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

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

# Data Validatable Report

August 13, 2012

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

Attn: Max Solmssen

Title: Report of Data: Case 68268

Project: LTM Red Hill/1022-024

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

Dear Mr. Solmssen:

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

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

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

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

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/cm
Enclosure
cc: File

Number of pages in this report: 389

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

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# SAMPLE RECEIPT INFORMATION

# Sample receipt information

ARF: 68268

Project: Red Hill/1022-024

**Sample Receipt Information:**

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

**Sample Table**

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

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

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

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

Measurement uncertainty can be reported upon request.

# CASE NARRATIVE

# EPA Method 8270D SIM

## Polynuclear Aromatic Hydrocarbons

**Sample Preparation:**

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

**Sample Analysis Information:**

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

**Quality Control/Assurance**

**Calibrations:**

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

**Blanks:**

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

**Spikes:**

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

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

**Surrogates**

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

**Tuning:**

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

**Internal Standards**

The internal standard area counts were compared to the mid-point of the initial calibration according to method 8270. All method criteria were met.

**Summary:**

No problem was encountered.

# EPA Method 8015B

## Total Petroleum Hydrocarbons – Diesel

**Sample Preparation:**

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

**Sample Analysis Information:**

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

**Quality Control/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 |
|---|---|---|---|

6826D 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 209 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) | | | | | | | | Analysis Requested/Method Number | | | | | | | | | | | | Date Shipped: 7/19/12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Red Hill / 1022-024 | Max Solmssen | | | | | | | | | | | | | | | | | | | | Carrier: FEDEX |
| Purchase Order Number | Sampler (Signature) | | | | | | | | | | | | | | | | | | | | Waybill No.: 876912433173 |
| | | | | | | Matrix | | | | | | | | | | | | | | | Comments: * Lead |
| Sample Identification | Location | Date Collected | Time Collected | Time Zone | No. of Containers | Aq | Sed. | Soil | TPH-GRO (8260B) | VOCs (8260B) | TPH-DRO (8015B) | PAHs (8270C SIM) | Lead (6020) | | | | | | | | sample was field- |
| ES083 | Red Hill | 7/19/12 | 1130 | HI | 8 | X | | | | | | | | | | | | | | | filtered. Preserved |
| ES084 MS/MSD | ↓ | ↓ | 1300 | ↓ | 16 | ↓ | | | | | | | | | | | | | | | w/ $HNO_3$ |
| ES086 Trip Blank | ↓ | ↓ | 800 | ↓ | 3 | ↓ | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | |

Shuttle Temperature:

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

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

| Relinquished by sampler: MS | Date 7/19/12 | Time 14:20 | Received by: | Relinquished by: | Date | Time | Received by: |
|---|---|---|---|---|---|---|---|
| Relinquished by: | Date | Time | Received by: | Relinquished by: | Date 7/20/12 | Time 1130 | Received at lab by: |

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

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

Form 2 & 8

# Surrogate Recovery

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 07/25/12

Matrix: WATER Instrument: Linus

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

Comments: Batch: #SIMHC-120725A

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 |

*Printed: 07/27/12 12:14:49 PM*
*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 | |

*Printed: 07/27/12 12:14:51 PM*
*APPL MSD SCII*

# 8270D-SIM

Form 4

## Blank Summary

Lab Name: APPL, Inc. SDG No: 68268

Case No: 68268 Date Analyzed: 07/25/12

Matrix: WATER Instrument: Linus

Blank ID: 120725A-BLK Time Analyzed: 1857

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

Comments: Batch: #SIMHC-120725A

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

Form 5
Tune Summary

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

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

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

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 | | | | | | | |
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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.

# 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

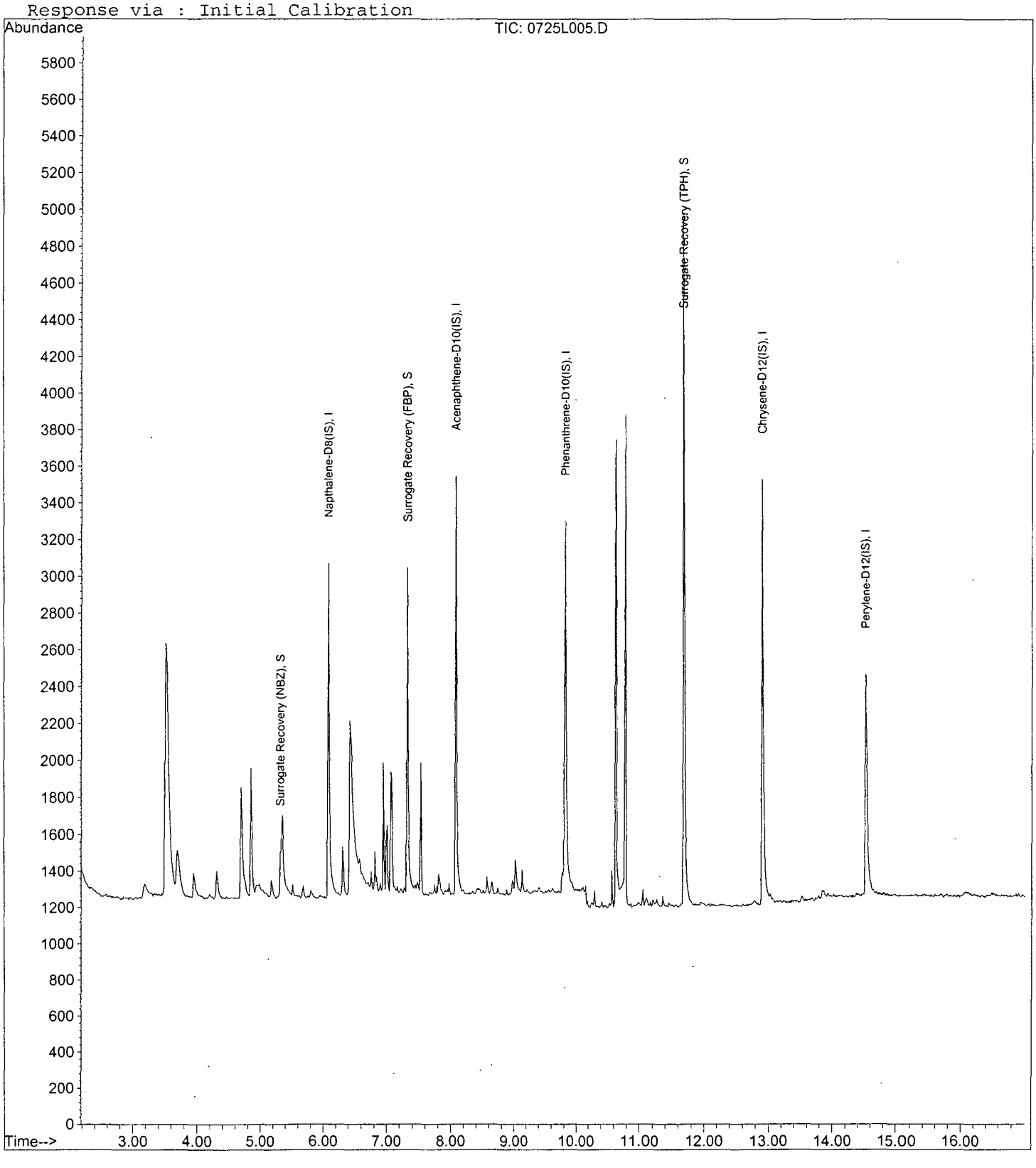
(#) = qualifier out of range (m) = manual integration

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

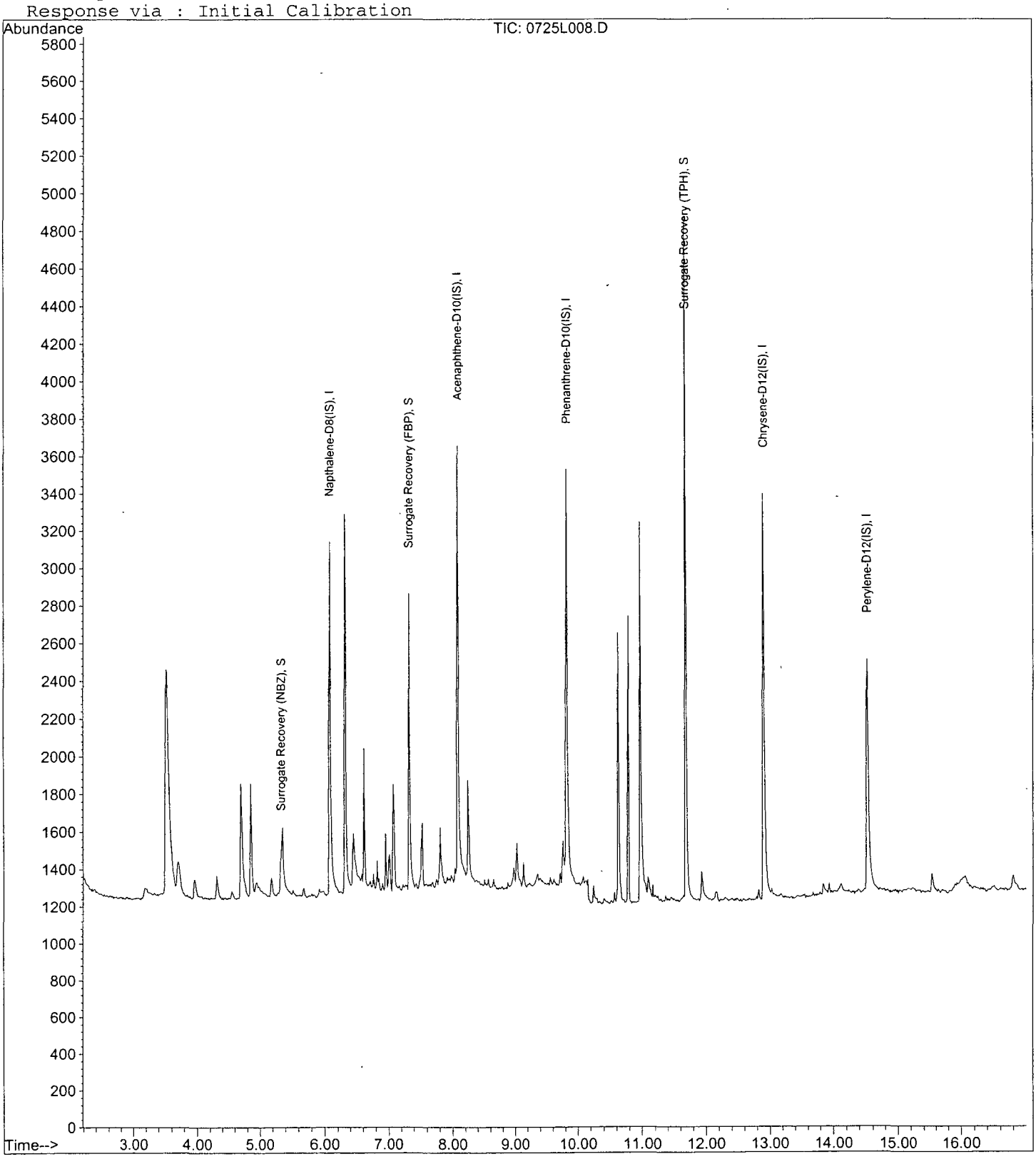
(#) = qualifier out of range (m) = manual integration

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 |

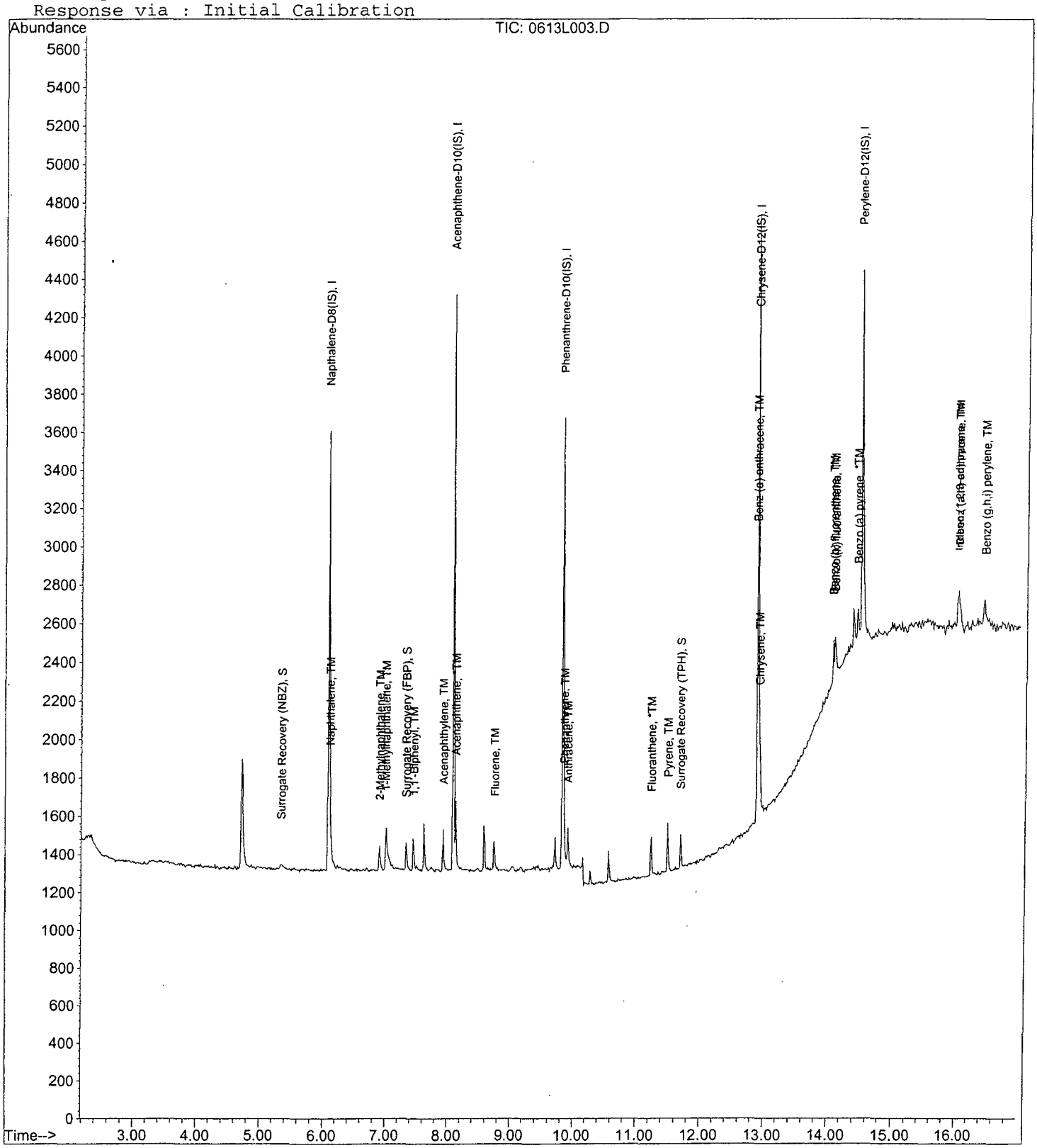
(#) = qualifier out of range (m) = manual integration

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 |

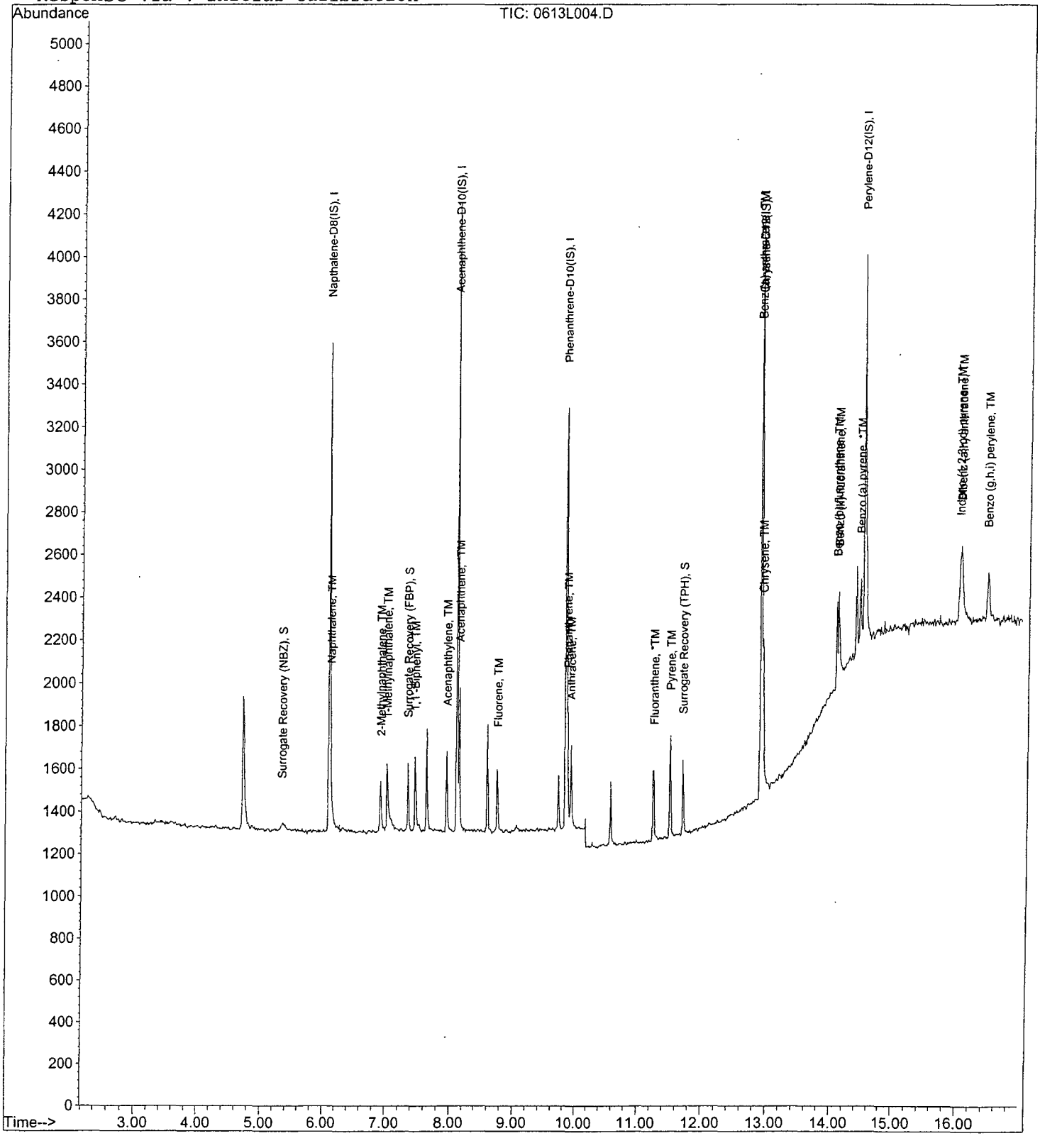
(#) = qualifier out of range (m) = manual integration

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 |

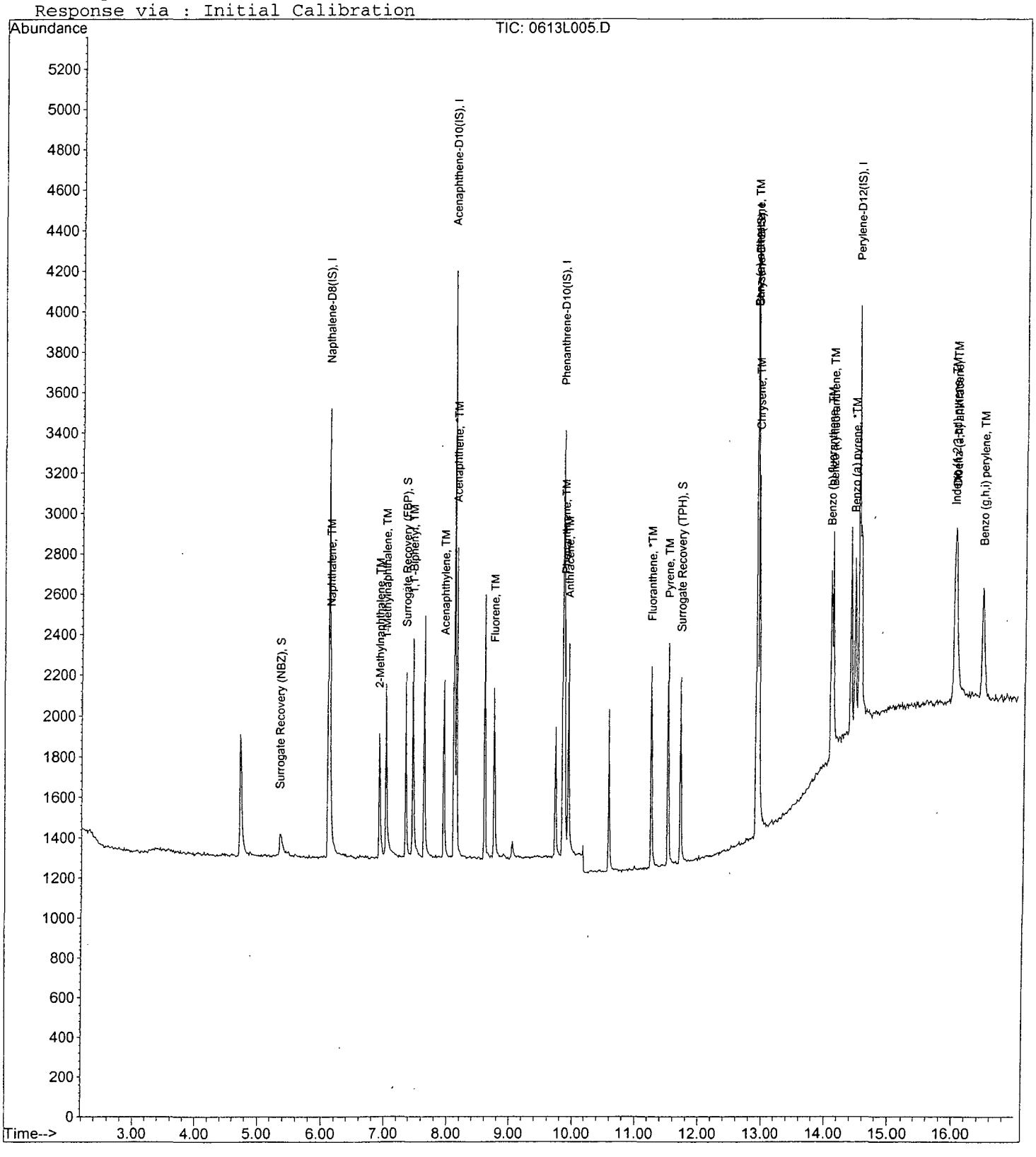
(#) = qualifier out of range (m) = manual integration

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 |

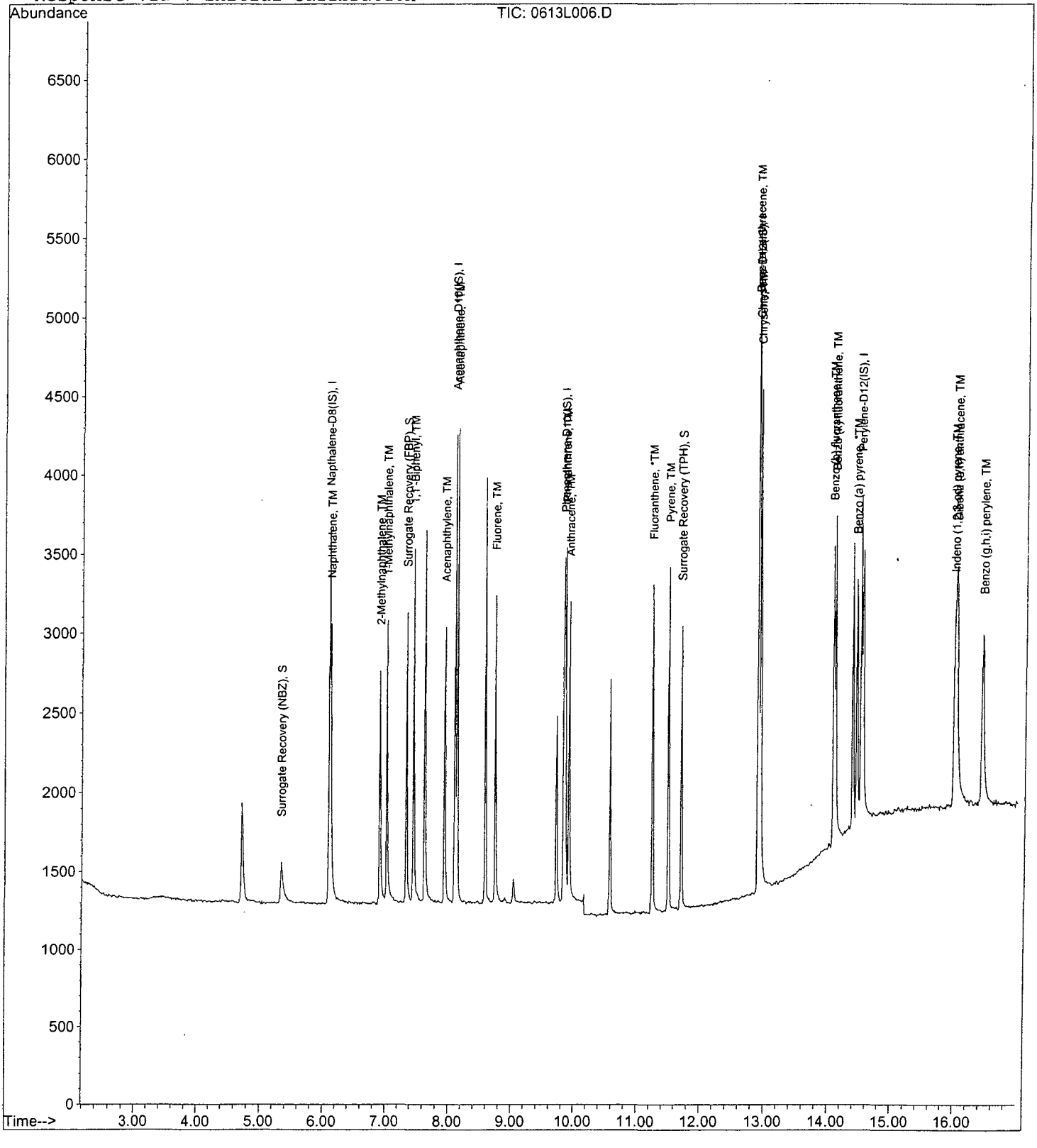
(#) = qualifier out of range (m) = manual integration

