ml DI Water					Prepared in 50ml 2%HNO3/2%HCl				
STD 1 / LDL 200.7					200.7 ICSA				
AMOUNT	STD	MANUFACTURER	LOT	EXP DATE	0.5mL	Al	CPI	11J015-30092	05/28/13
0.250 mL	200.7 LDL	O2SI	1028857-29667	11/01/12	0.5mL	Ca	CPI	11J031-29989	05/14/13
Prepared in 50 ml 2%HNO3/2%HCl					0.5mL	Mg	CPI	11K178-30093	05/28/13
STD 3 / HDL 200.7					0.5mL	Fe	O2SI	1030787-30616	05/17/13
0.5 mL	CCV-A	ABSOLUTE	012512-30306	01/25/15	Prepared in 50 ml 2%HNO3/2%HCl				
0.5 mL	CCV-B	ABSOLUTE	021312-30339	02/13/15	200.7 ICSAB				
0.5 mL	CCV-C	ABSOLUTE	012512-30307	01/25/15	0.5mL	Al	CPI	11J015-30092	05/28/13
Prepared in 100 ml 2%HNO3/2%HCl					0.5mL	Ca	CPI	11J031-29989	05/14/13
STD 2 / CCV1 200.7					0.5mL	Mg	CPI	11K178-30093	05/28/13
AMOUNT	STD	PREP DATE	EXP DATE		0.5mL	Fe	O2SI	1030787-30616	05/17/13
25mL	STD 3	TODAY	1 WEEK		0.25mL	INT SPECIAL MIX	O2SI	1032370-30265	2/1/13
25mL	2%HNO3/2%HCl	TODAY	1 WEEK		Prepared in 50 ml 2%HNO3/2%HCl				
CCV2 200.7									
15mL	STD 3	TODAY	1 WEEK						
25mL	2%HNO3/2%HCl	TODAY	1 WEEK						

NBS 07/26/12

Internal Standard Concentration						
Amt	STD	Element	Vendor	Lot#	Final Conc. In Std	Expires
500uL	1000 ug/mL	Li	CPI	10L079-27839	5000 ug/L	06/10/12
500uL	1000 ug/mL	In	CPI	10J155-28574	5000 ug/L	09/25/12
500uL	1000 ug/mL	Ho	CPI	10A107-28576	5000 ug/L	09/25/12
500uL	1000 ug/mL	Tb	CPI	11B054-28575	5000 ug/L	09/25/12
500uL	1000 ug/mL	Sc	o2si	1024073-28527	5000 ug/L	08/18/12
500uL	1000 ug/mL	Ge	Environmental Express	1116011-29381	5000 ug/L	02/08/13

Prep:	07/26/12	NBS	Prep in -	1%HNO3/1.0%HCL:	Lot #L08023/51305	in 100mL
Expires:	08/25/12					

062

Metals Standards Log Book # 35 Page # 063

NBS 07/30/12

NBS 07/30/12
6020/6020A
(A)

ICP-MS STANDARDS 6020/6020A/3015/3051A
Today's Date: 07/30/12
Expires: 08/06/12
Prep 1% HNO3/1.0%HCL
20 mL HNO3 / 2000 mL Di Water
Lot #L08023
20mL HCL / 2000mL Di Water
Lot #51305
Expires: 08/06/12

Internal Standard Mix: Prep 07/26/2012

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 07/30/12

Standard 3 08/06/12

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 07/30/12

Intermediate-Sb 08/06/12
100 uL of Sb STD (CPI 12A011-30298) in 10 mL of 1% HNO3/1.0% HCL
ICV-Sb 08/06/12
100 uL of Intermediate-Sb in 10 mL of 1% HNO3/1.0% HCL

Standard 2 08/06/12

Amount	STD	
500 uL	Standard 4	07/30/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/30/12