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

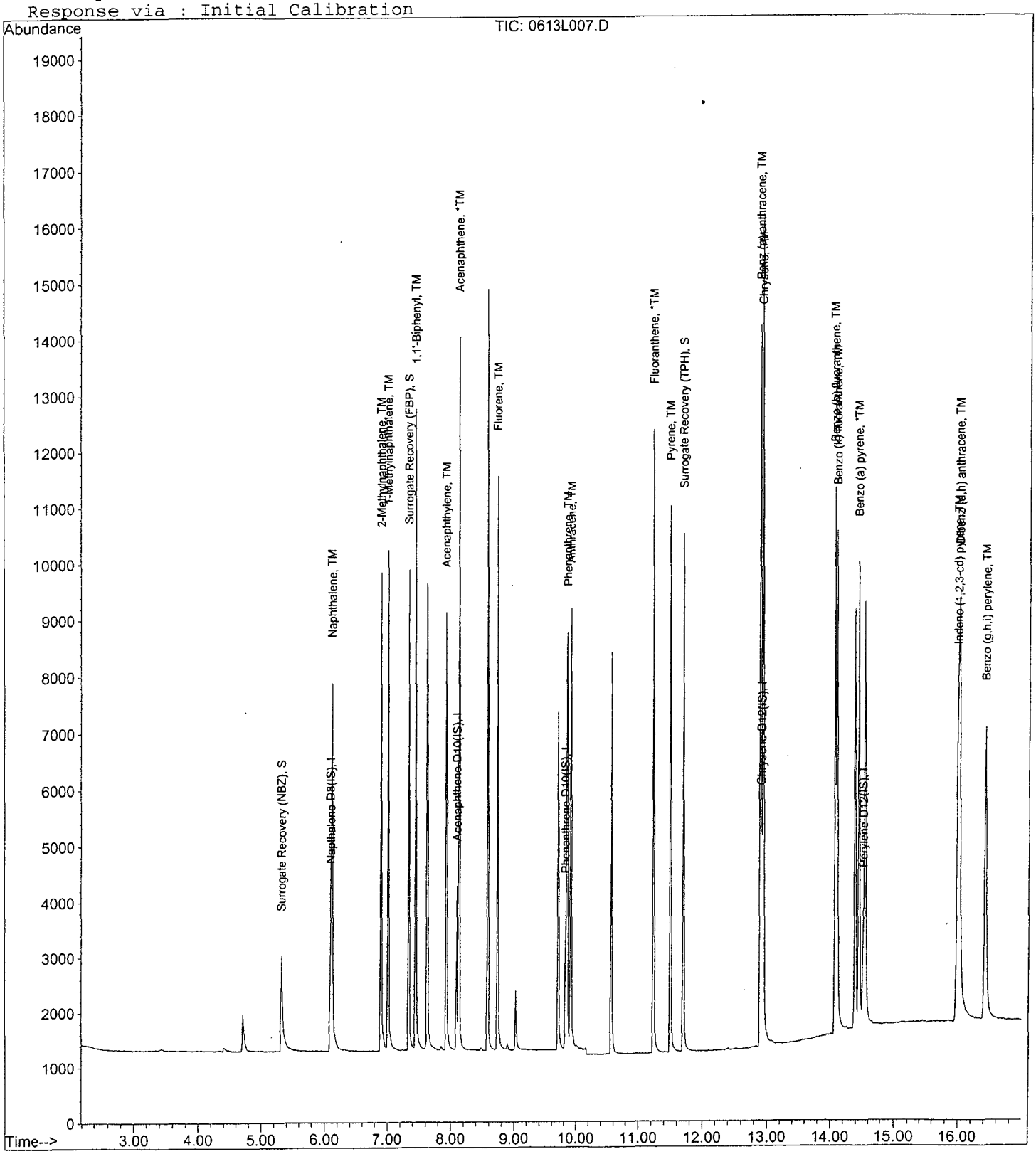
Quantitation Report

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

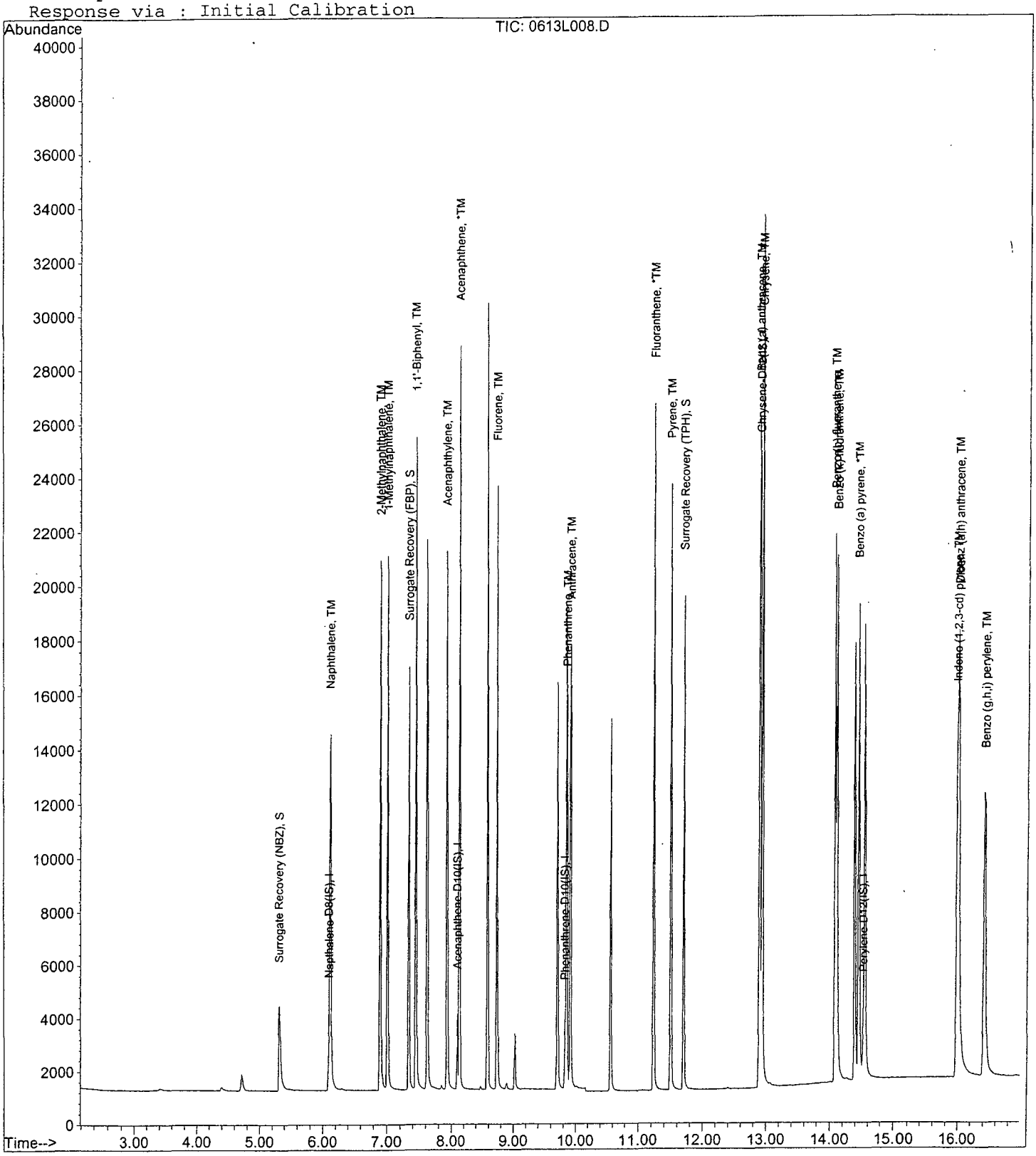
Quantitation Report

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 |

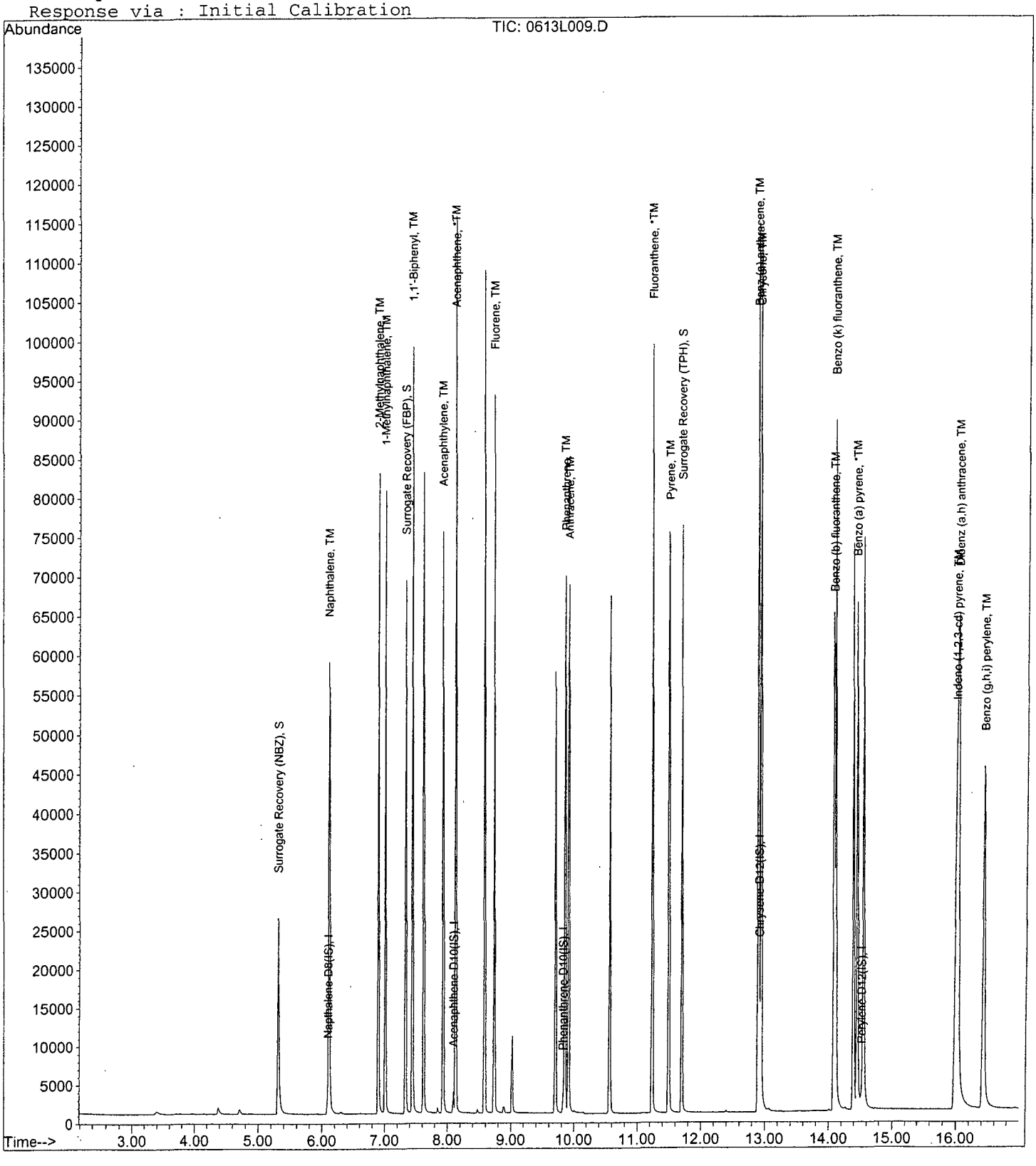
(#) = qualifier out of range (m) = manual integration

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

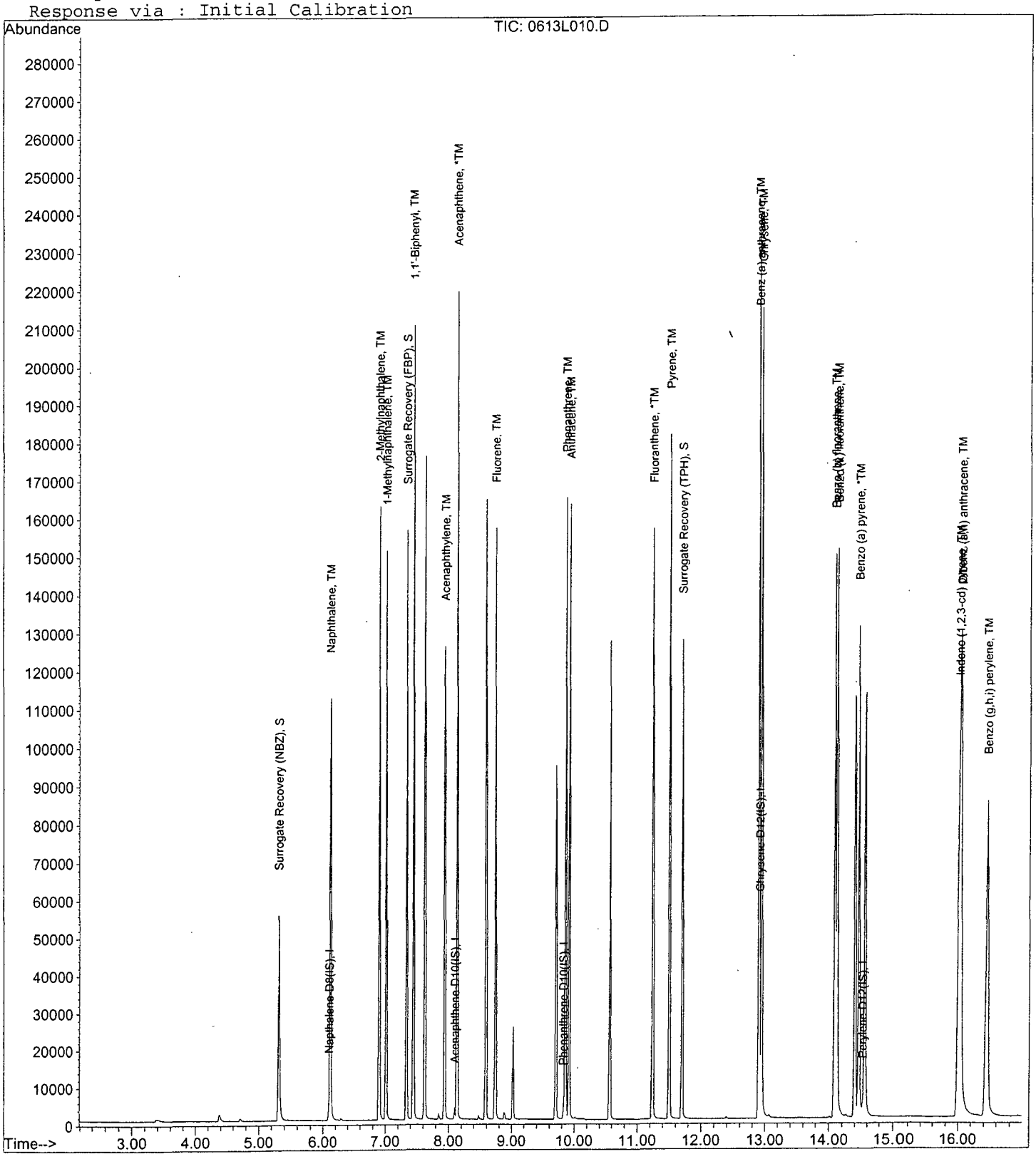
Quantitation Report

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 |

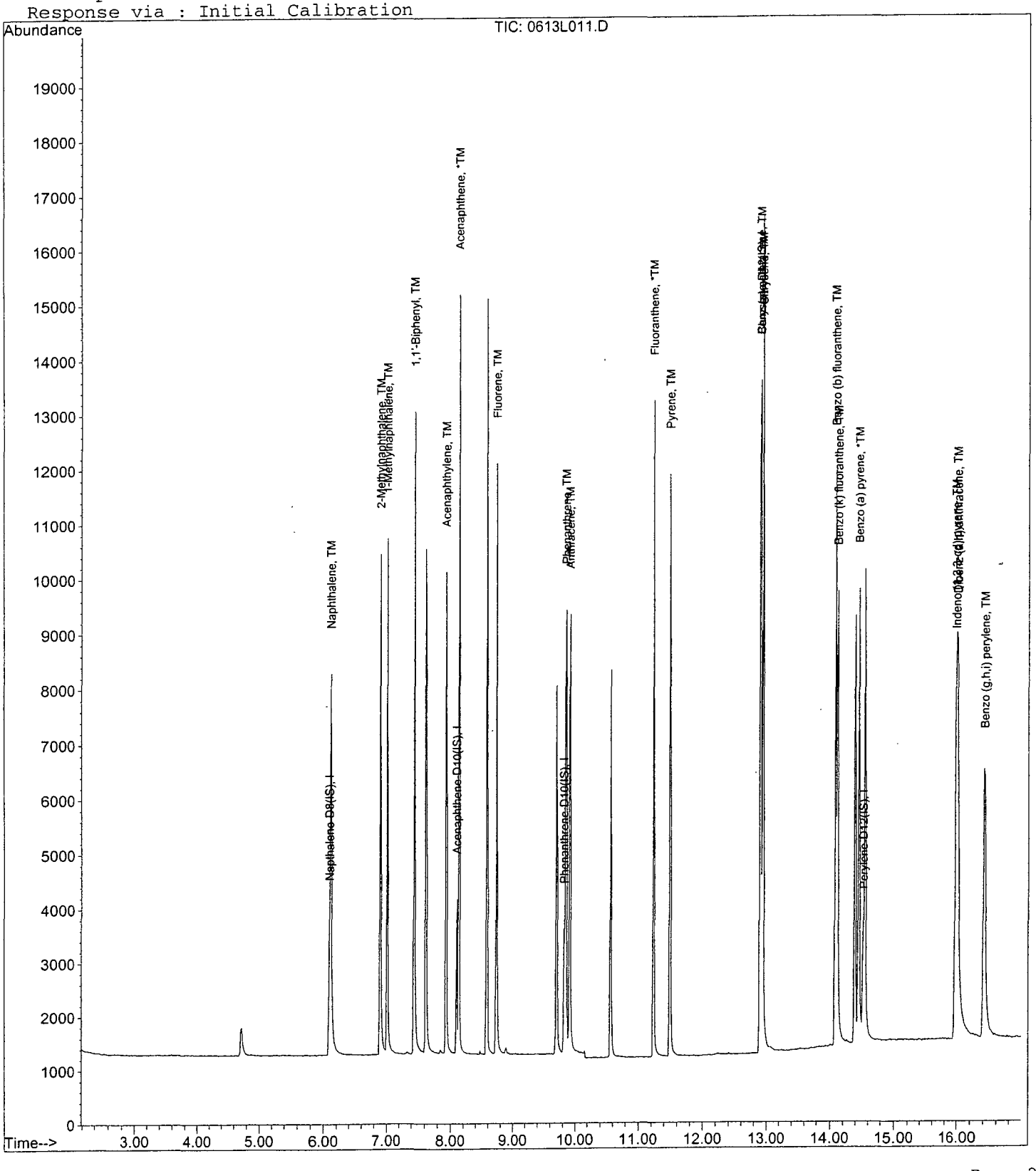
(#) = qualifier out of range (m) = manual integration

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 |

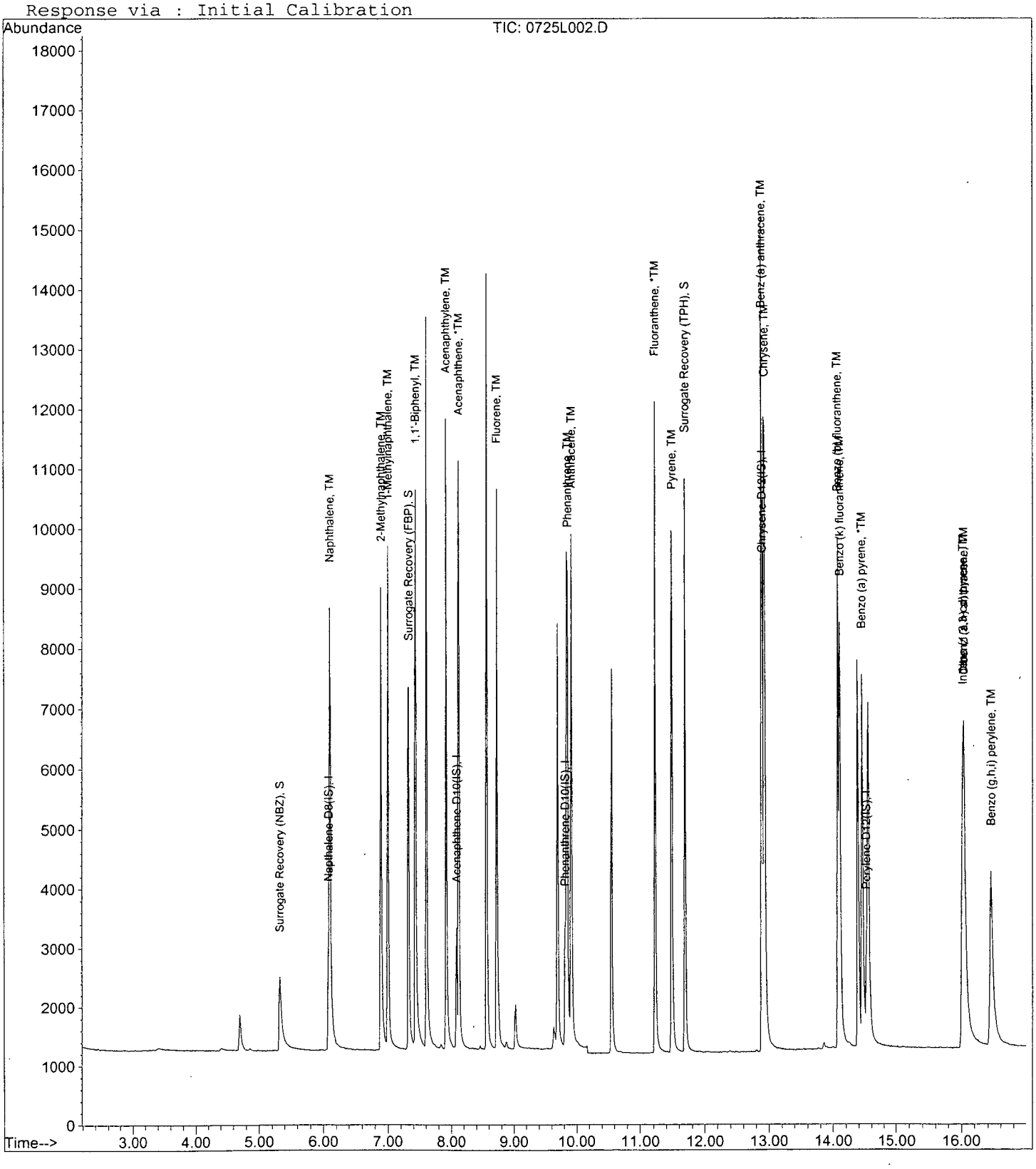
(#) = qualifier out of range (m) = manual integration

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

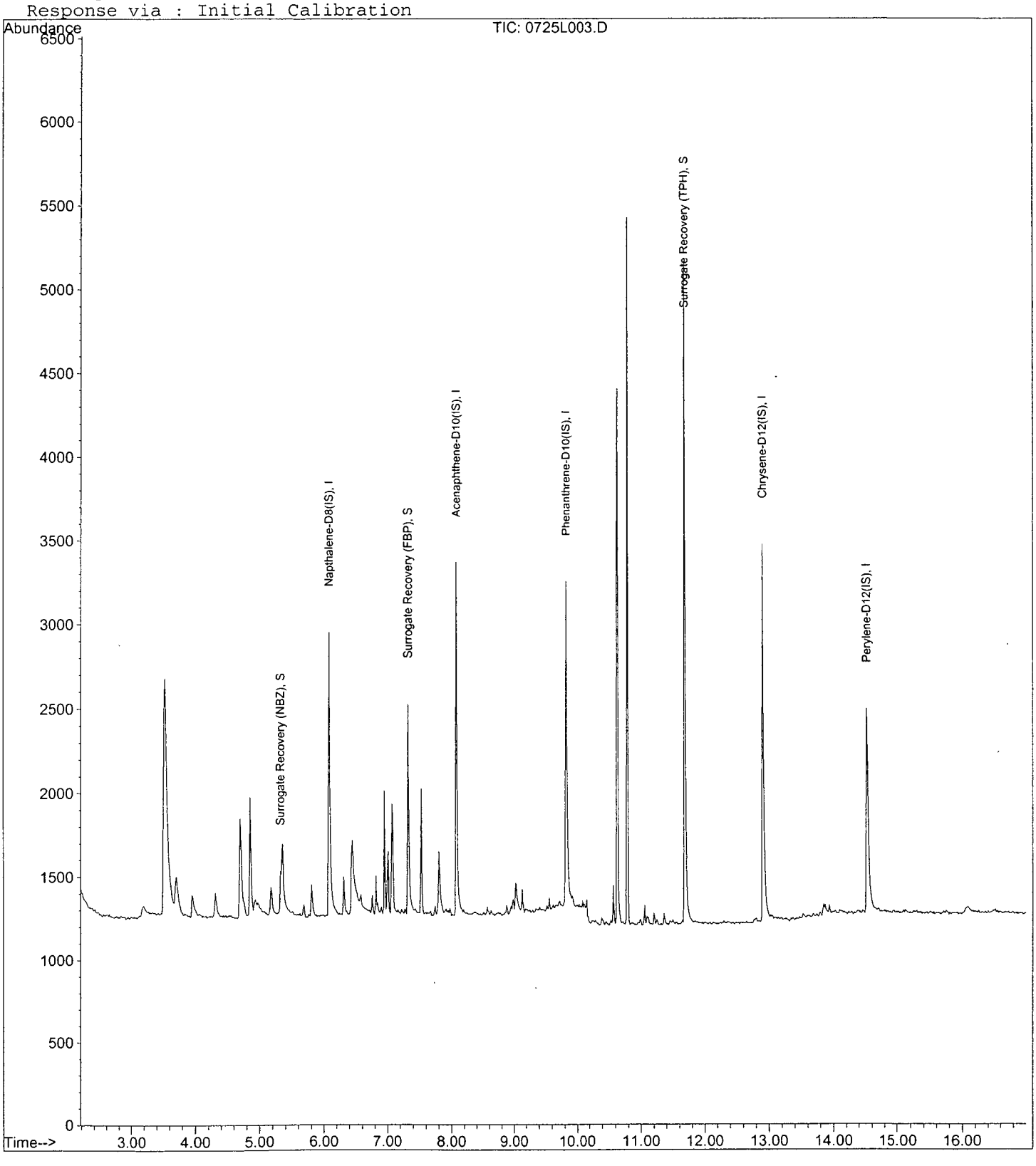
(#) = qualifier out of range (m) = manual integration

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

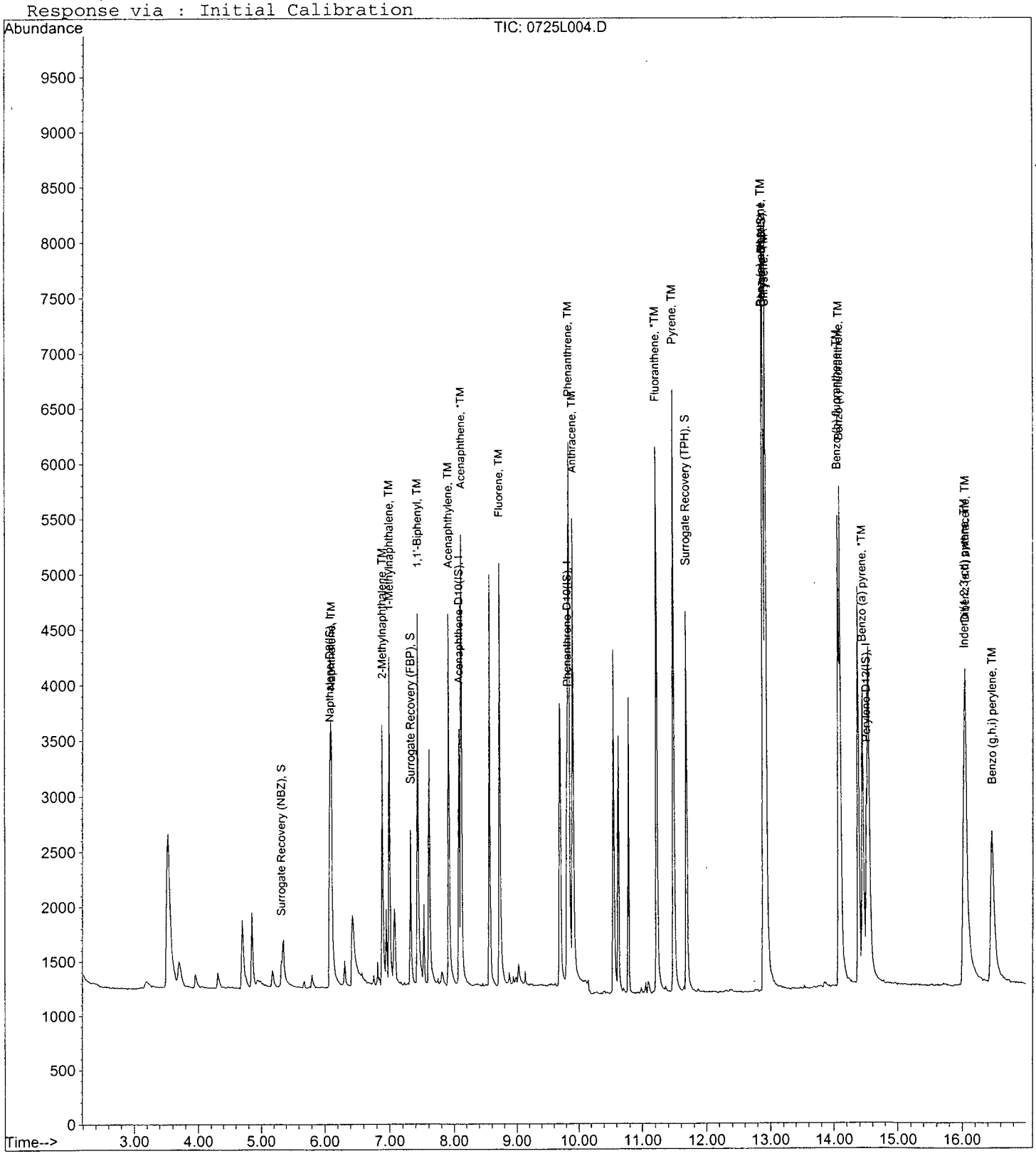
(#) = qualifier out of range (m) = manual integration

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 |

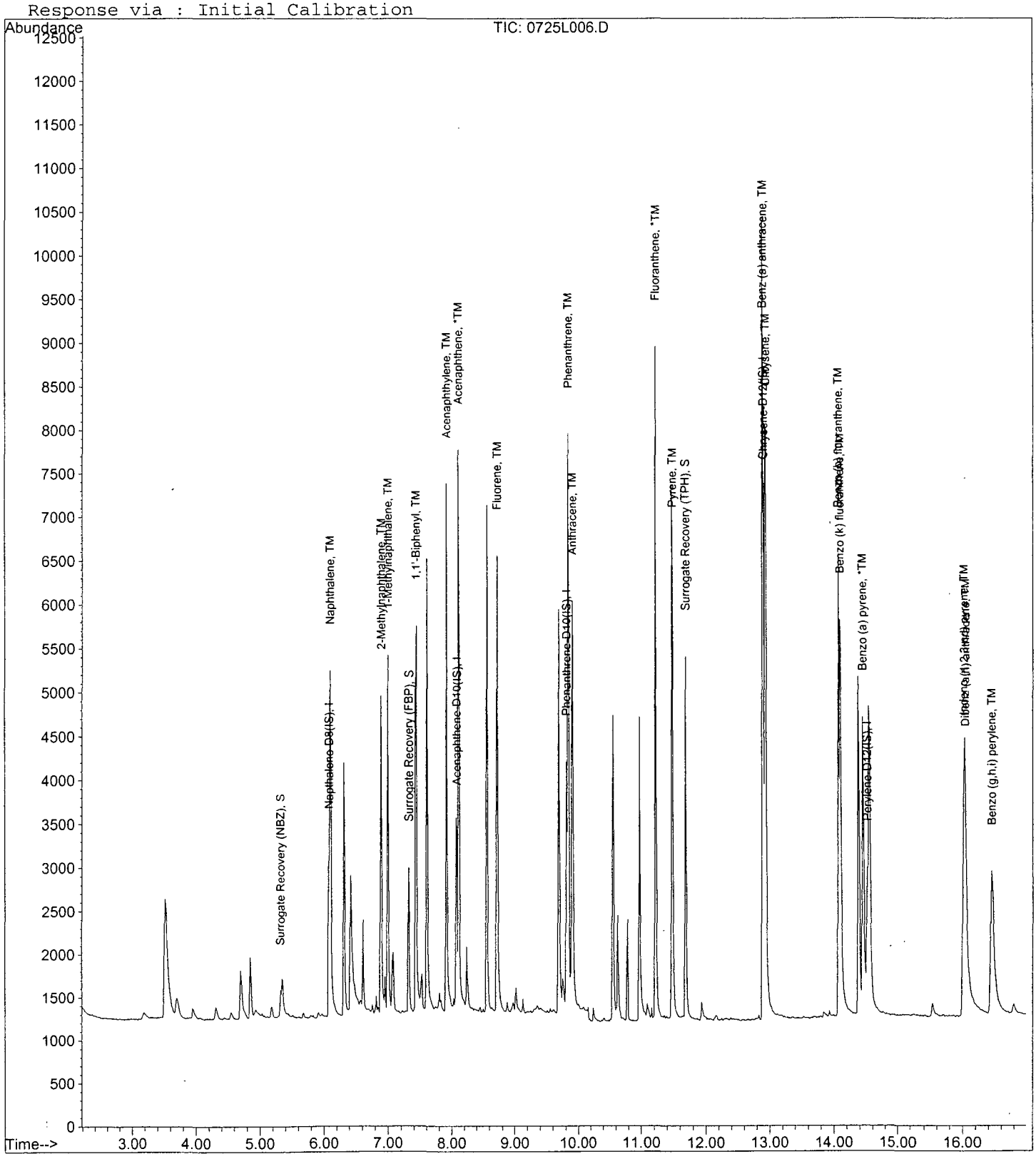
(#) = qualifier out of range (m) = manual integration

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 |

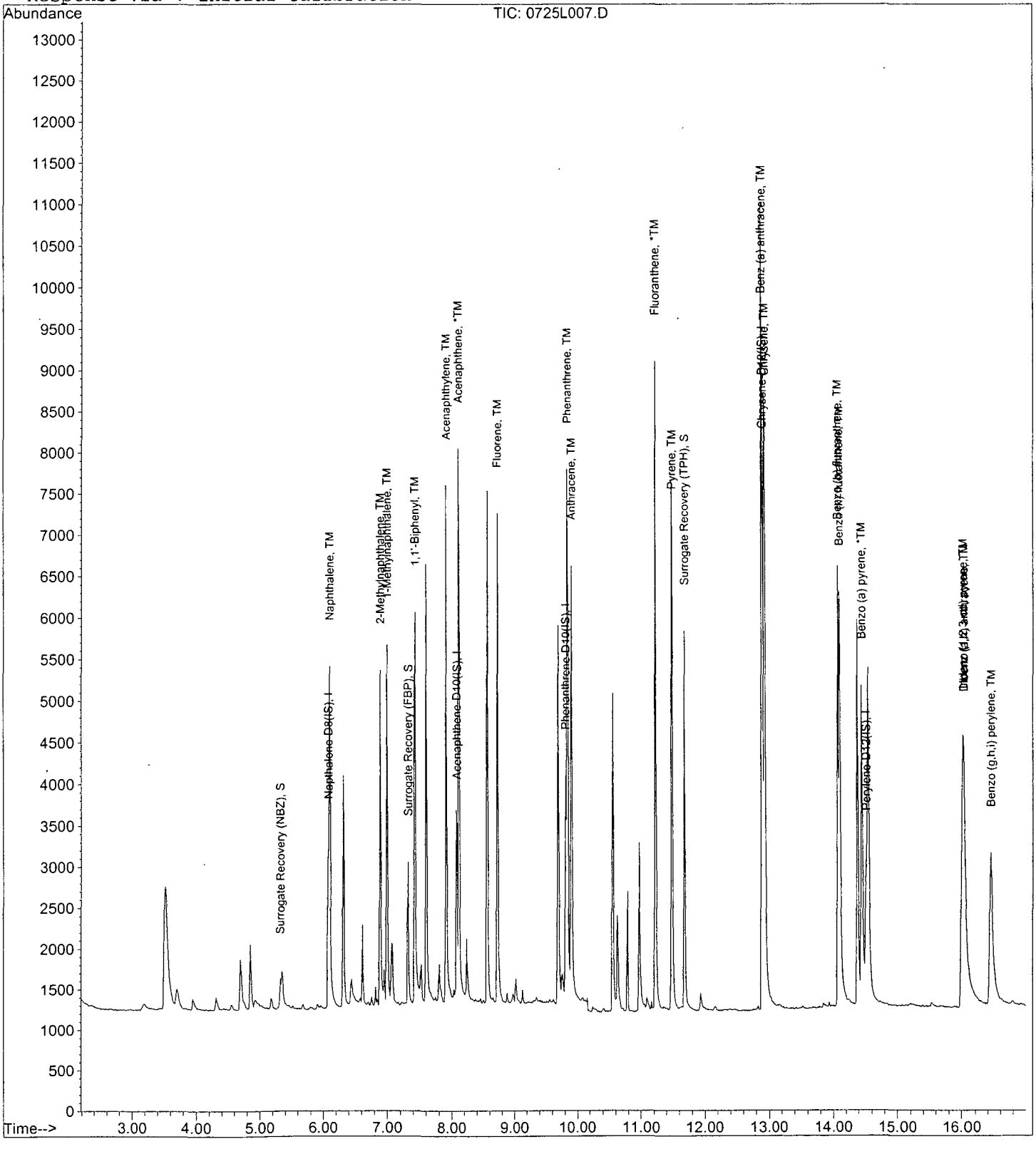
(#) = qualifier out of range (m) = manual integration

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

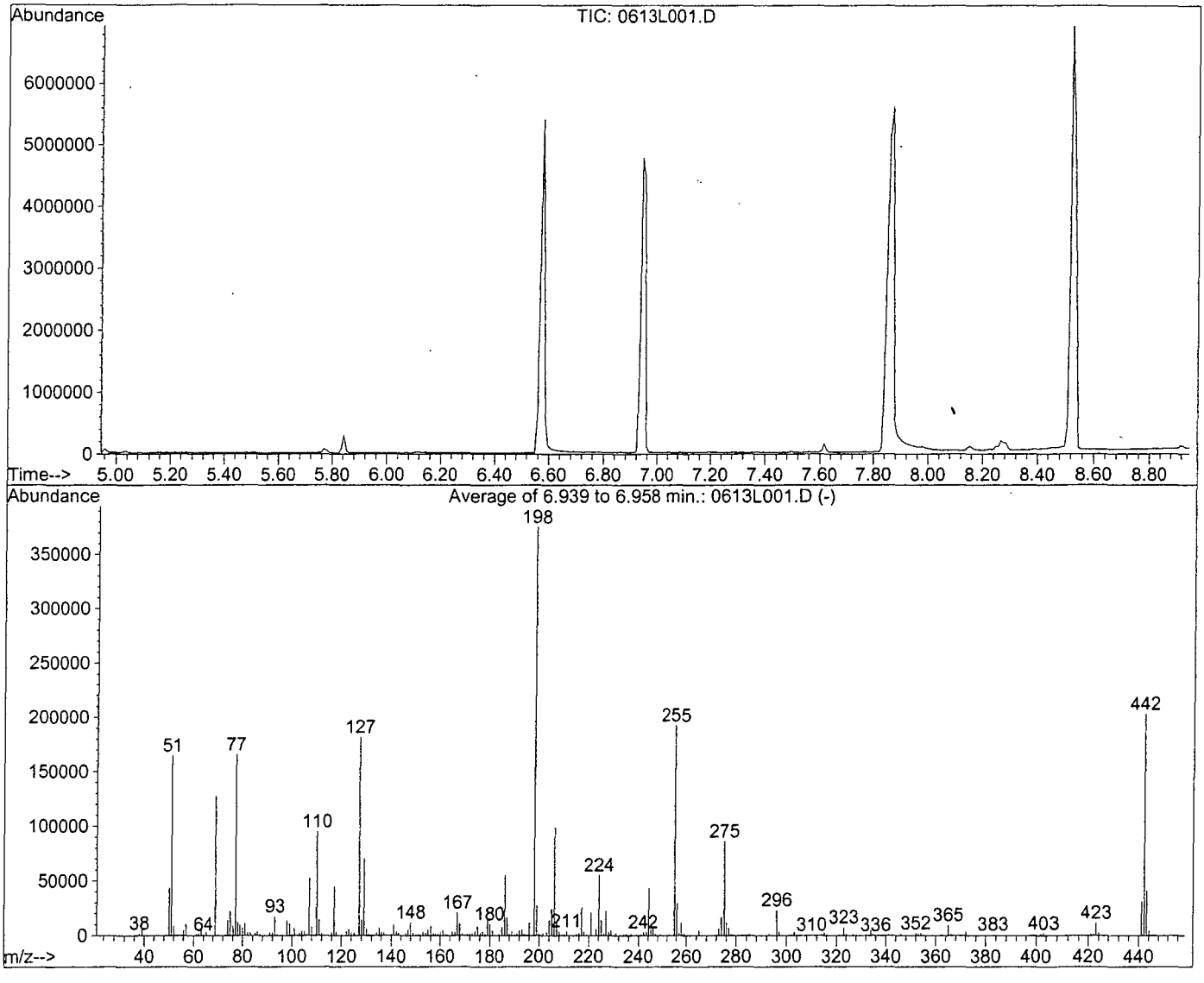
Method : M:\LINUS\DATA\L120613\SIMB.M (RTE Integrator)
Title : EPA 8270C
Last Update : Wed Jul 25 18:38:43 2012
Response via : Initial Calibration



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



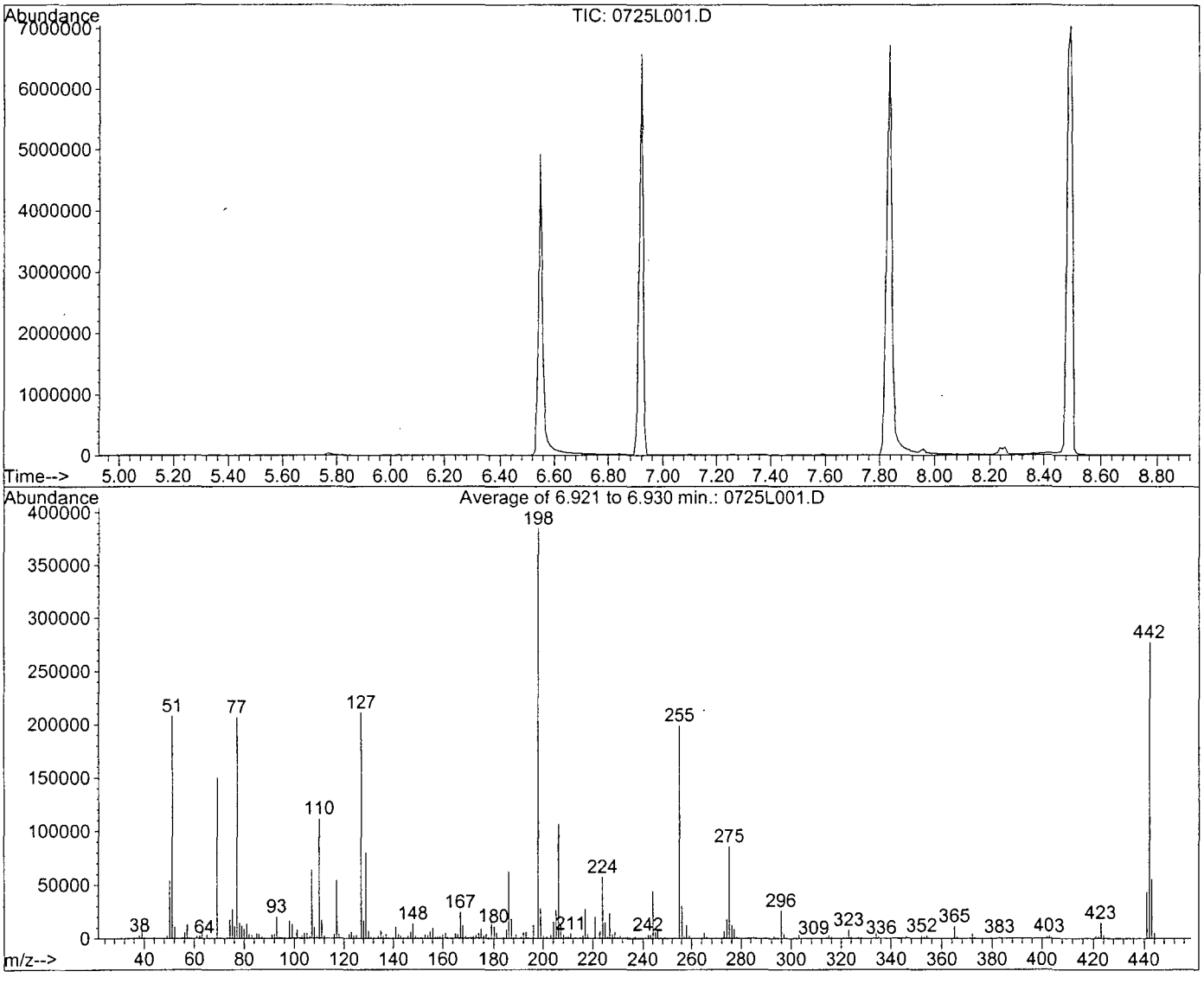

Spectrum Information: Average of 6.939 to 6.958 min.

| 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

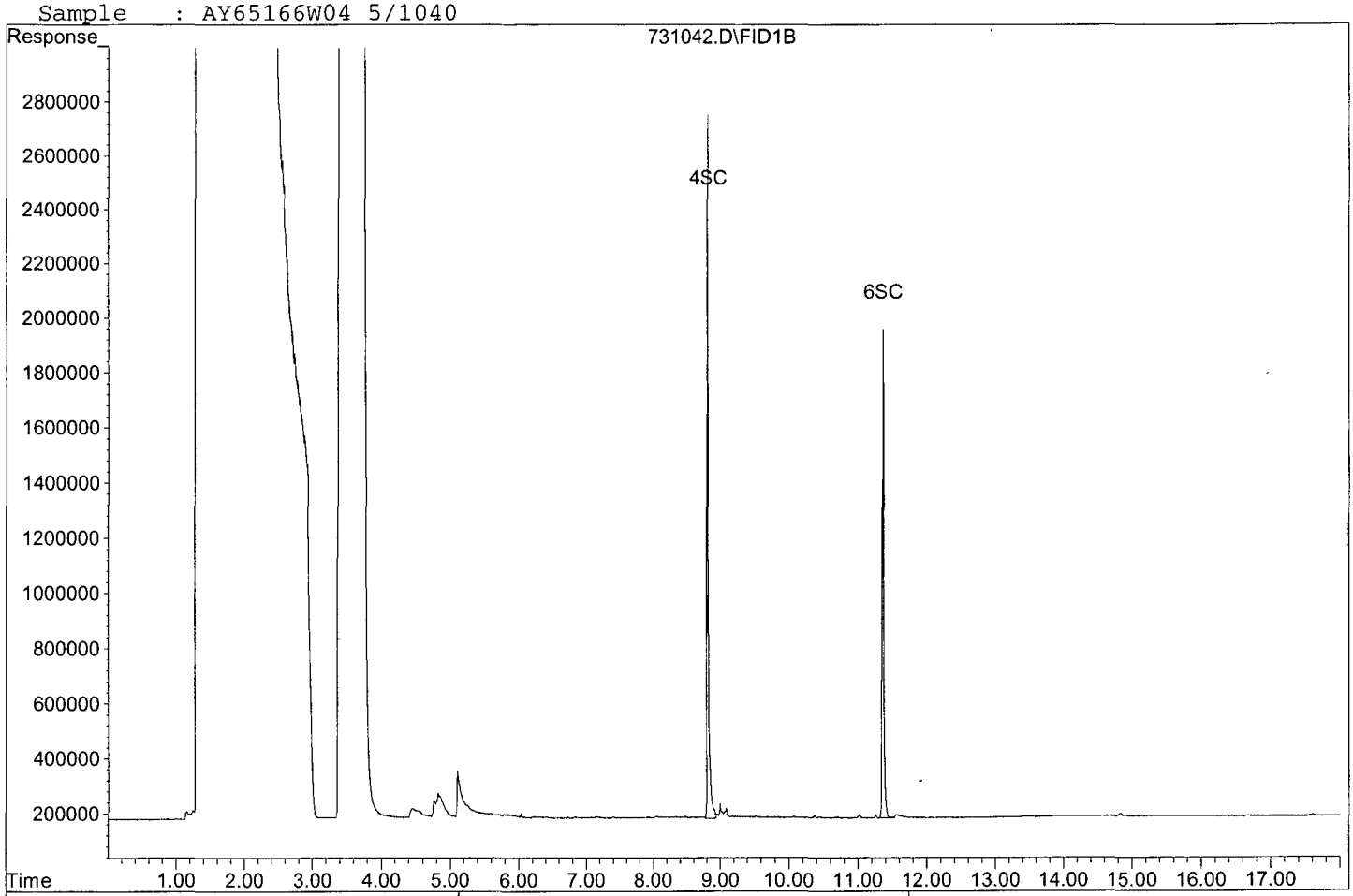
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

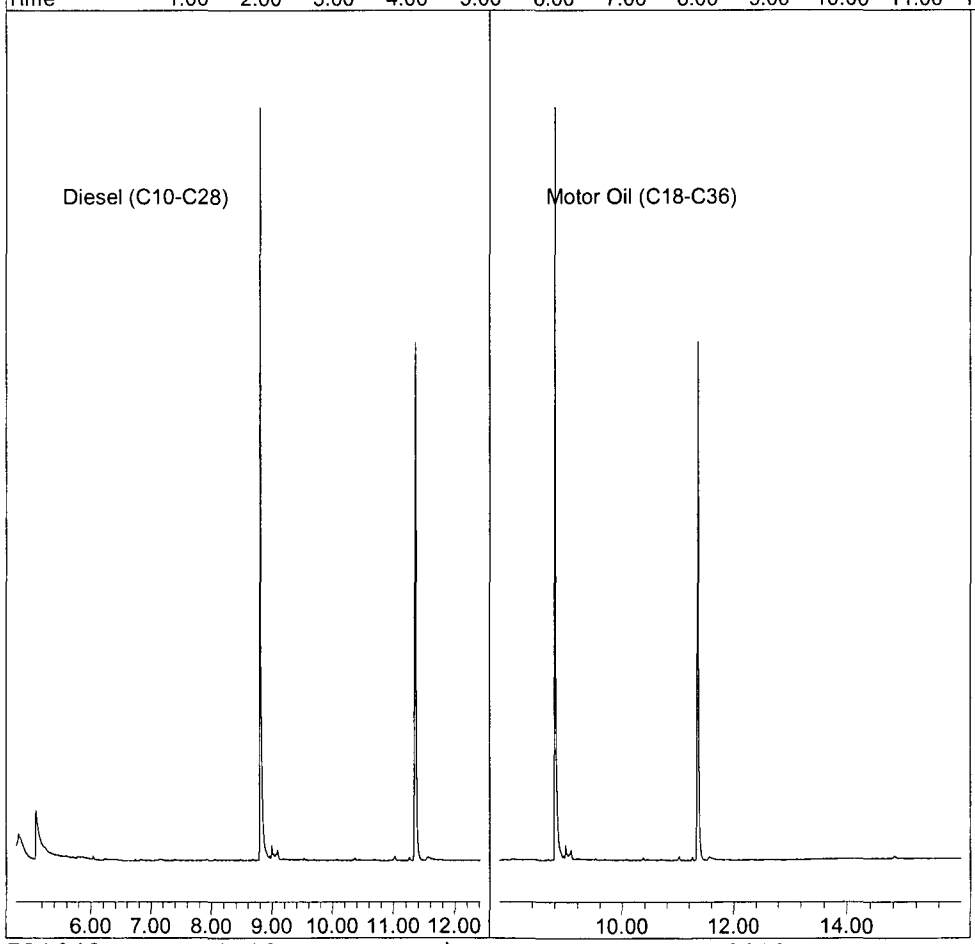
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

| 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

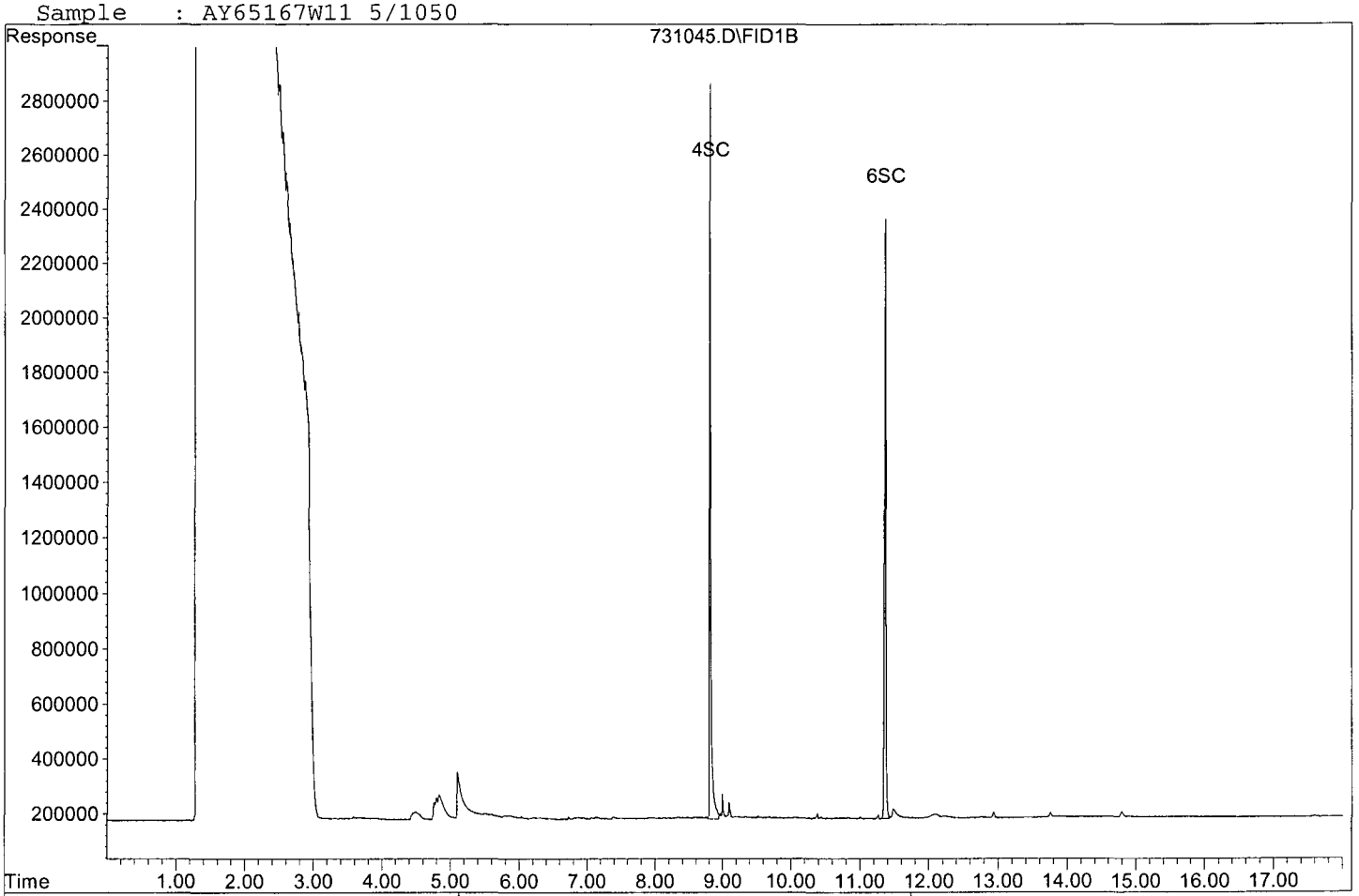
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