Standard 1 08/06/12

Amount	STD	
50 uL	Standard 4	07/30/12

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/30/12

ICP-MS ICV 08/06/12

Amount	STD		
50 uL	QCS ICV A	CPI	11C184-30611
50 uL	QCS ICV B	CPI	11C184-30612

Prepared in 50 mL of 1% HNO3/1.0% HCL 07/30/12

ICSA Prep: 08/06/12

1 mL	ICSA	CPI	12E134

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/30/12

ICSAB Prep: 08/06/12

1mL	ICSA	CPI	12E134
0.025mL	INT	O2SI	1032370-30265

Prepared in 5 mL of 1% HNO3/1.0% HCL 07/30/12

ICP-LDR 08/06/12

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 07/30/12

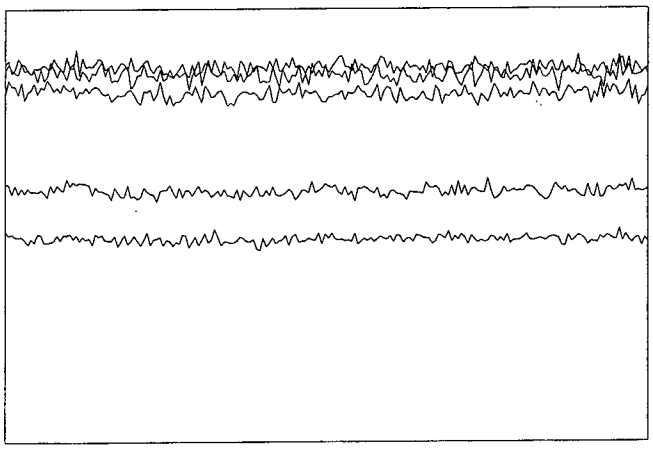
RBS 7/30/12

Hg WORKING STANDARD

1ml X 10ug/ml Hg STOCK STD. (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
1ml X 10ug/ml Hg STOCK ICV (07/13/12RJS)/200ml 1% HNO3 Lot#L02030
Final concentration is 50 ug/L. Expires.....7/3-/12.....

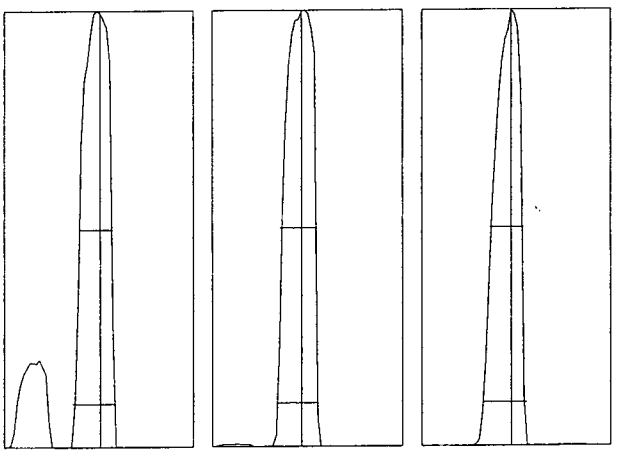
Tune Report

Tune File : NG_HMI.u
Comment : 120730



Integration Time:	0.1000 sec	
Sampling Period:	0.7200 sec	
n:	200	
Oxide:	156/140	0.734%
Doubly Charged:	70/140	0.988%

m/z	Range	Count	Mean	RSD%	Background
7	20,000	17210.0	17252.4	1.51	1.40
89	50,000	41005.0	40082.5	1.71	1.50
205	50,000	29021.0	28756.1	1.91	6.00
156/140	2	0.786%	0.733%	6.44	
70/140	2	1.068%	0.977%	5.68	
140	50,000	42229.0	42313.1	1.87	3.50
59	50,000	22840.0	23206.4	1.86	1.80



m/z:	7	89	205
Height:	17,054	40,580	29,367
Axis:	7.05	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