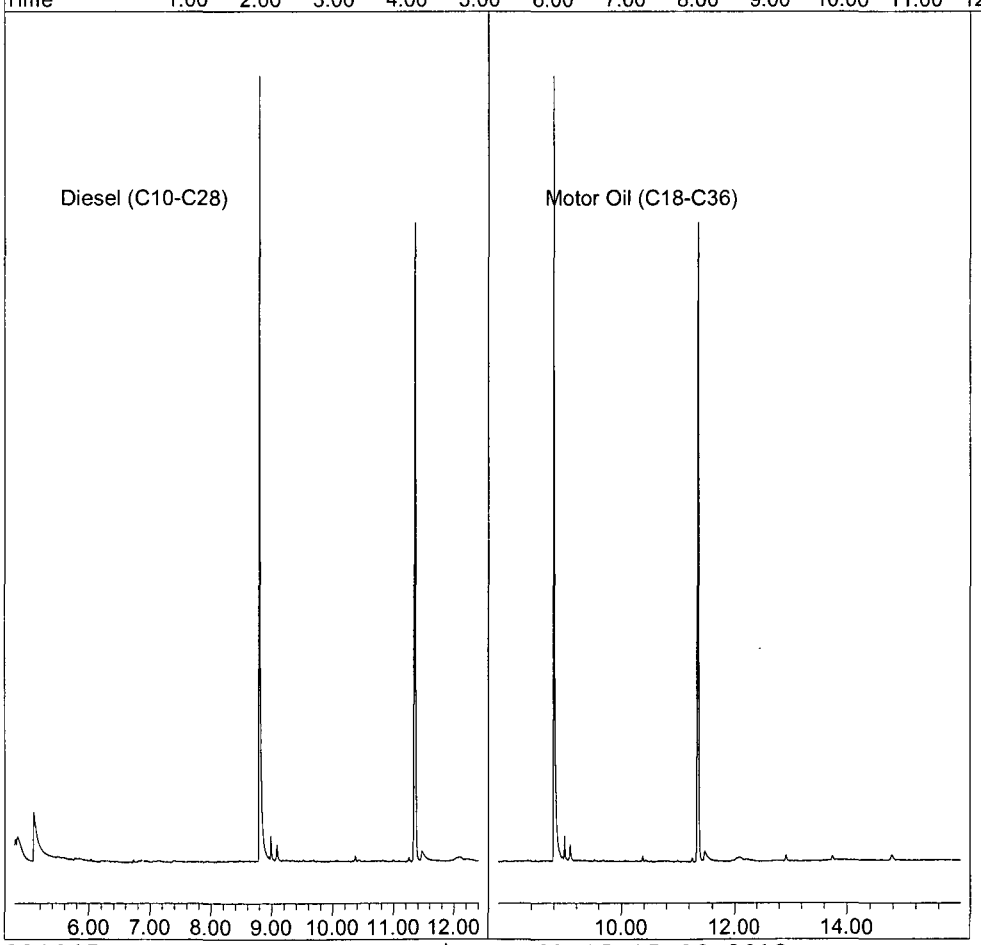
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 4) SC Ortho-Terphenyl(S) | 8.80 | 34609999 | 116.945 ppb |
| Surrogate Spike 142.857 | | Recovery = | 81.86% |
| 6) SC Octacosane(S) | 11.36 | 31728129 | 100.246 ppb |
| Surrogate Spike 142.857 | | Recovery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

* 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

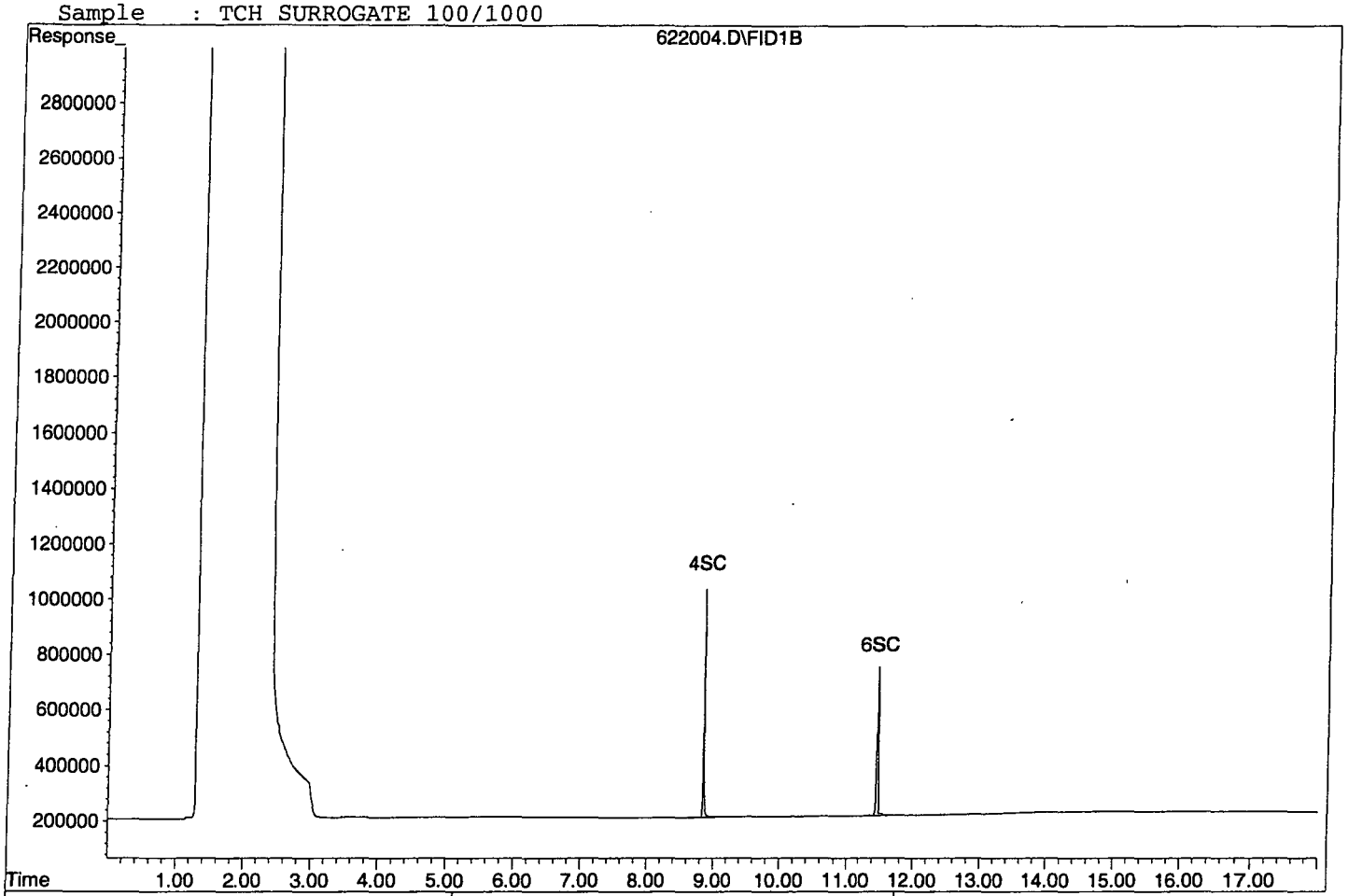
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

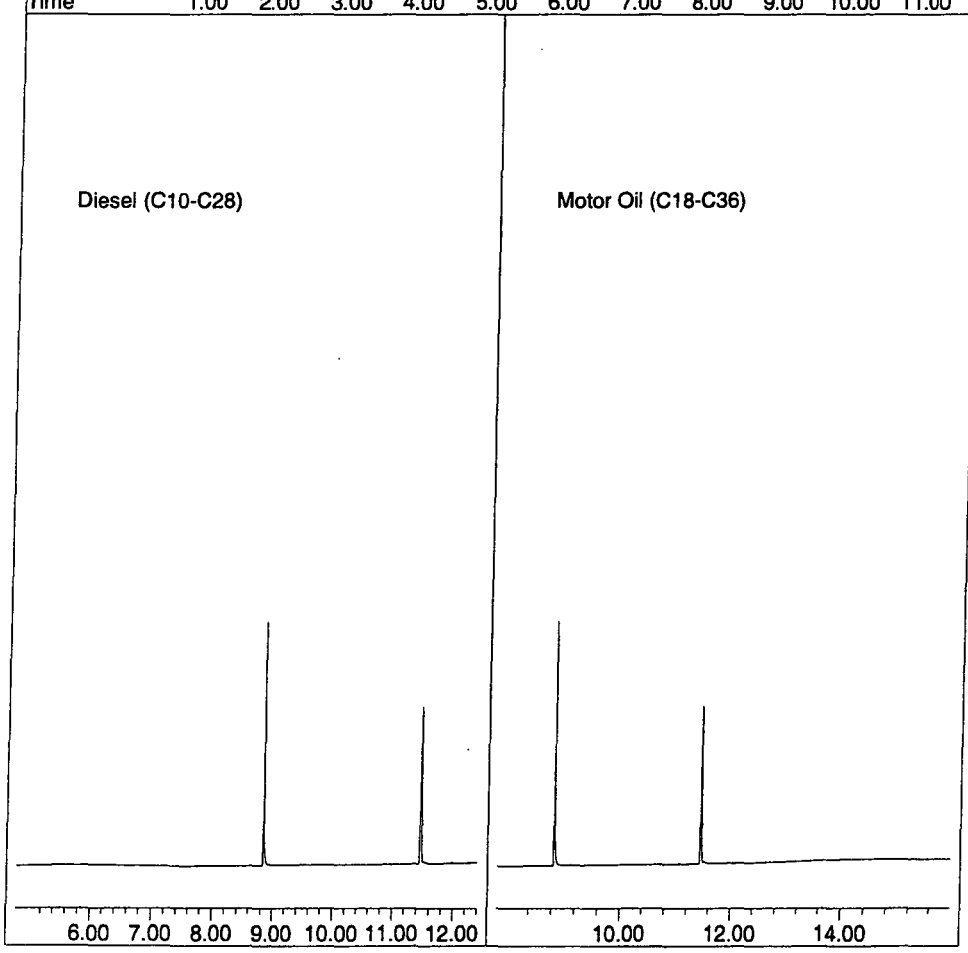
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

| 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 | | | | |

Quantitation Report

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



Quantitation Report (QT Reviewed)

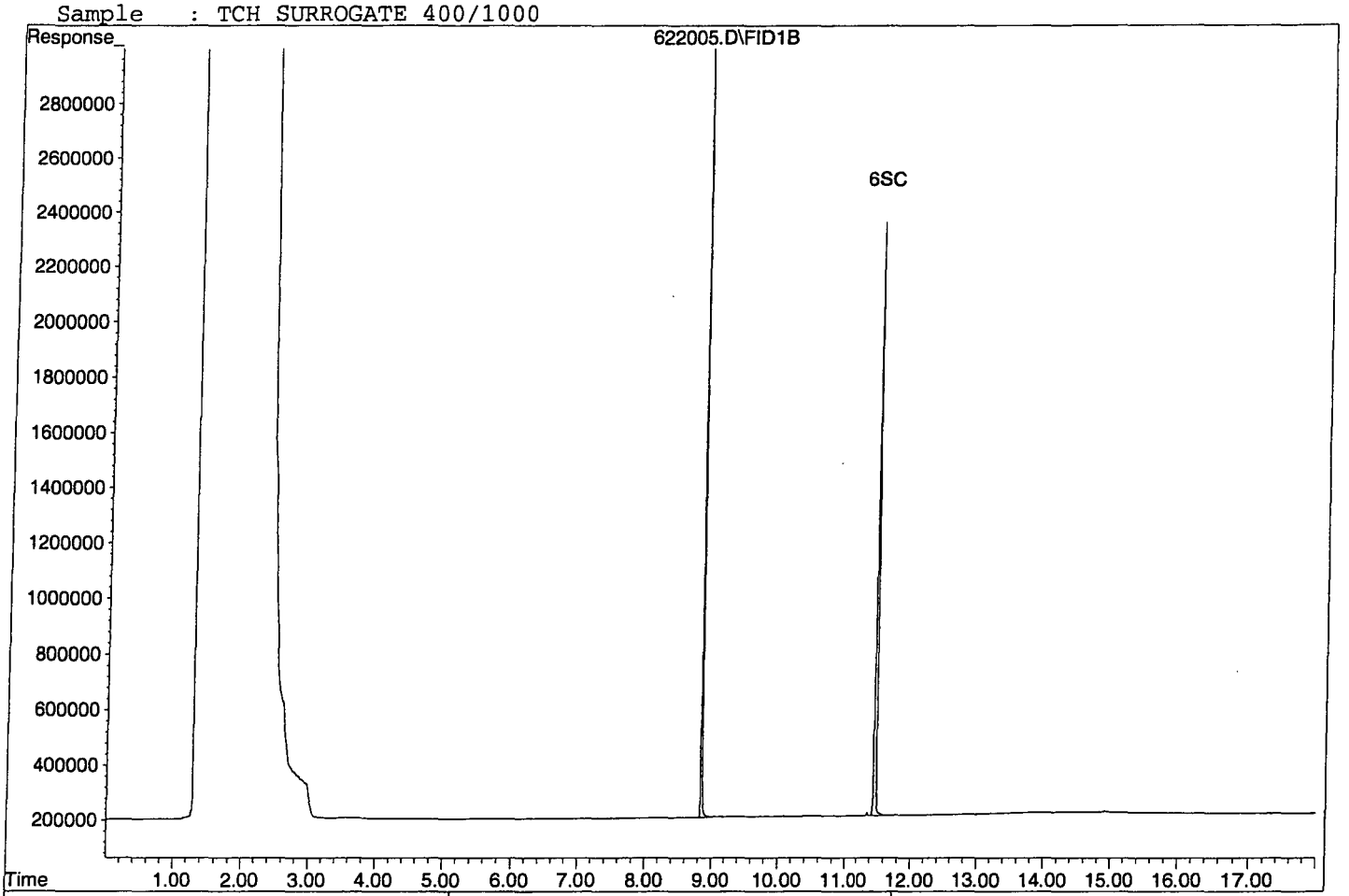
Data File : G:\APOLLO\DATA\120622\622005.D Vial: 5
Acq On : 6-22-12 18:46:55 Operator: LAC
Sample : TCH SURROGATE 400/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:37 2012 Quant Results File: TPH0622.RES

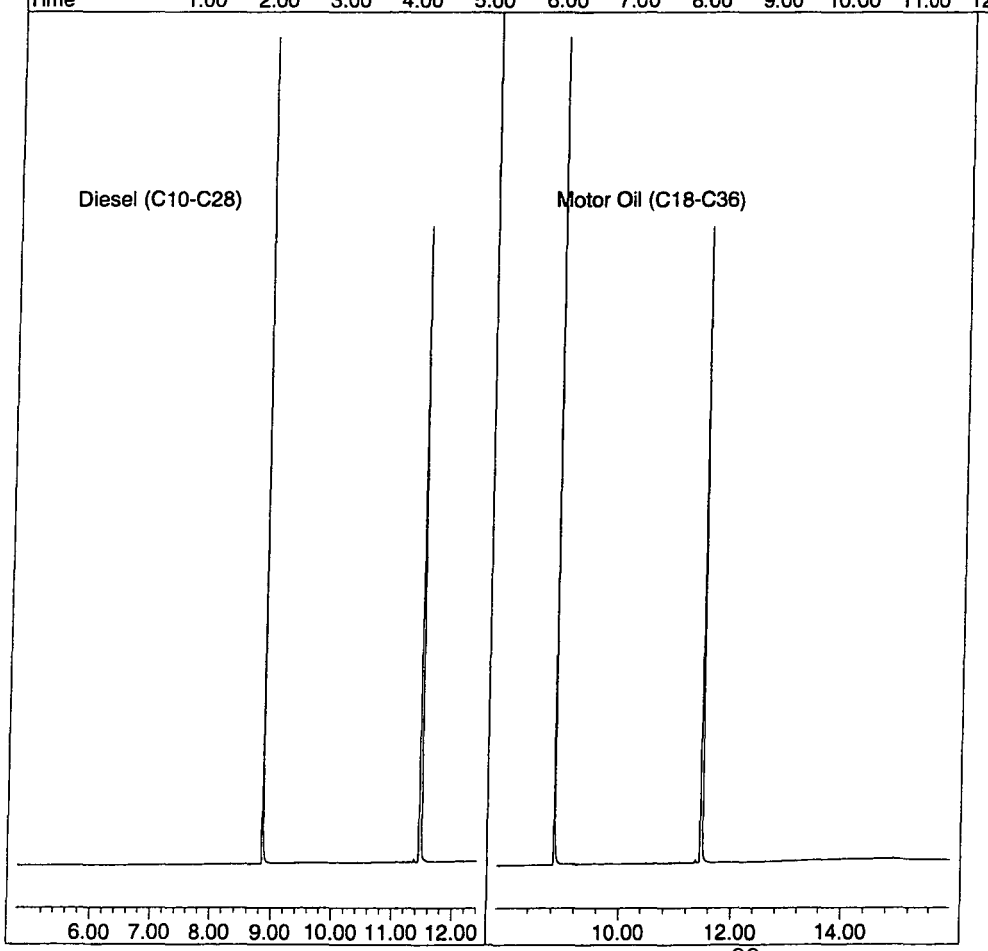
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

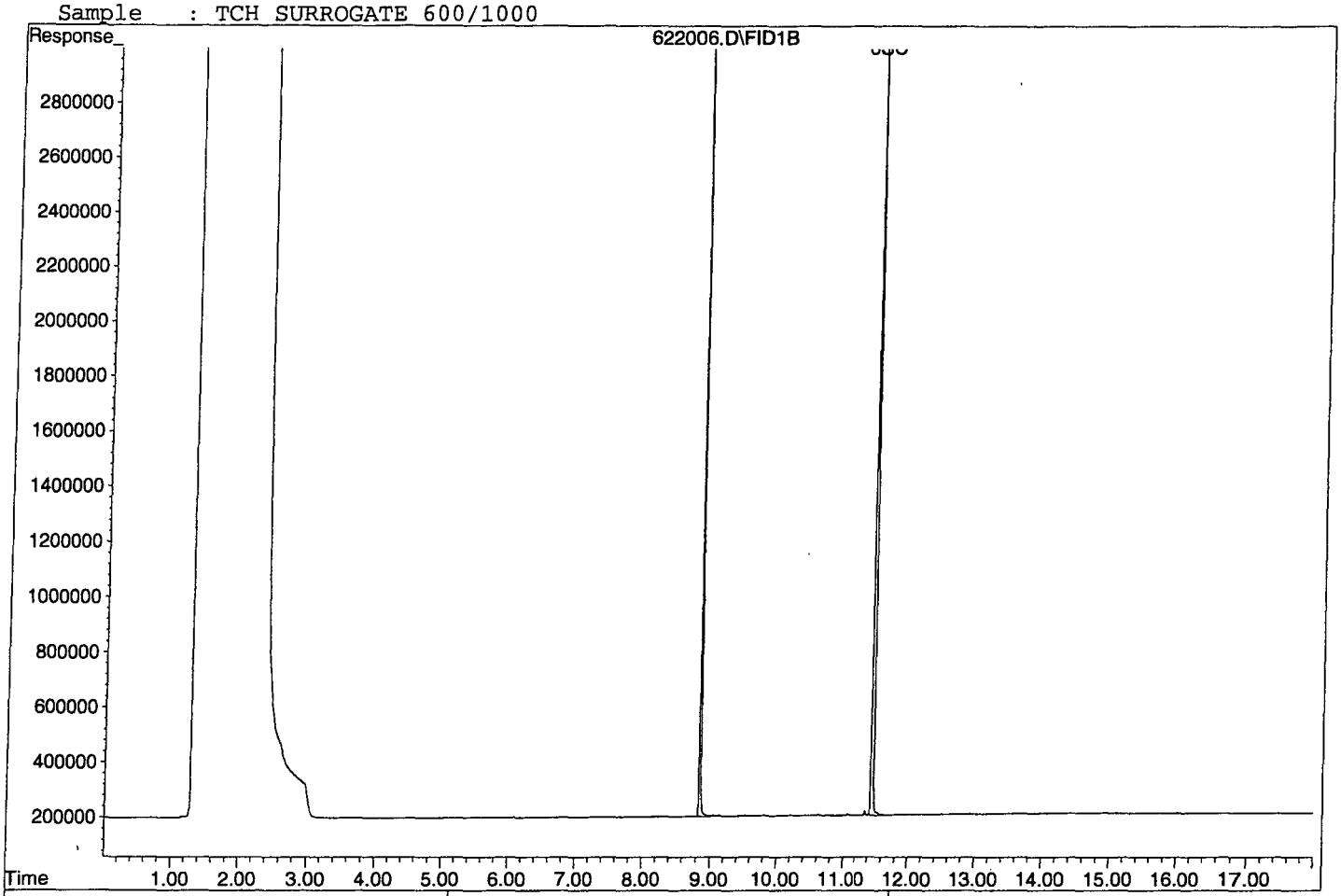
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

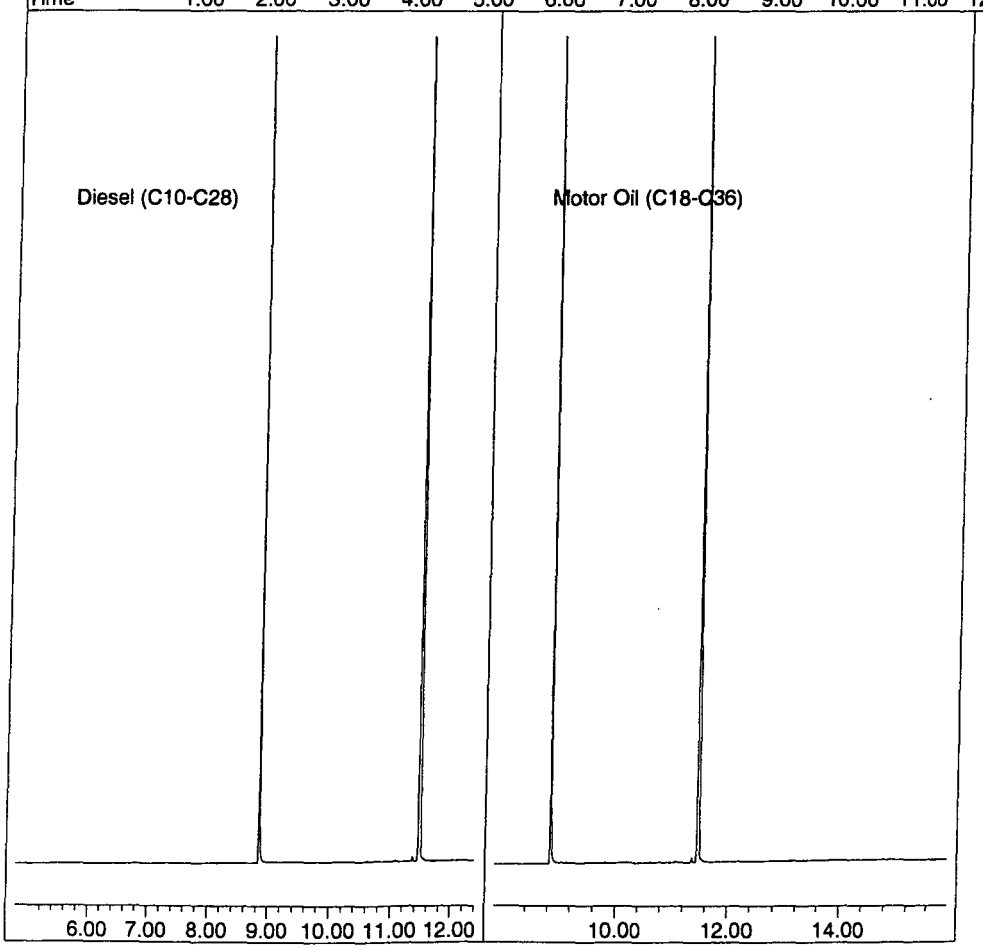
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

| 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

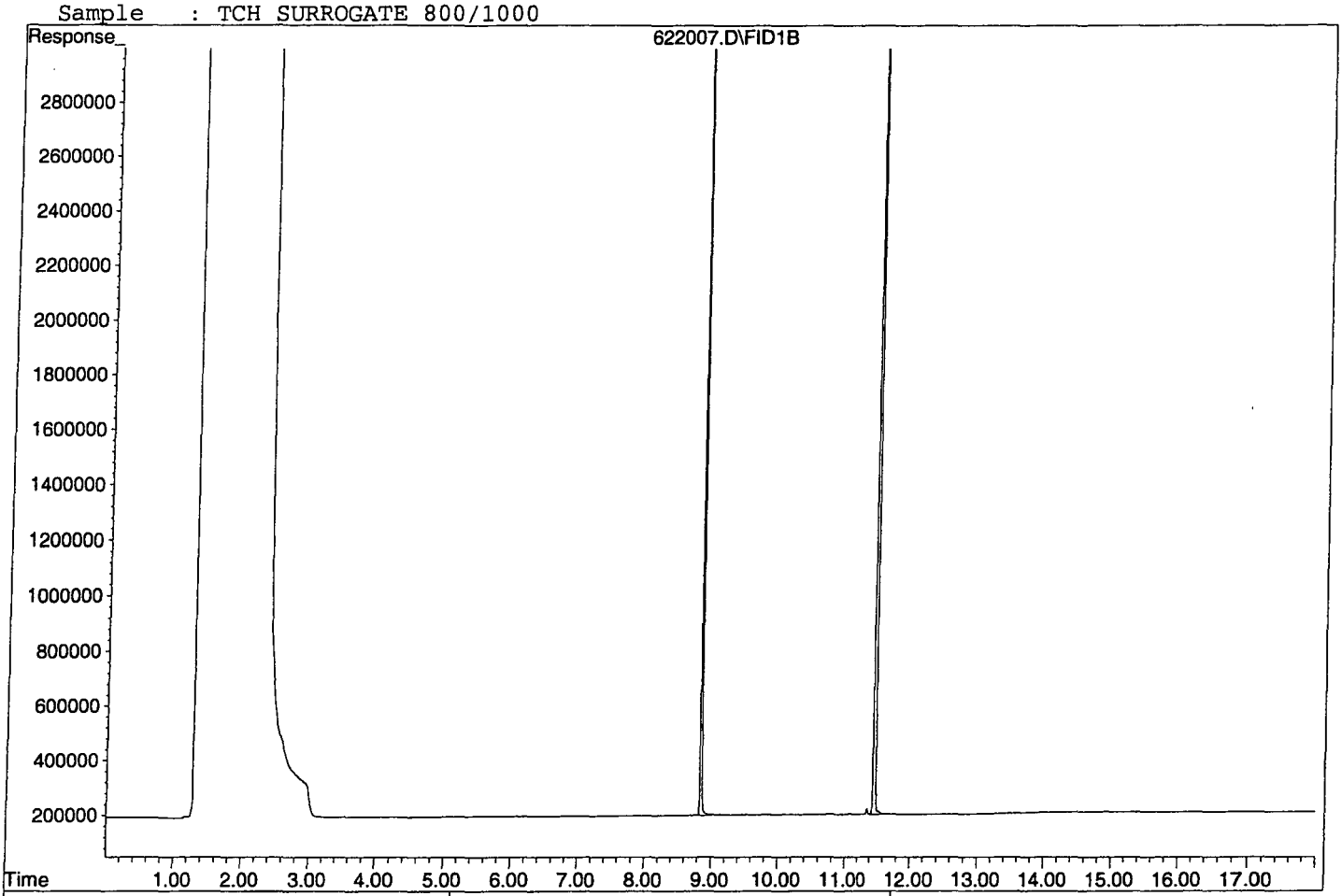
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

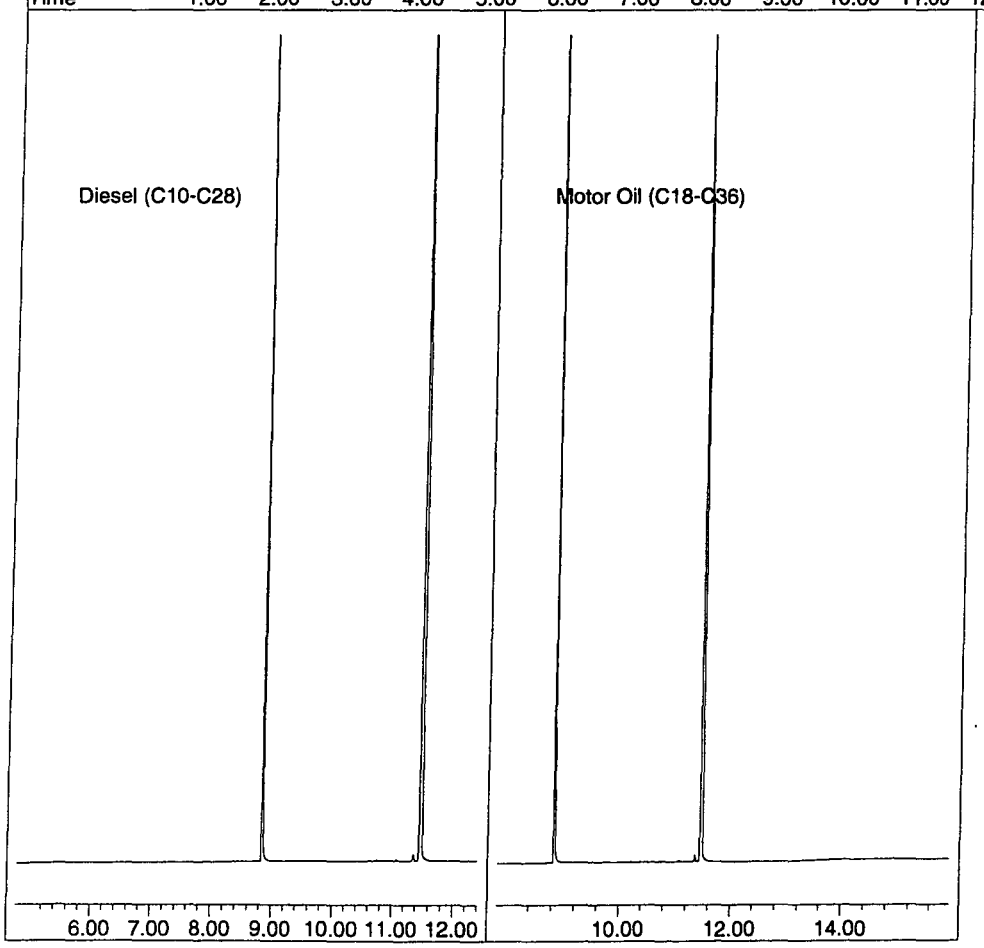
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

| 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)

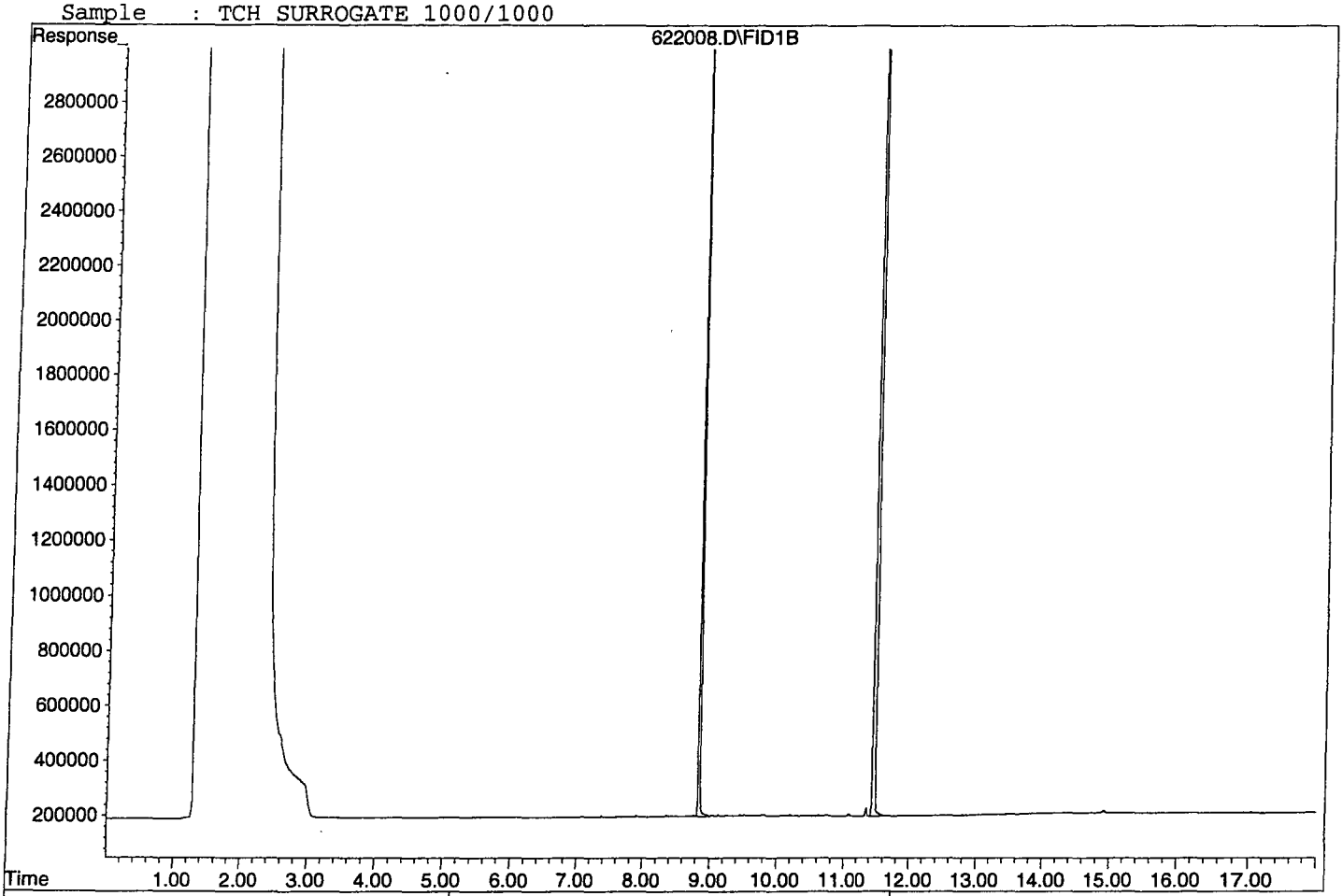
Data File : G:\APOLLO\DATA\120622\622008.D Vial: 8
Acq On : 6-22-12 19:58:49 Operator: LAC
Sample : TCH SURROGATE 1000/1000 Inst : Apollo
Misc : Mix(c) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:39 2012 Quant Results File: TPH0622.RES

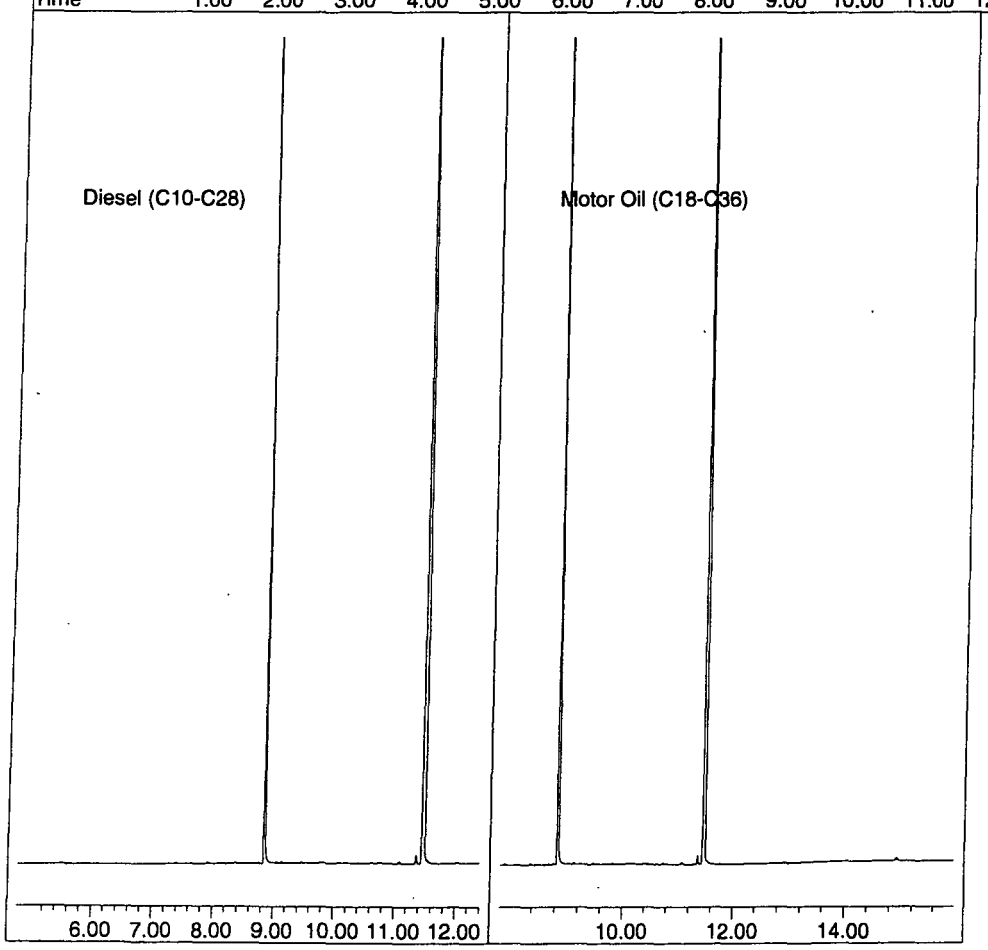
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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

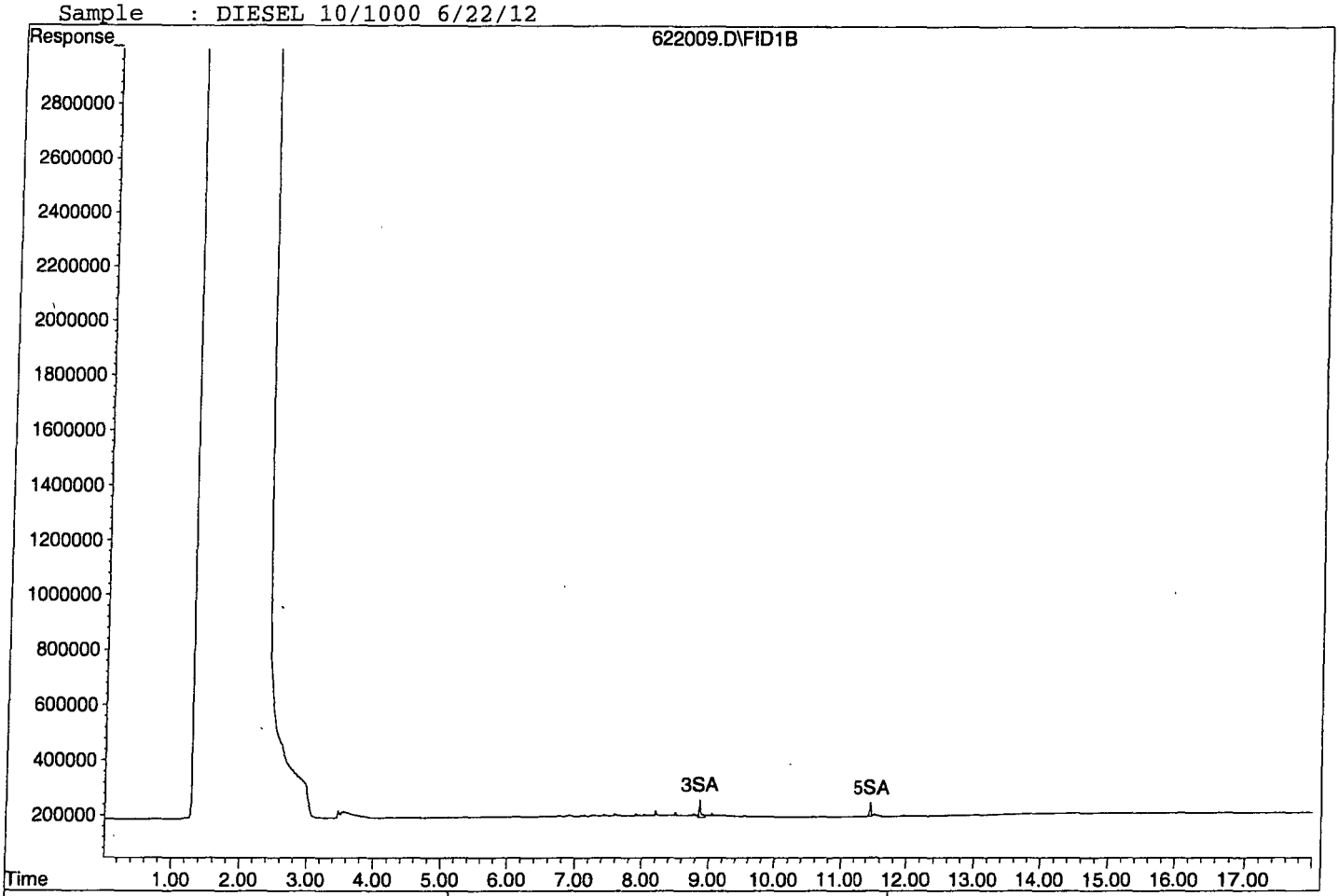
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

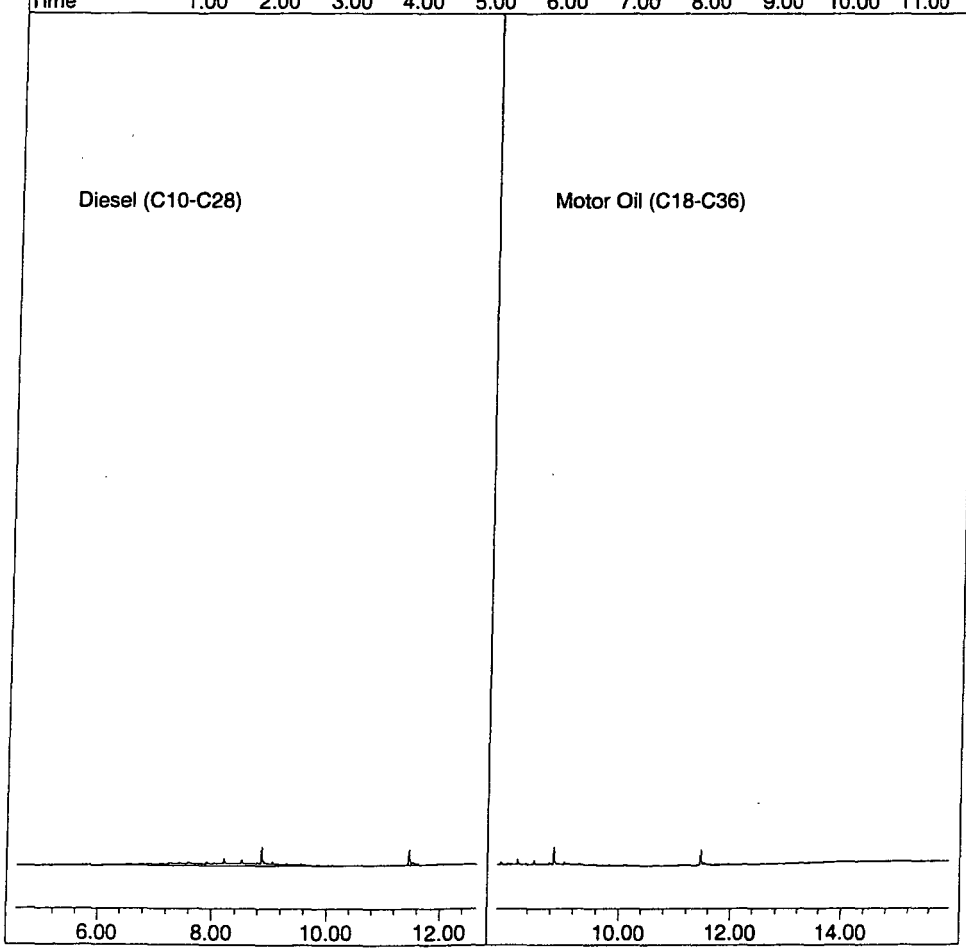
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

| 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)

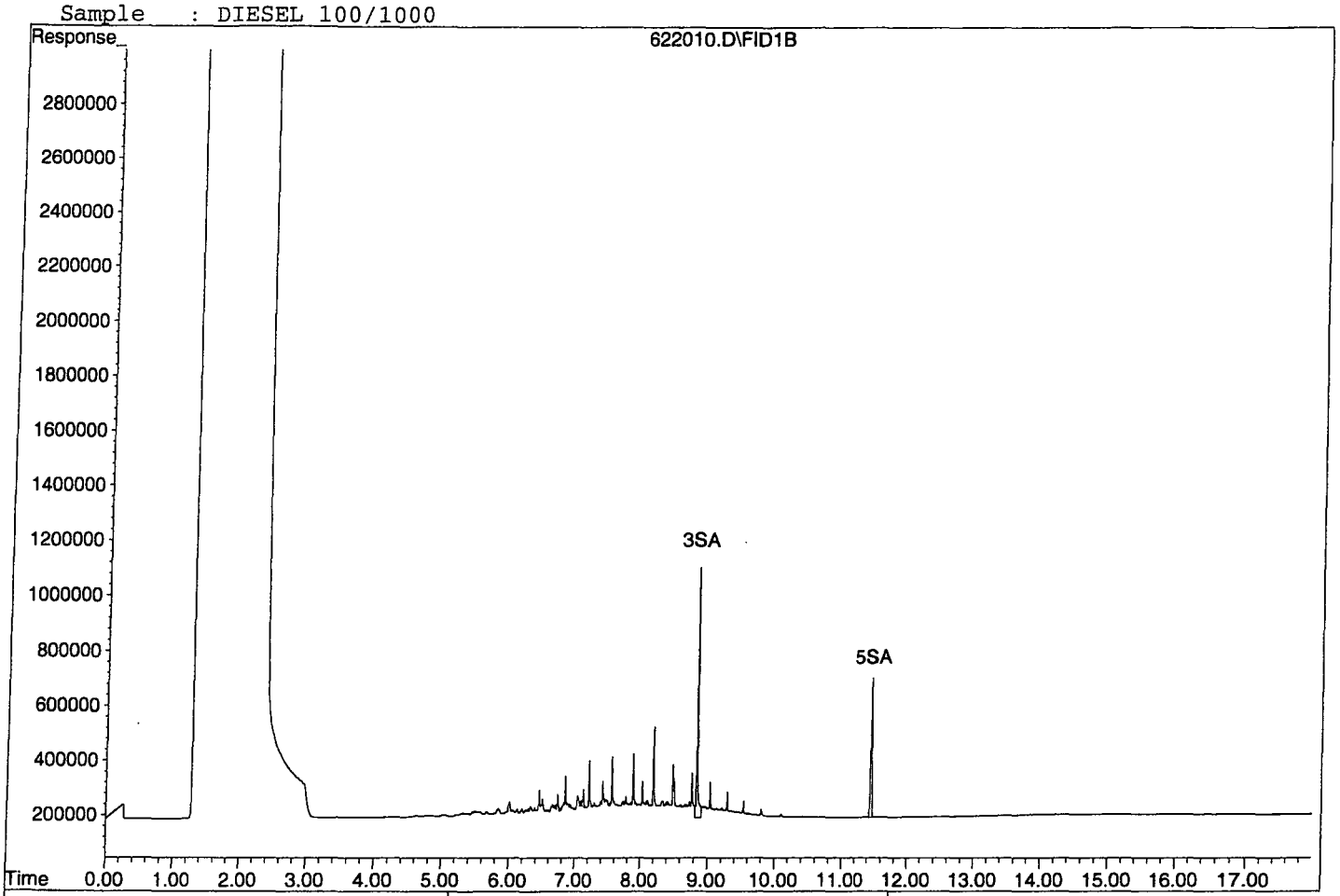
Data File : G:\APOLLO\DATA\120622\622010.D Vial: 10
Acq On : 6-22-12 20:47:06 Operator: LAC
Sample : DIESEL 100/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

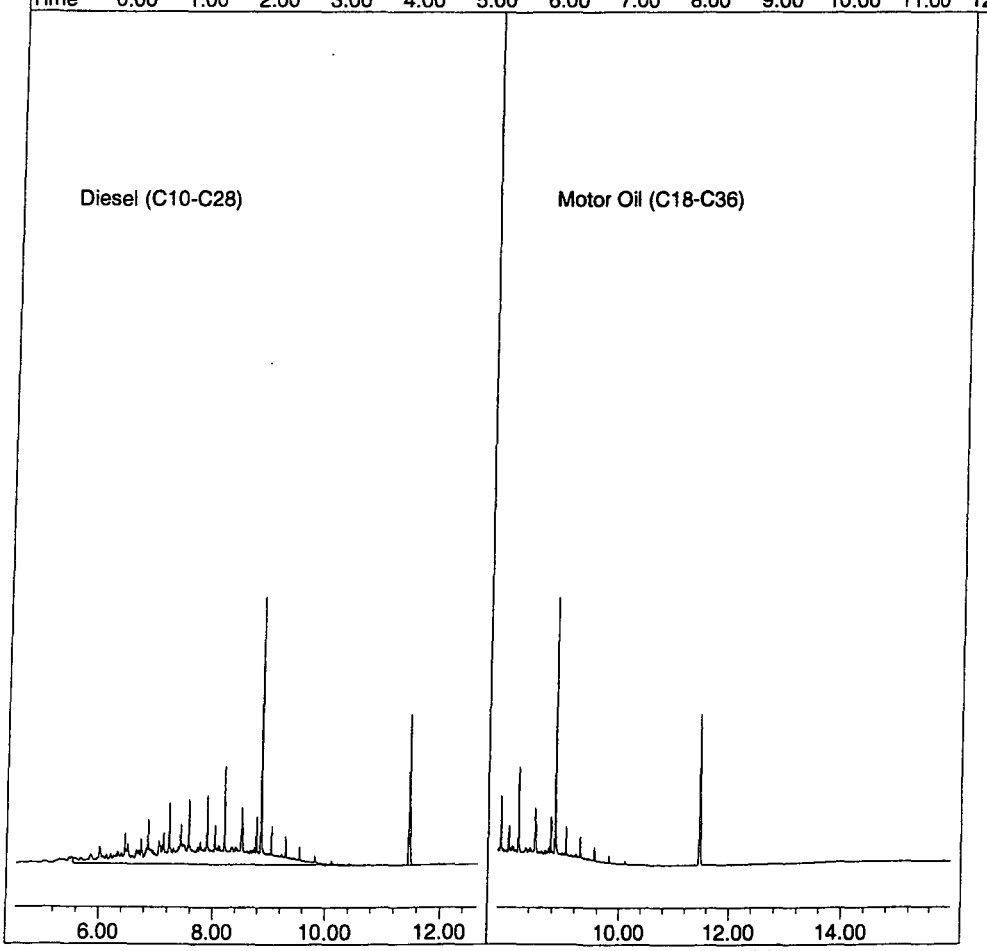
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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)

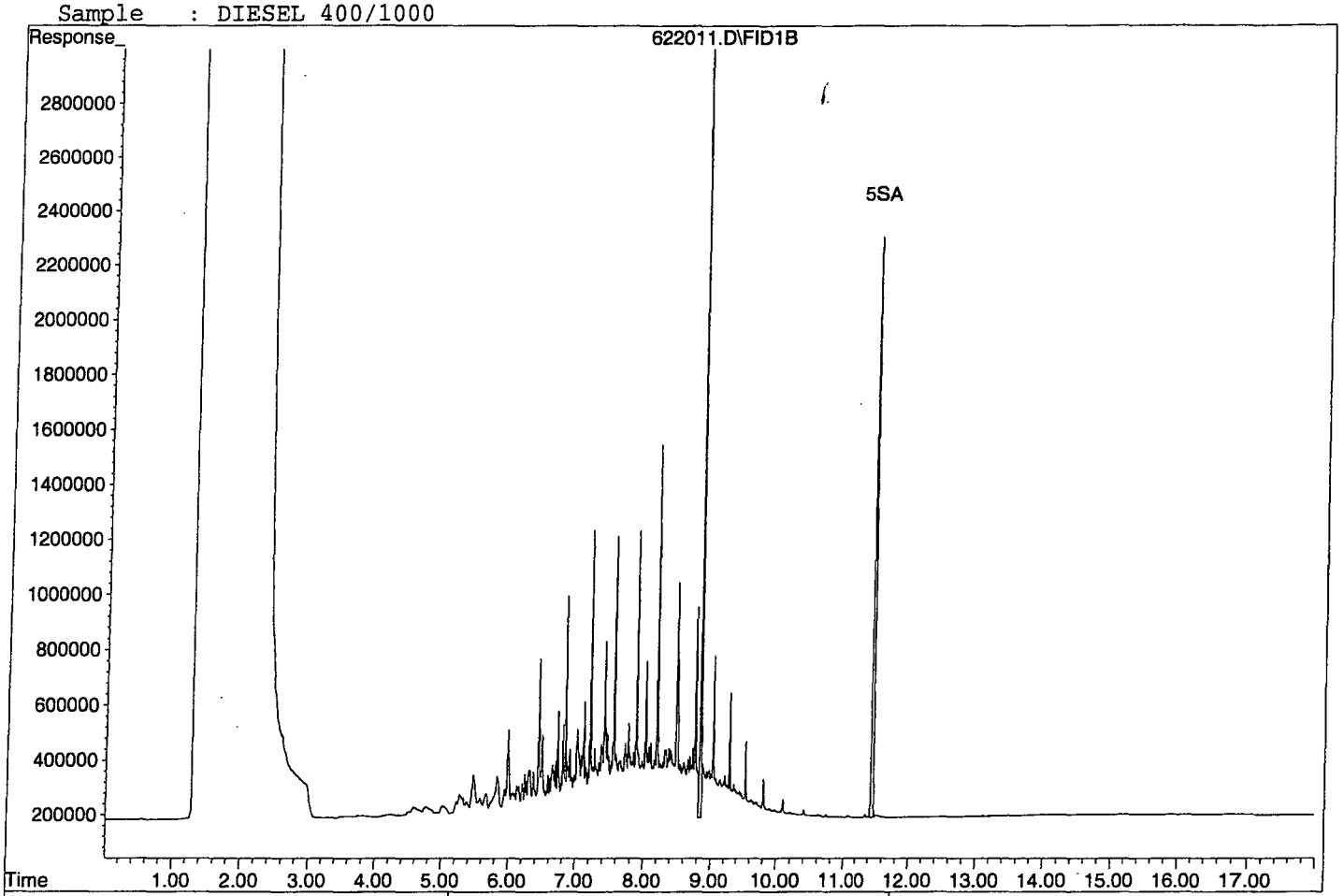
Data File : G:\APOLLO\DATA\120622\622011.D Vial: 11
Acq On : 6-22-12 21:11:13 Operator: LAC
Sample : DIESEL 400/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