Generated : Jul 30, 2012 10:01:22
Printed : Jul 30, 2012 10:01:24

Tune Report

Tune File : NG_HMI.u
Comment : 120730

Tuning Parameters

===Plasma Condition===			===Ion Lenses===			===Q-Pole Parameters===		
RF Power	:	1600 W	Extract 1	:	0 V	AMU Gain	:	128
RF Matching	:	1.7 V	Extract 2	:	-140 V	AMU Offset	:	129
Smpl Depth	:	8 mm	Omega Bias-ce	:	-24 V	Axis Gain	:	0.9999
Torch-H	:	0.2 mm	Omega Lens-ce	:	-0.4 V	Axis Offset	:	-0.05
Torch-V	:	-0.2 mm	Cell Entrance	:	-30 V	QP Bias	:	-3 V
Carrier Gas	:	0.5 L/min	QP Focus	:	5 V			
Makeup Gas	:	0.5 L/min	Cell Exit	:	-30 V	===Detector Parameters===		
Optional Gas	:	--- %				Discriminator	:	8 mV
Nebulizer Pump	:	0.1 rps	===Octopole Parameters===			Analog HV	:	1720 V
Sample Pump	:	--- rps	OctP RF	:	180 V	Pulse HV	:	1350 V
S/C Temp	:	2 degC	OctP Bias	:	-6 V			

===Reaction Cell===

Reaction Mode	:	OFF						
H2 Gas	:	0 mL/min	He Gas	:	0 mL/min	Optional Gas	:	--- %

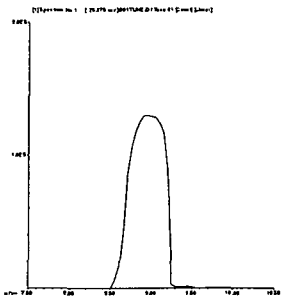
Generated : Jul 30, 2012 10:01:22
Printed : Jul 30, 2012 10:01:27

200.8 QC Tune Report

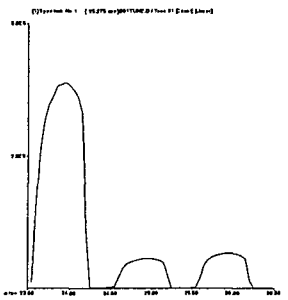
Data File: C:\ICPCHEM\1\DATA\12G30k00.B\001TUNE.D
Date Acquired: Jul 30 2012 10:26 am
Acq. Method: TN200_8.M
Operator: NBS
Sample Name: 100ppb Tune sol
Misc Info:
Vial Number: 1303
Current Method: C:\ICPCHEM\1\METHODS\TN200_8.M

RSD (%)

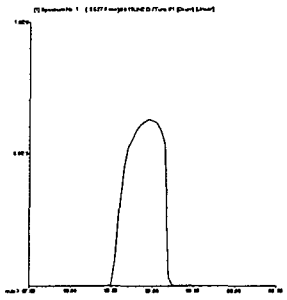
Element	CPS Mean	Rep1	Rep2	Rep3	Rep4	Rep5	%RSD	Required	Flag
9 Be	676181	684266	677402	680651	672190	666397	**1.59**	5.00	
24 Mg	2092363	2096457	2108867	2090063	2078698	2087732	**1.39**	5.00	
59 Co	3388701	3427269	3404119	3392502	3361721	3357893	**1.10**	5.00	
115 In	17343573	17558716	17447692	17316488	17225710	17169260	**0.88**	5.00	
208 Pb	2994814	2987683	3018816	2996945	2993348	2977280	**0.46**	5.00	



9 Be
Mass Calib.
Actual: 8.95
Required: 8.90 - 9.10
Flag:
Peak Width
Actual: 0.60
Required: 0.90
Flag:



24 Mg
Mass Calib.
Actual: 23.95
Required: 23.90 - 24.10
Flag:
Peak Width
Actual: 0.60
Required: 0.80
Flag:



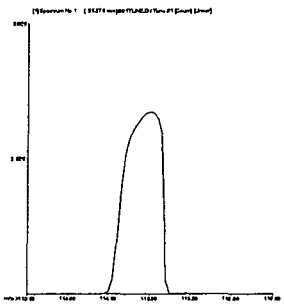
59 Co

Mass Calib.

Actual:	58.95		
Required:	58.90	-	59.10
Flag:			

Peak Width

Actual:	0.55		
Required:	0.90		
Flag:			



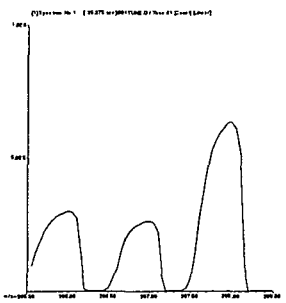
115 In

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

Metals Digestion Worksheet

Method Name 3015 Digestion **Prep Method** M3015 **Set** 120730A **Units** mL

Spikes	
Spiked ID 1	LCSW LOT# 1037547-31169
Spiked ID 2	LCSW LOT# 1037546-31168
Spiked ID 3	
Spiked ID 4	
Spiked By	NM Date: 07/30/12 10:50:00 AM
Witnessed By	BC Date: 07/30/12 10:50:00 AM

Starting Temp:	20 c
Ending Temp:	170 c
Temperature Type:	Microwave
Sufficient Vol for Matrix QC:	Yes
End Date/Time	07/30/12 12:00

	Sample	Sample Container	Spike Amount	Spike ID	Digested Amount	Final Volume	Start Date/Time	Comments
1	120730A Blk				45mL	50mL	07/30/12 10:50	equip: Venus
2	120730A LCS		90uL	1+2	45mL	50mL	07/30/12 10:50	equip: Venus
3	AY65049	AY65049W01			45mL	50mL	07/30/12 10:50	equip: Venus
4	AY65052	AY65052W01			45mL	50mL	07/30/12 10:50	equip: Venus
5	AY65220	AY65220W08			45mL	50mL	07/30/12 10:50	equip: Venus
6	AY65220 MS	AY65220W08	90uL	1+2	45mL	50mL	07/30/12 10:50	equip: Venus
7	AY65220 MSD	AY65220W08	90uL	1+2	45mL	50mL	07/30/12 10:50	equip: Venus

Solvent and Lot#
HNO3 J.T.B L10023 0233

Sample COC Transfer	
Sample prep employee Initials	nm
Analyst's initials	EA
Date	7-30-12
Time	12:00
Moved to	Metals

Technician's Initials	
Scanned By	lo
Sample Preparation	nm
Digestion	nm
Bring up to volume	nm
Modified	07/30/12 10:33:01 AM

Reviewed By: EA **Date:** 7-30-12

6020/200.8 Injection Log

Directory: K:\ICP-MS Optimus\raw data output csv\

RunID	Injected		Sample Name	Misc Info	FileName	Multiplier
1	30 Jul 2012	10:45	Calibration Blank		120730Arev	1.
2	30 Jul 2012	10:51	120730 Standard 1		120730Arev	1.
3	30 Jul 2012	10:58	120730 Standard 2		120730Arev	1.
4	30 Jul 2012	11:05	120730 Standard 3		120730Arev	1.
5	30 Jul 2012	11:11	120730 Standard 4		120730Arev	1.
6	30 Jul 2012	11:18	ICV 120730		120730Arev	1.
8	30 Jul 2012	11:31	ICB 120730		120730Arev	1.
9	30 Jul 2012	11:38	CCV 120730		120730Arev	1.
10	30 Jul 2012	11:45	CCB 120730		120730Arev	1.
12	30 Jul 2012	12:04	ICSA 120730		120730Arev	1.
13	30 Jul 2012	12:11	ICSAB 120730		120730Arev	1.
14	30 Jul 2012	12:24	CCV 120730		120730Arev	1.
15	30 Jul 2012	12:37	CCB 120730		120730Arev	1.
23	30 Jul 2012	13:30	CCV 120730		120730Arev	1.
24	30 Jul 2012	13:48	CCB 120730		120730Arev	1.
25	30 Jul 2012	13:54	120730A-3015-BLK		120730Arev	1.
26	30 Jul 2012	14:01	120730A-3015-LCS		120730Arev	1.
31	30 Jul 2012	14:34	AY65220W08		120730Arev	1.
32	30 Jul 2012	14:41	AY65220W08 MS		120730Arev	1.
33	30 Jul 2012	14:47	AY65220W08 MSD		120730Arev	1.
34	30 Jul 2012	14:54	AY65220W08-A		120730Arev	1.
36	30 Jul 2012	15:07	CCV 120730		120730Arev	1.
37	30 Jul 2012	15:20	CCB 120730		120730Arev	1.