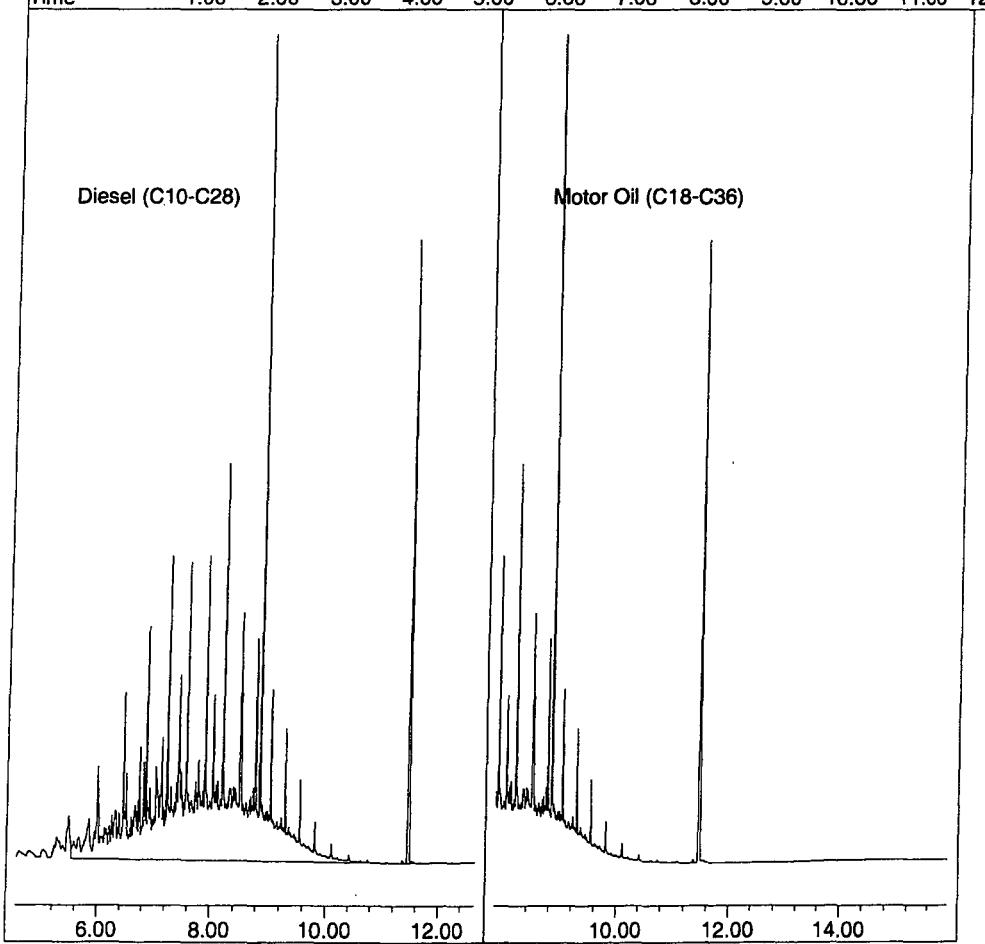
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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)

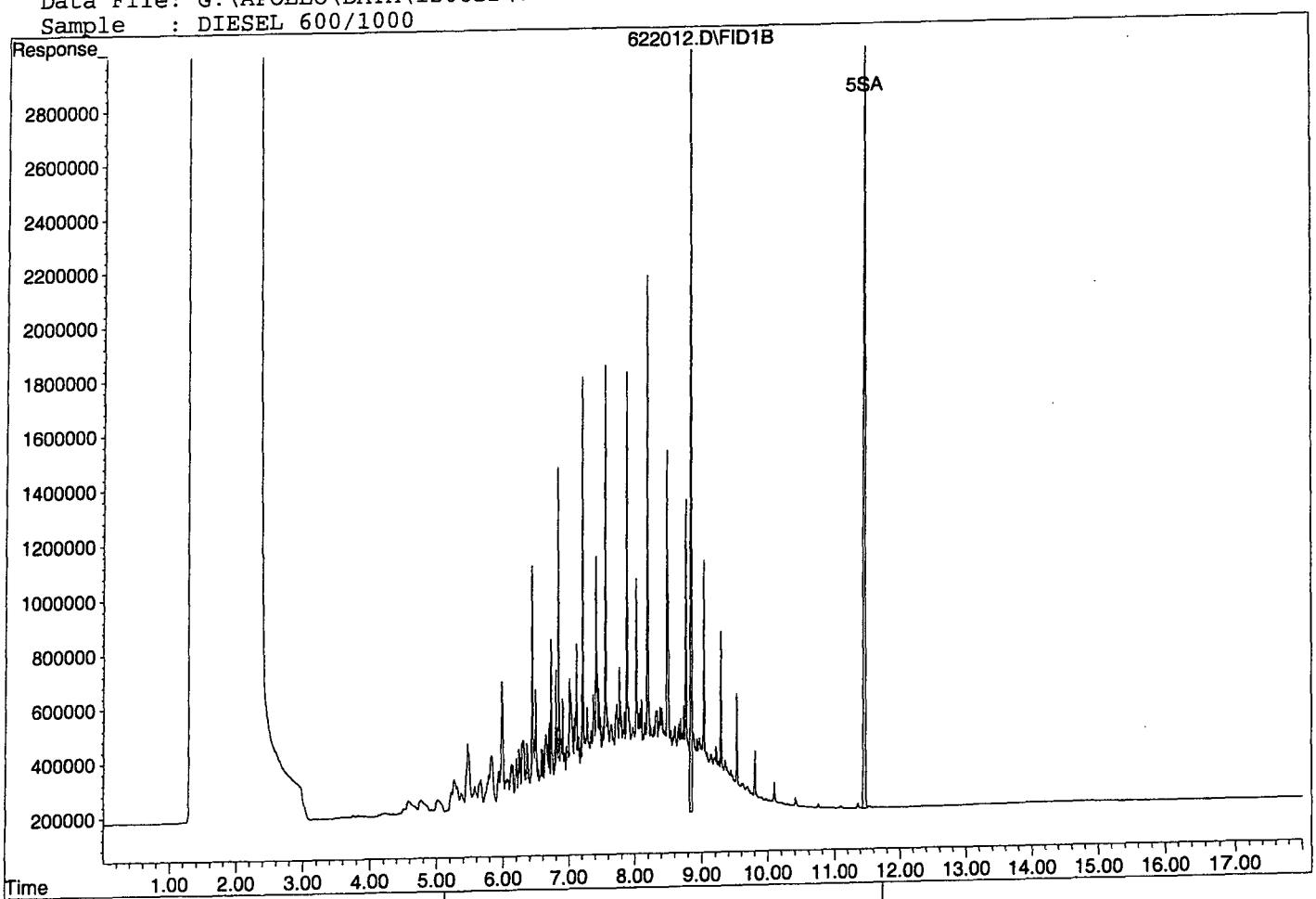
Data File : G:\APOLLO\DATA\120622\622012.D Vial: 12
Acq On : 6-22-12 21:35:18 Operator: LAC
Sample : DIESEL 600/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

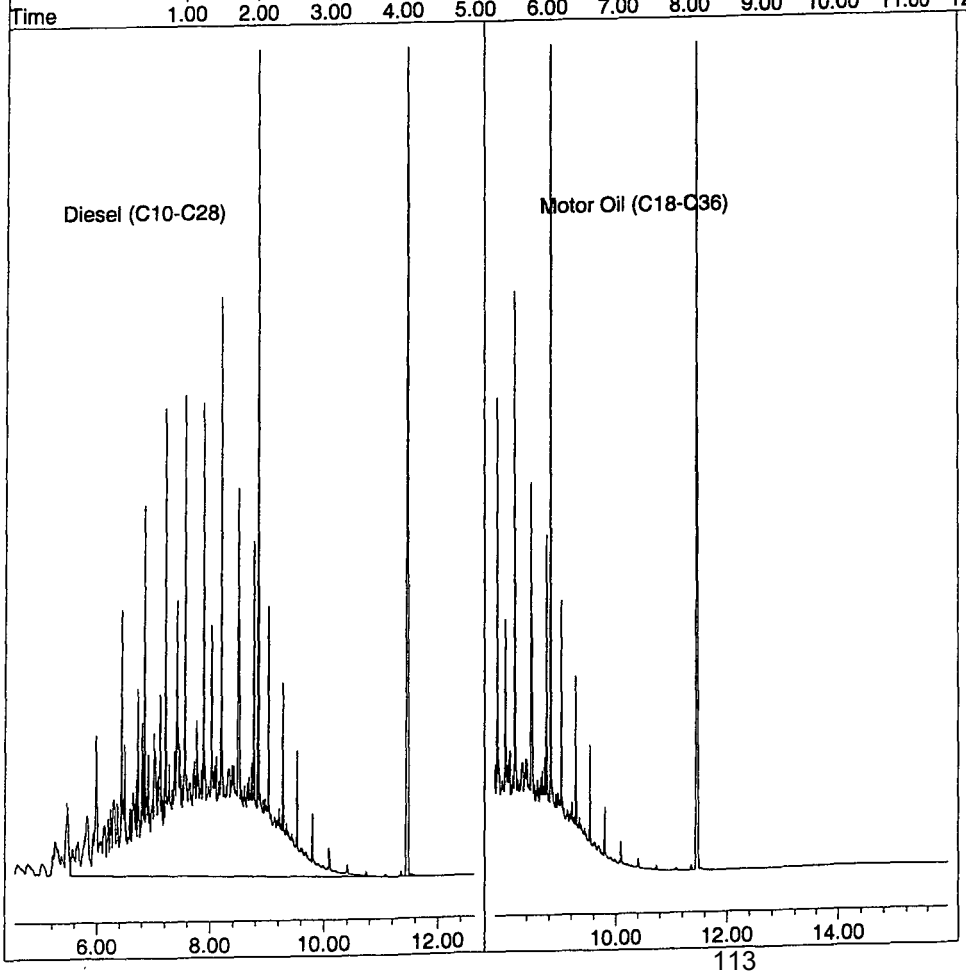
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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)

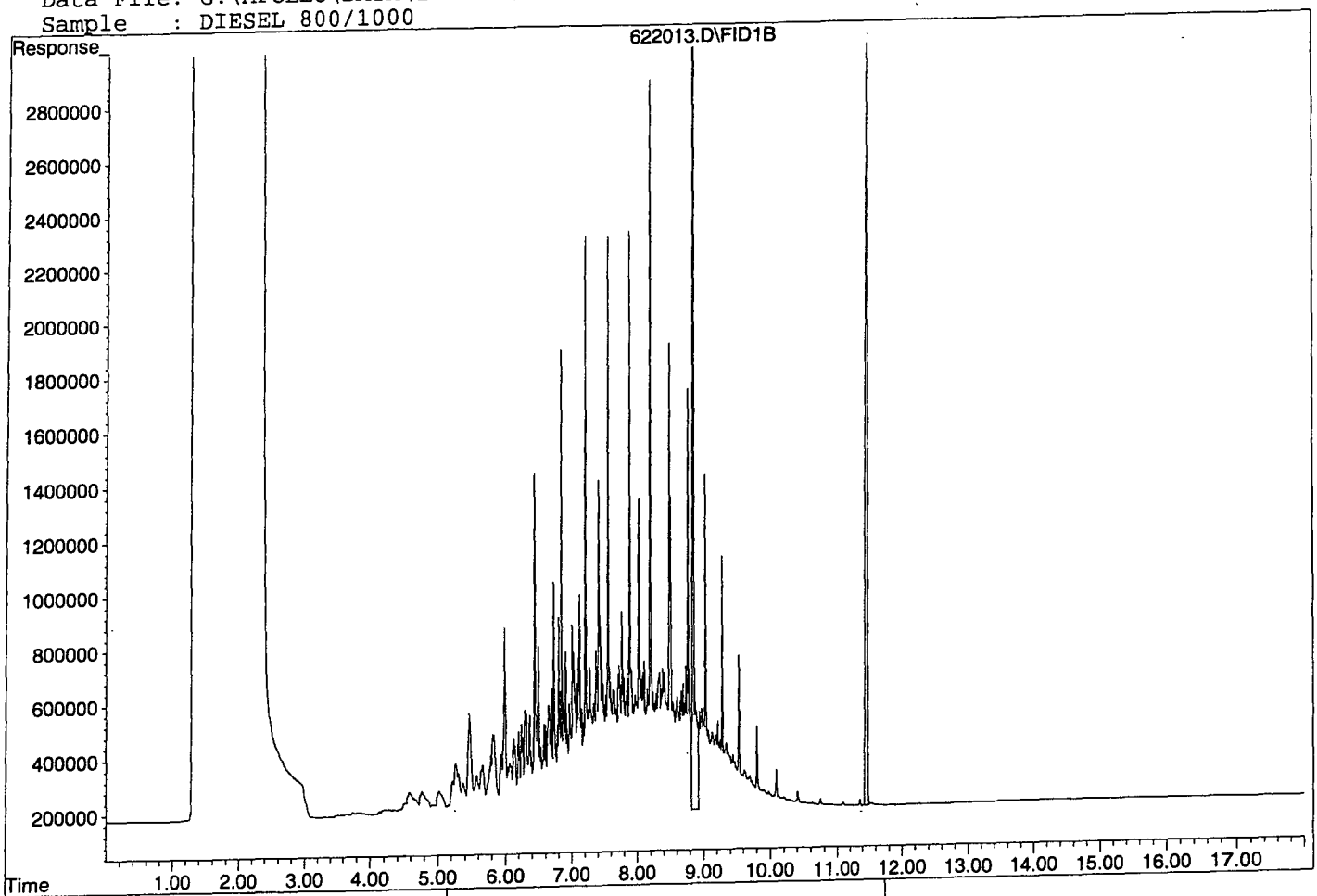
Data File : G:\APOLLO\DATA\120622\622013.D Vial: 13
Acq On : 6-22-12 21:59:20 Operator: LAC
Sample : DIESEL 800/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

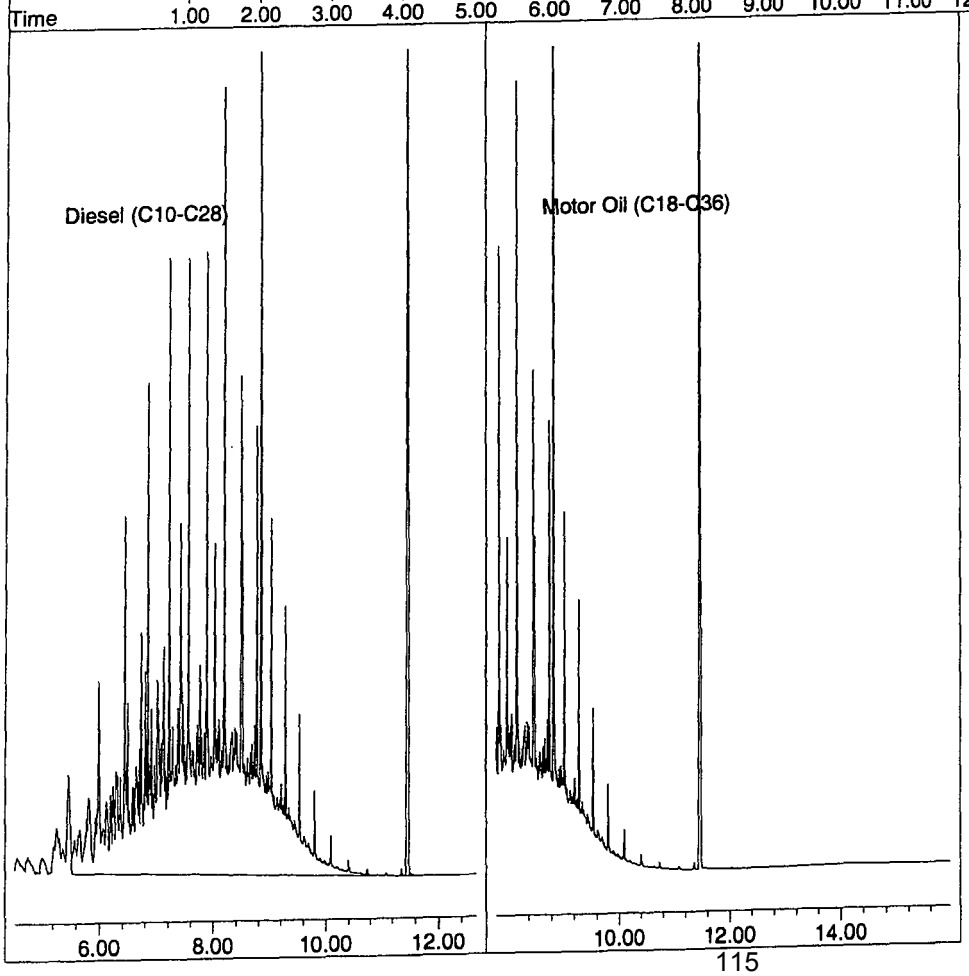
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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)

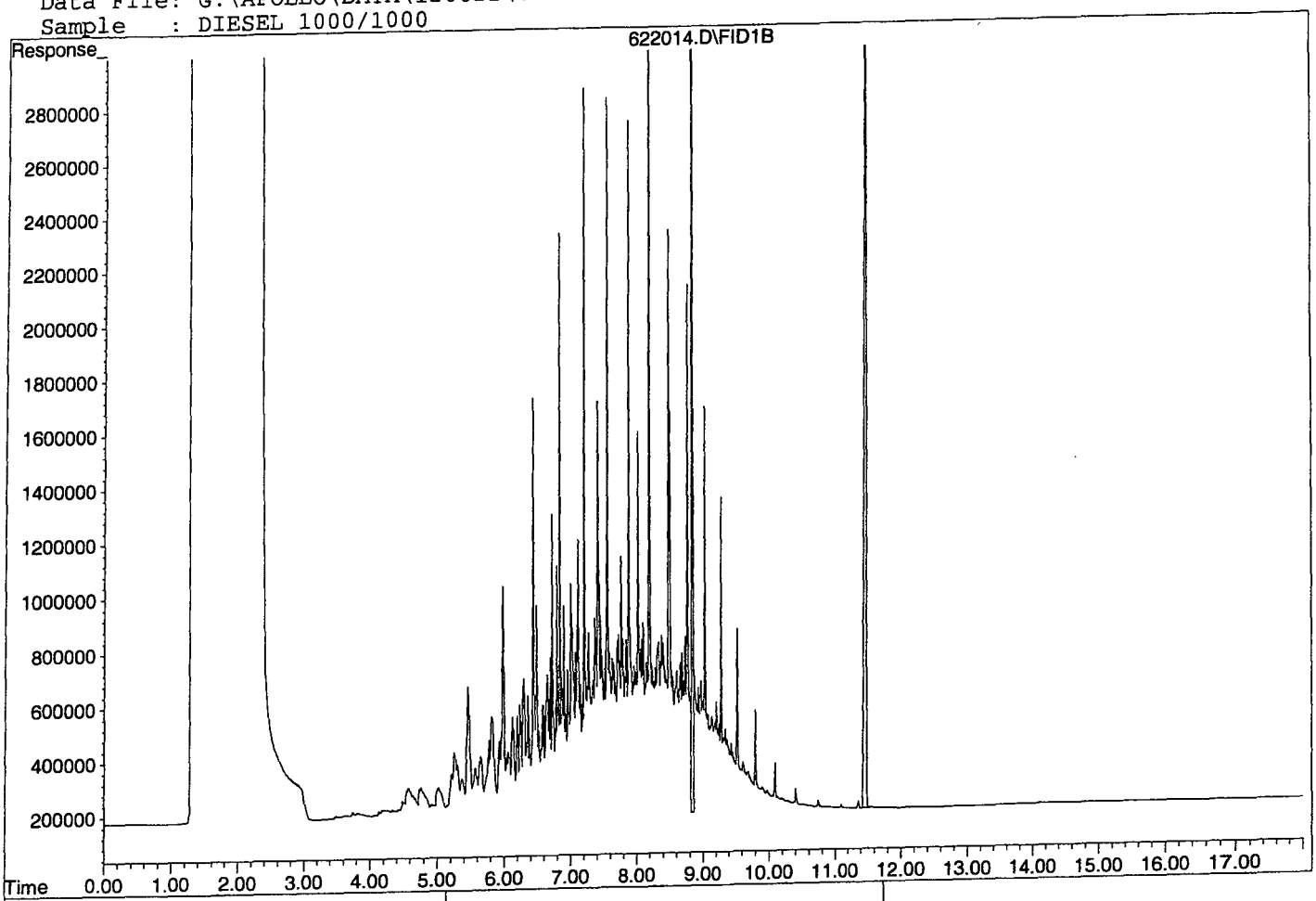
Data File : G:\APOLLO\DATA\120622\622014.D Vial: 14
Acq On : 6-22-12 22:23:21 Operator: LAC
Sample : DIESEL 1000/1000 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:05 2012 Quant Results File: TPH0622.RES

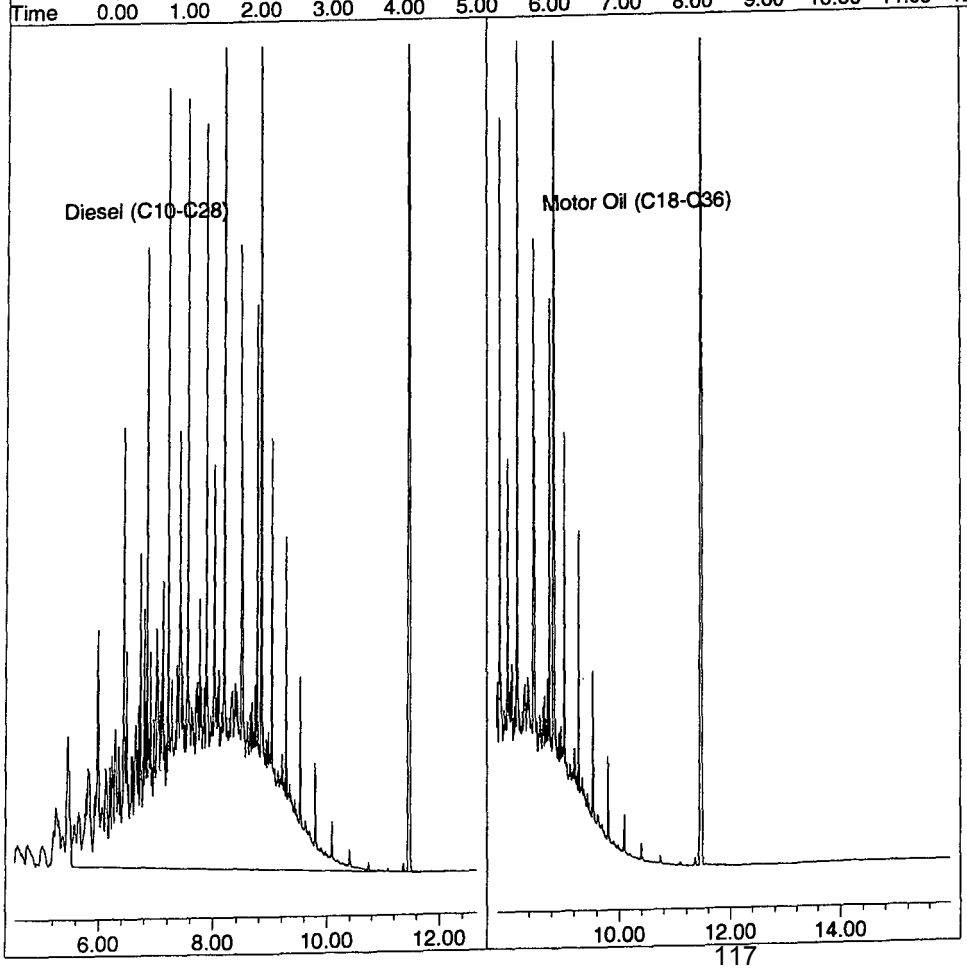
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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 | | | | | | | |
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| 37 | | | | | | | |
| 38 | | | | | | | |
| 39 | | | | | | | |
| 40 | | | | | | | |
| | | Average | | | 6.0 | | |

Quantitation Report (QT Reviewed)

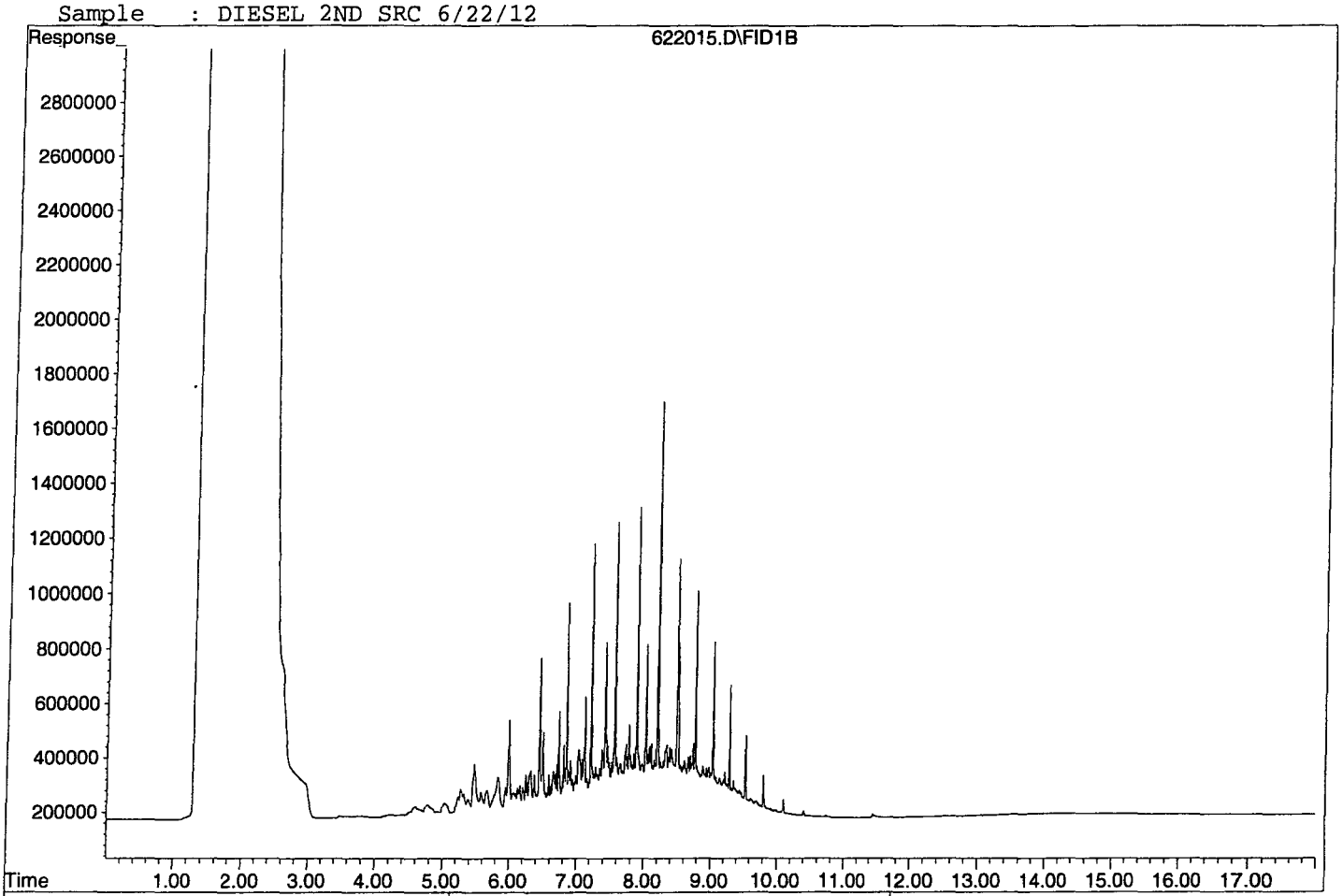
Data File : G:\APOLLO\DATA\120622\622015.D Vial: 15
Acq On : 6-22-12 22:47:20 Operator: LAC
Sample : DIESEL 2ND SRC 6/22/12 Inst : Apollo
Misc : Mix(A) Multiplr: 1.00
IntFile : events.e
Quant Time: Jun 25 9:28 2012 Quant Results File: TPH0622.RES

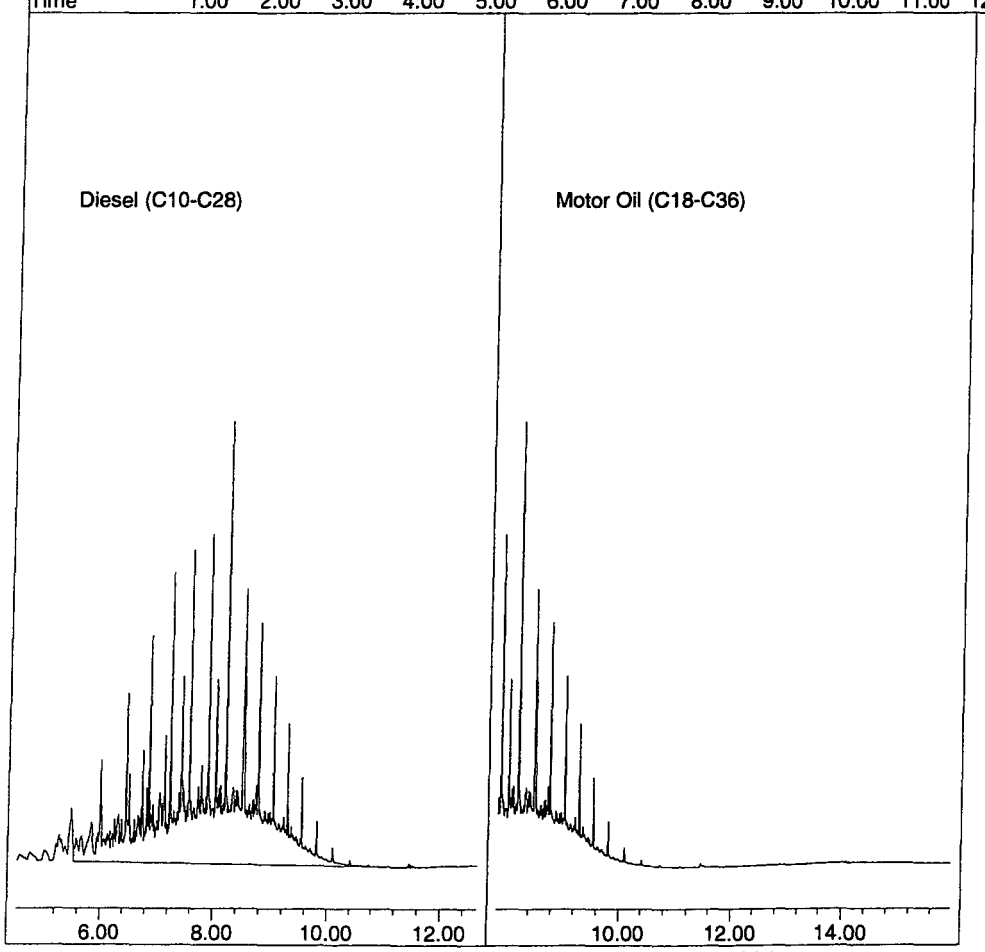
Method : G:\APOLLO\DATA\120622\TPH0622.M (Chemstation Integrator)
Title : Diesel
Last Update : Mon Jun 25 09:48:29 2012
Response via : Multiple Level Calibration

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 | |
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| 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

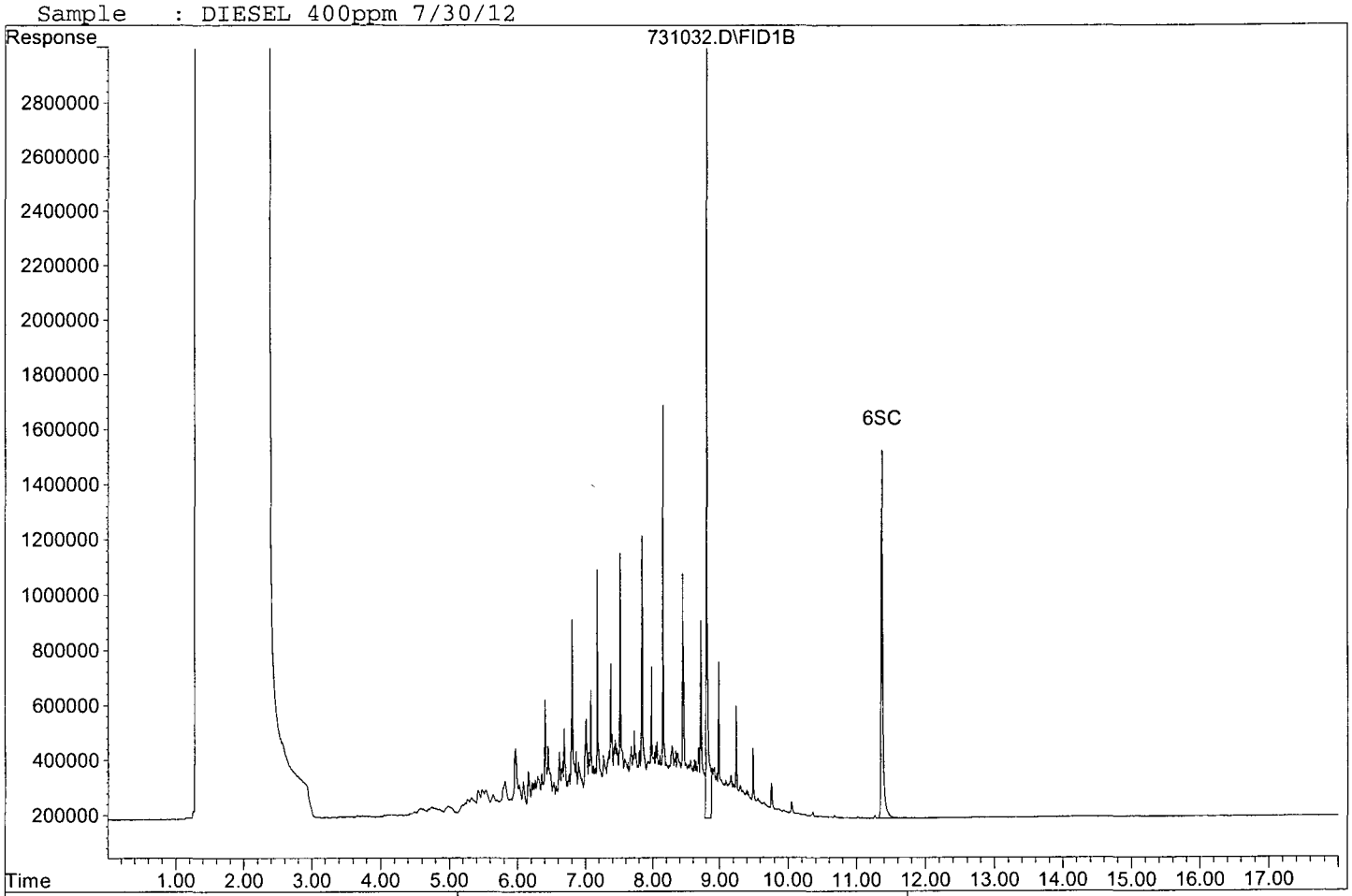
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

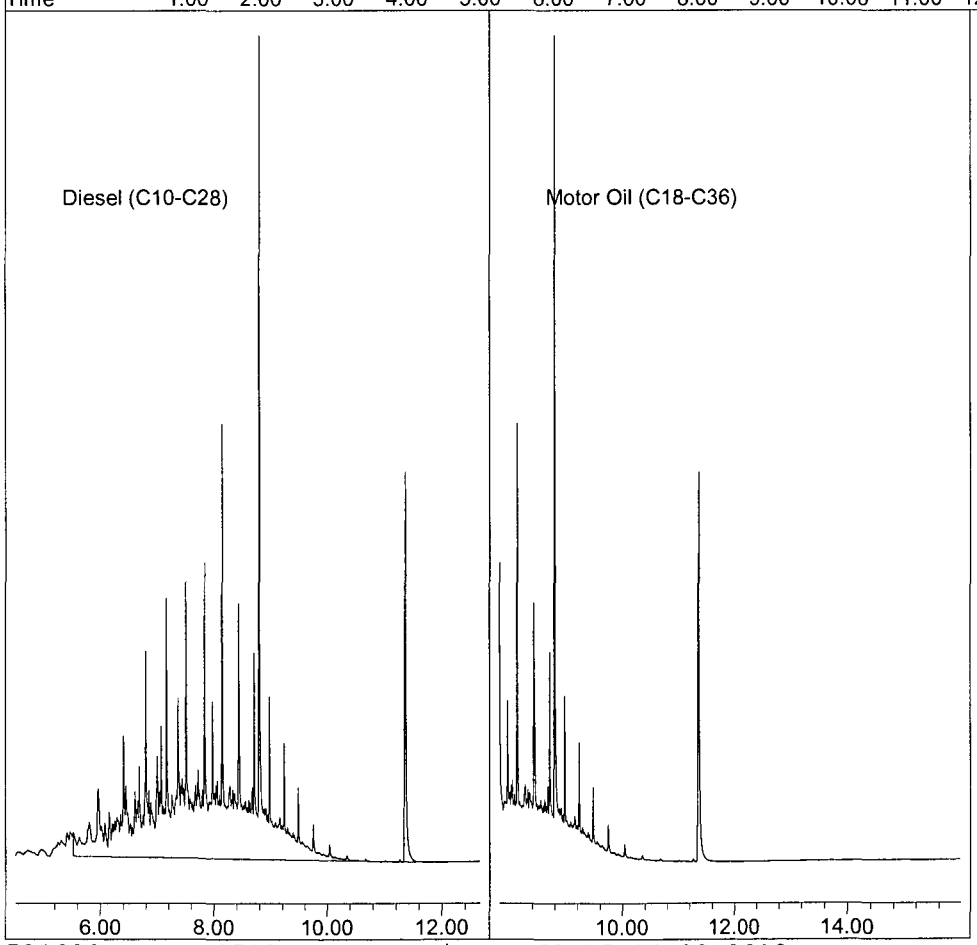
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

| 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 | |
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| 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

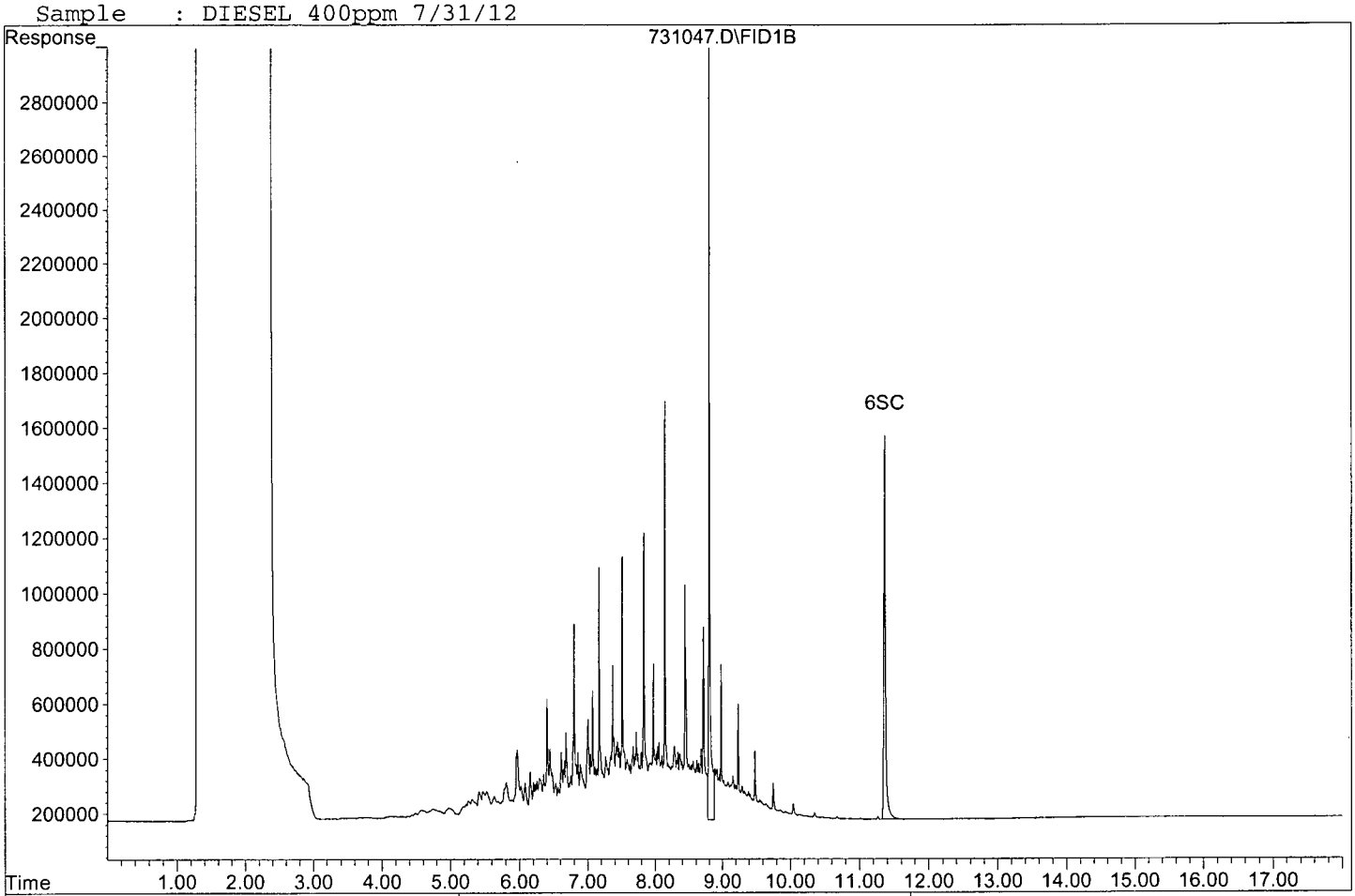
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

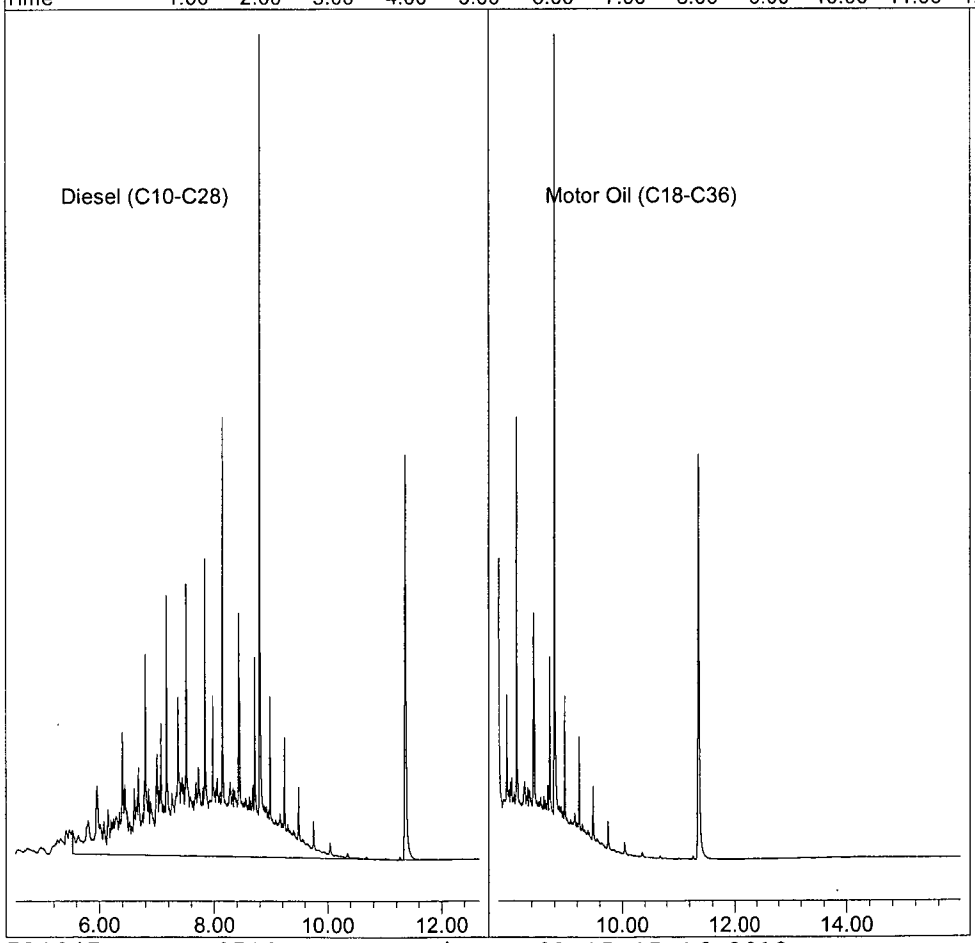
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 4) SC Ortho-Terphenyl(S) | 8.80 | 36659238 | 26.013 ppb |
| Surrogate Spike 30.000 | Recovery = | | 86.71% |
| 6) SC Octacosane(S) | 11.36 | 24520491 | 16.269 ppb |
| Surrogate Spike 30.000 | Recovery = | | 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

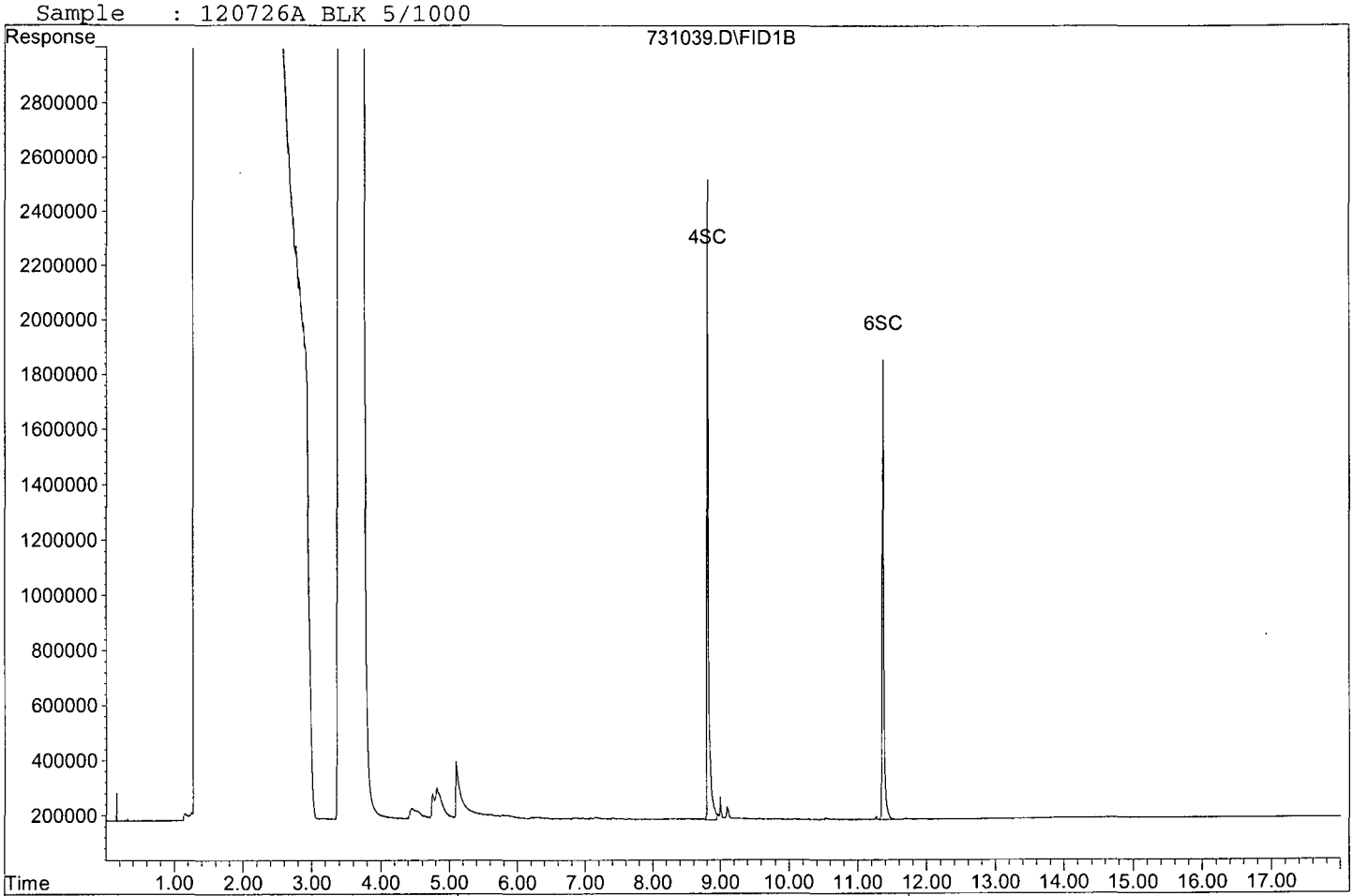
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

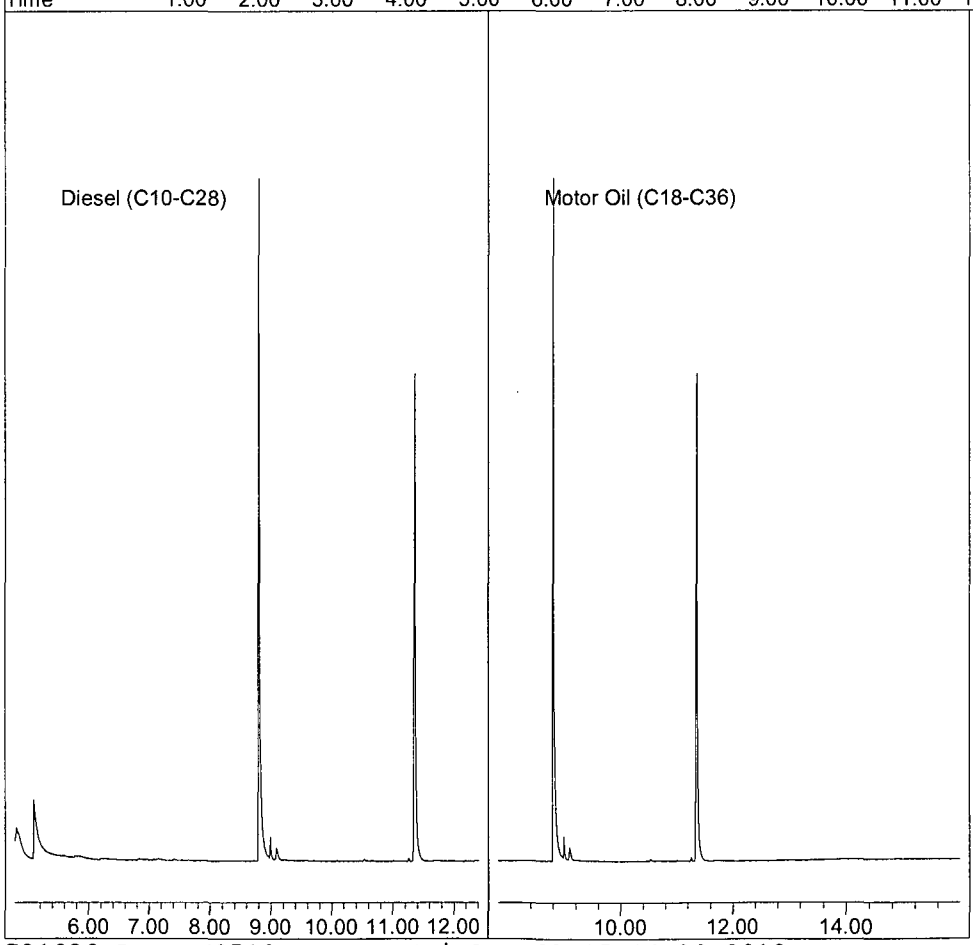
| Compound | R.T. | Response | Conc Units |
|---|---|---|---|
| System Monitoring Compounds | | | |
| 4) SC Ortho-Terphenyl(S) | 8.80 | 33091847 | 111.815 ppb |
| Surrogate Spike 142.857 | | Recovery = | 78.27% |
| 6) SC Octacosane(S) | 11.36 | 29130667 | 92.039 ppb |
| Surrogate Spike 142.857 | | Recovery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

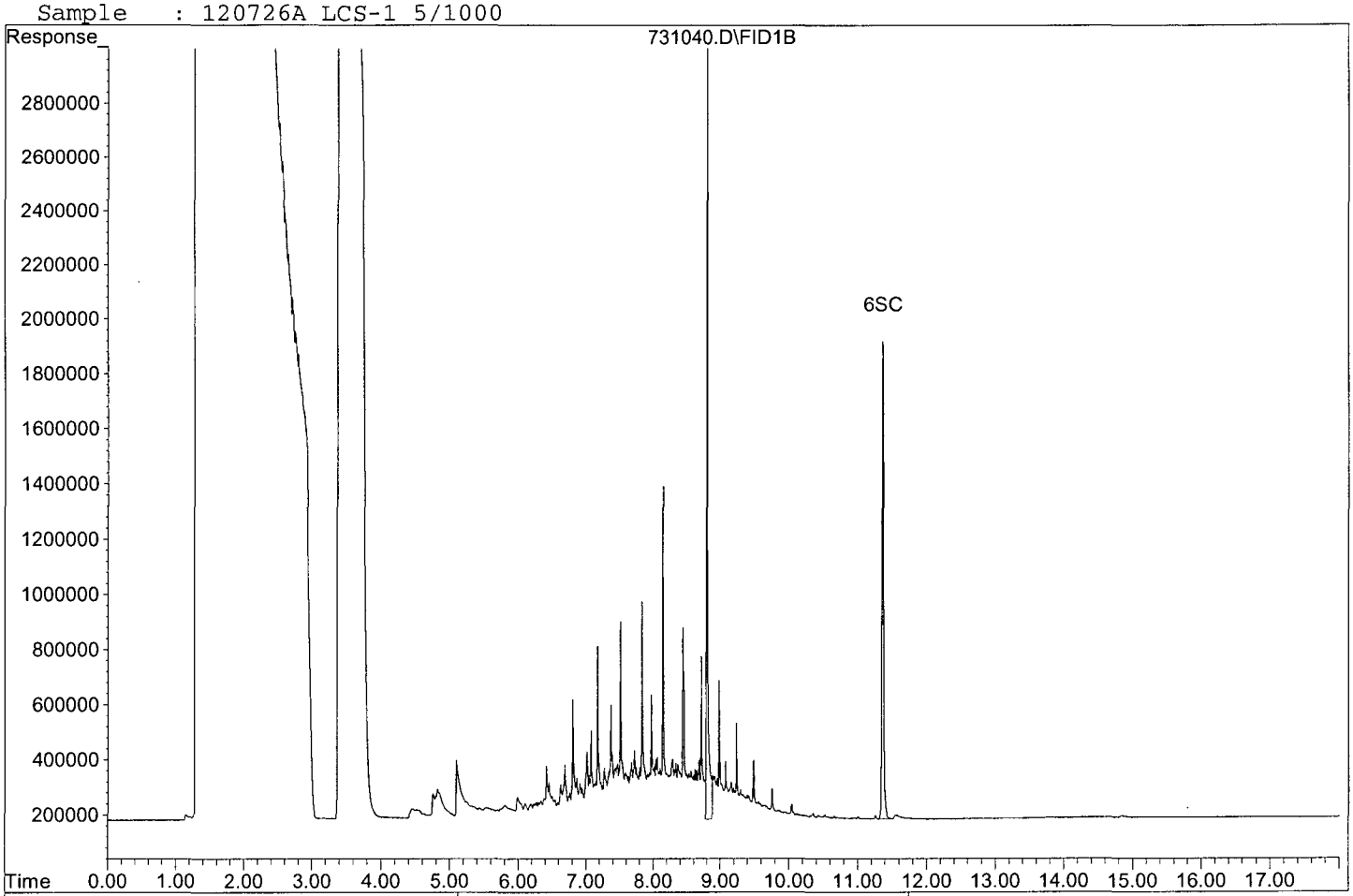
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

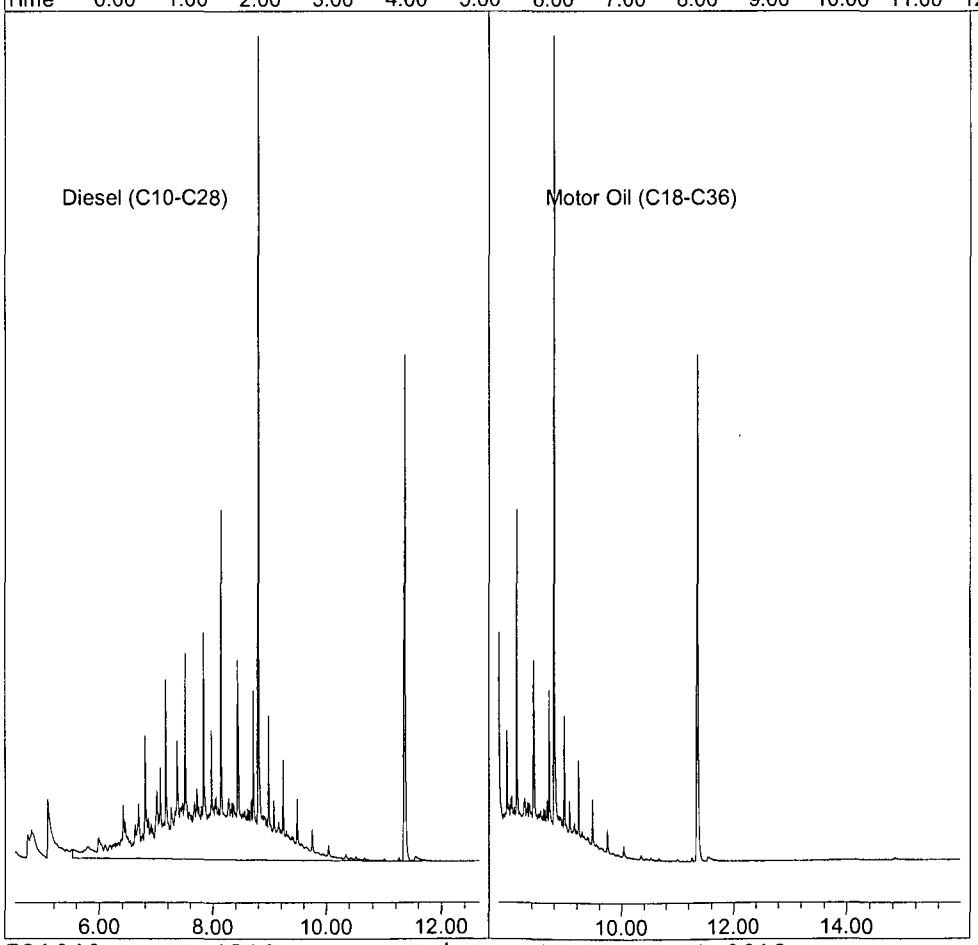
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

| 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

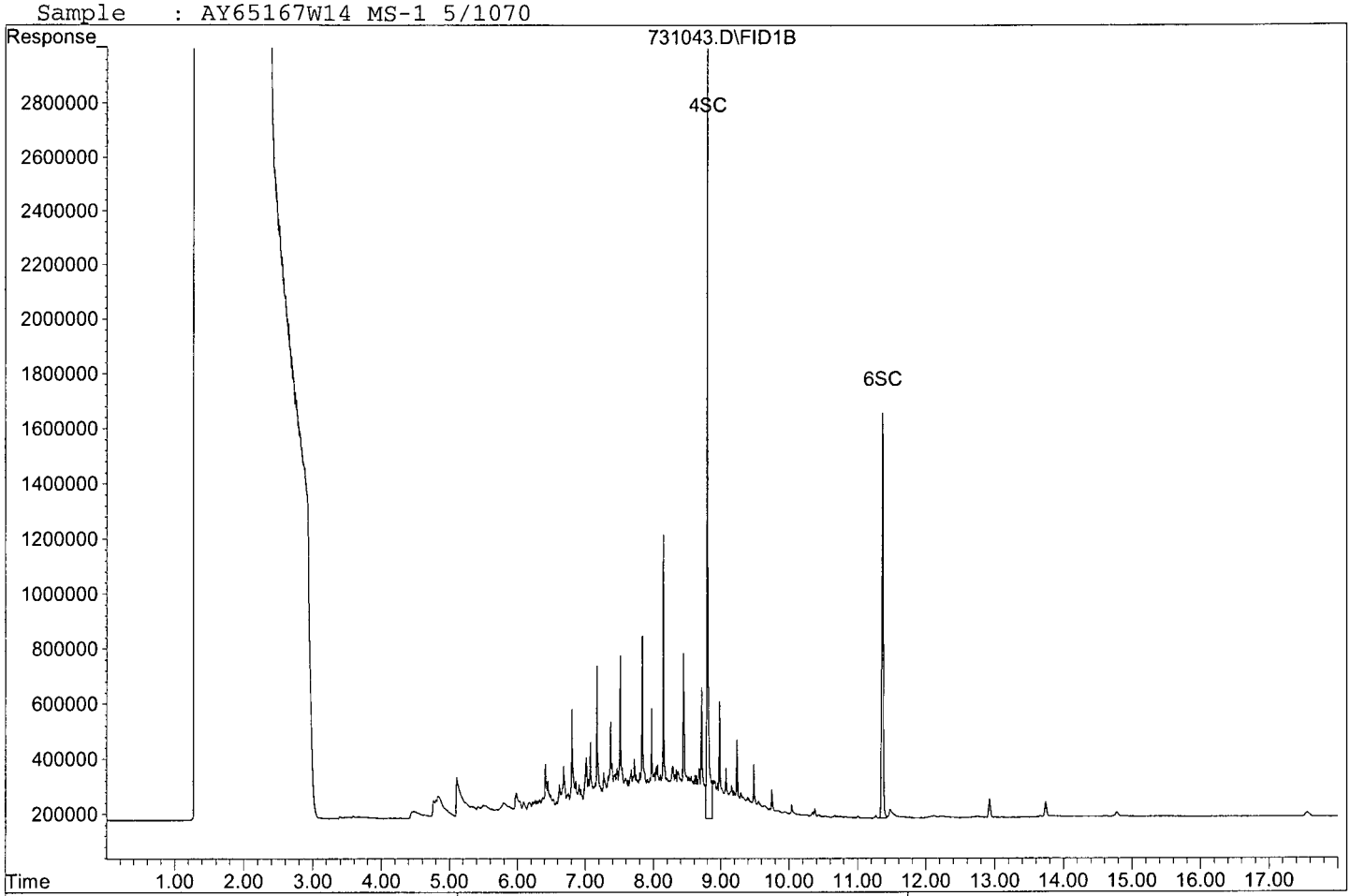
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

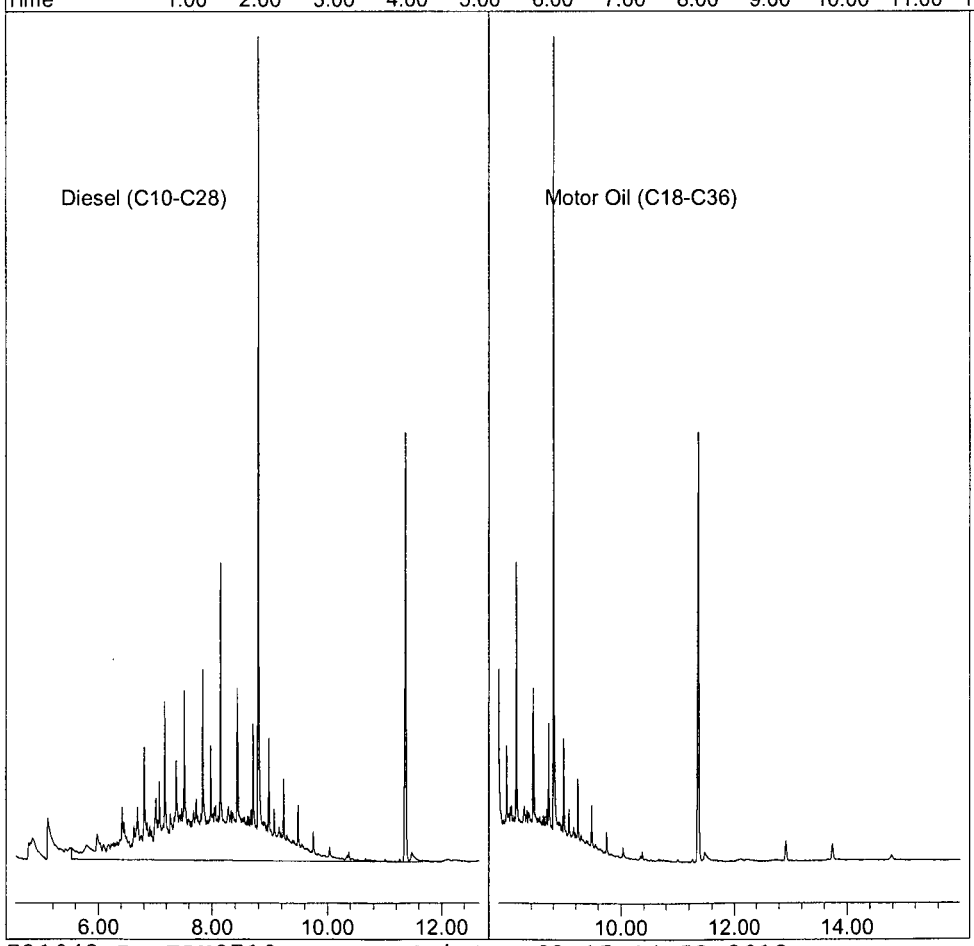
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

| 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

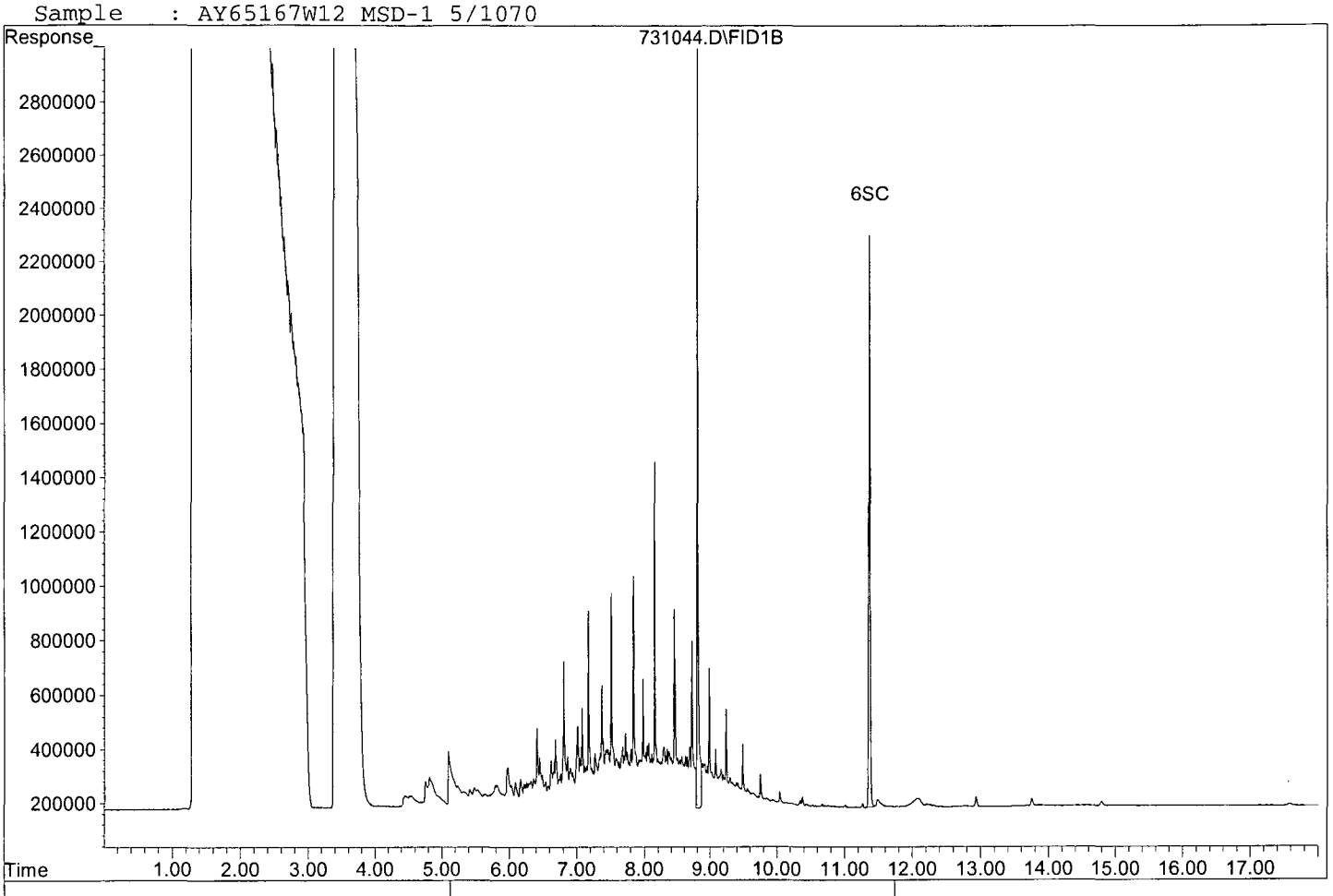
Method : G:\APOLLO\DATA\120731\TPH0719.M (Chemstation Integrator)
Title : Diesel
Last Update : Thu Aug 02 17:43:25 2012
Response via : Multiple Level Calibration

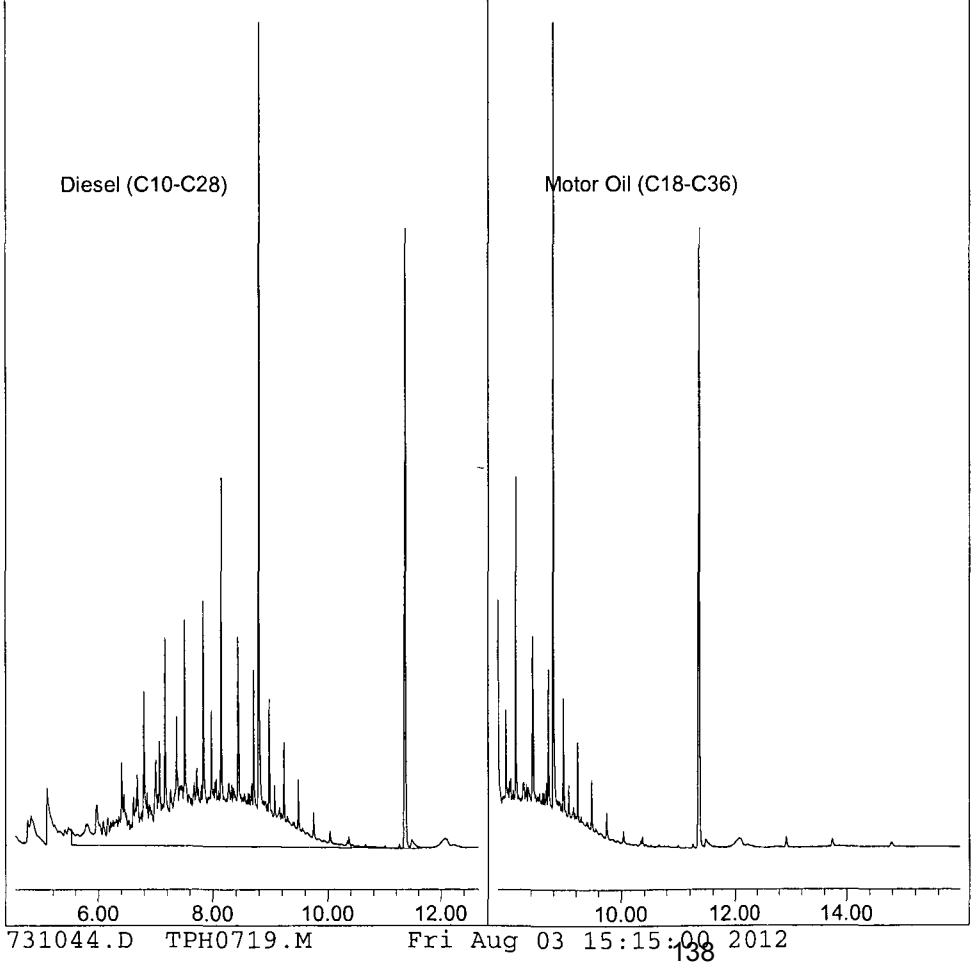
Volume Inj. : 2UL
Signal Phase : DB-5
Signal Info : FID02A

| 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 | | | | |
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| 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 | | | | |
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| 19 | | | | |
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| 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 | | | | | | | |
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| 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 | | | | | | | |
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| 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

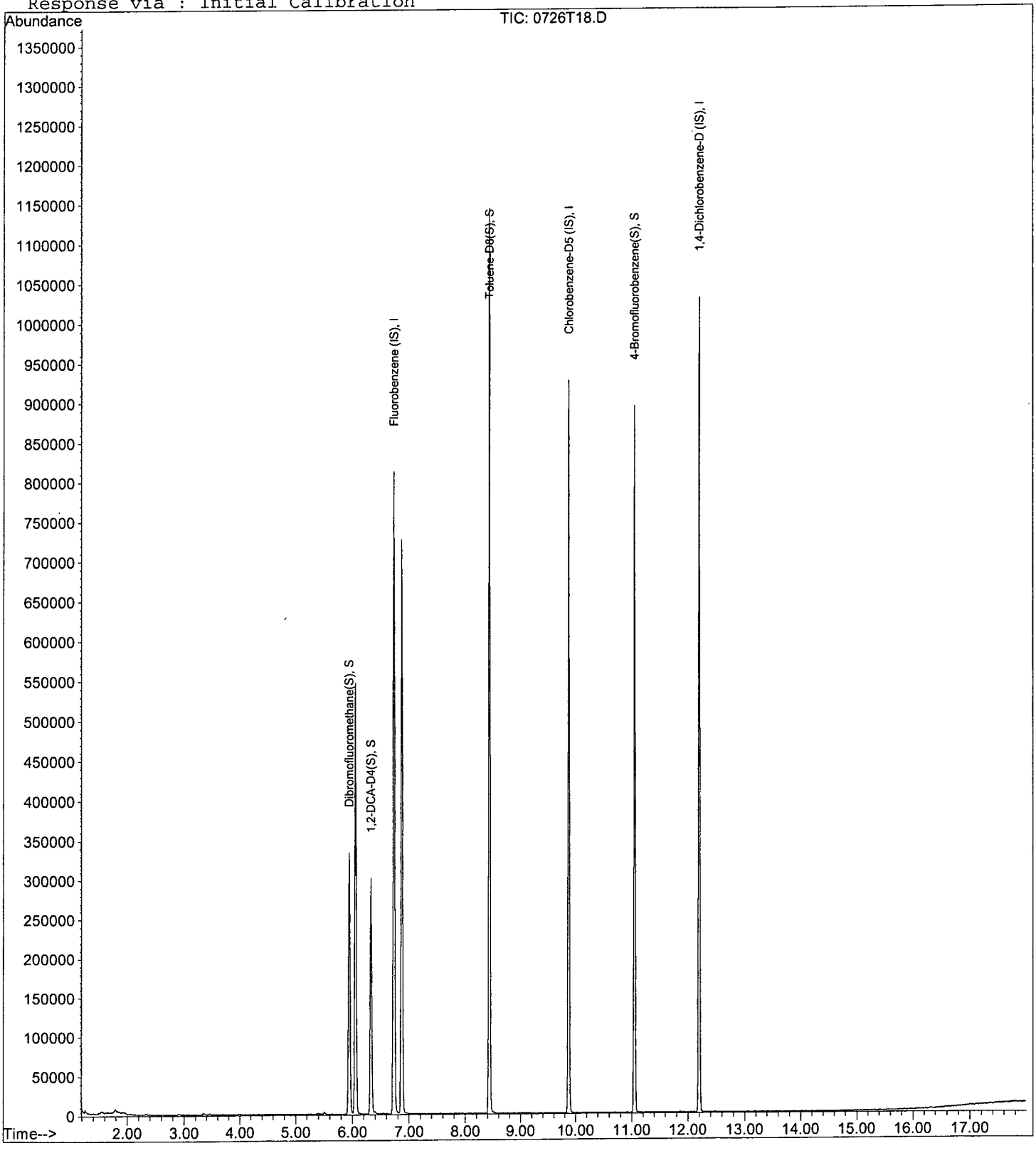
Quantitation Report

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

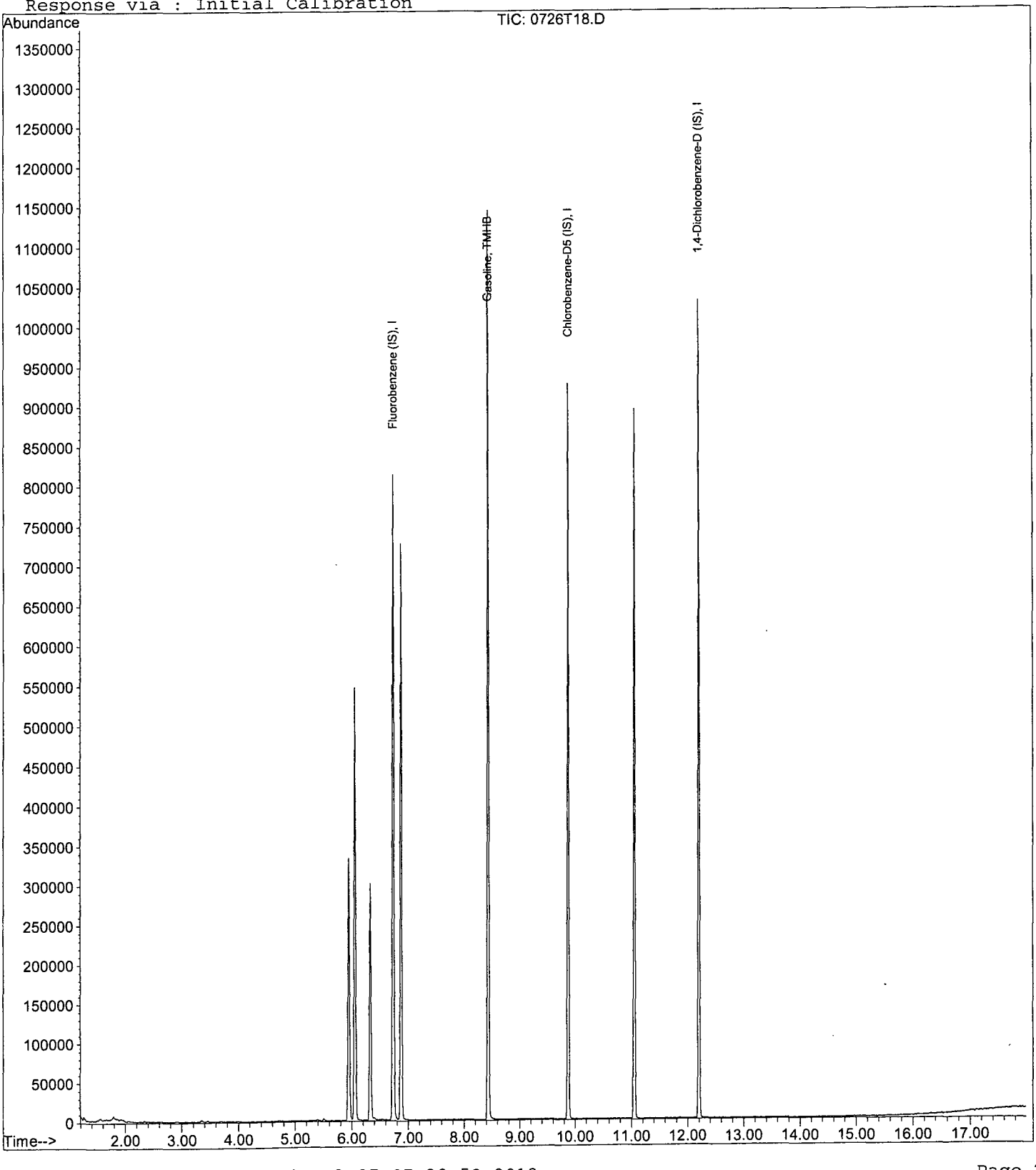
Quantitation Report

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

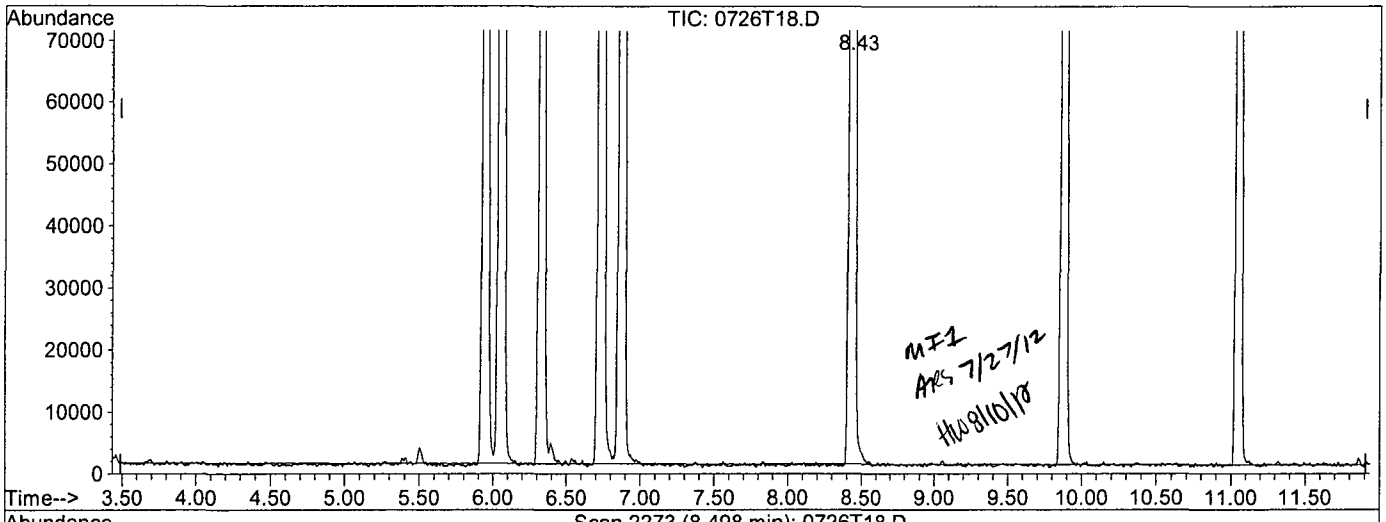
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

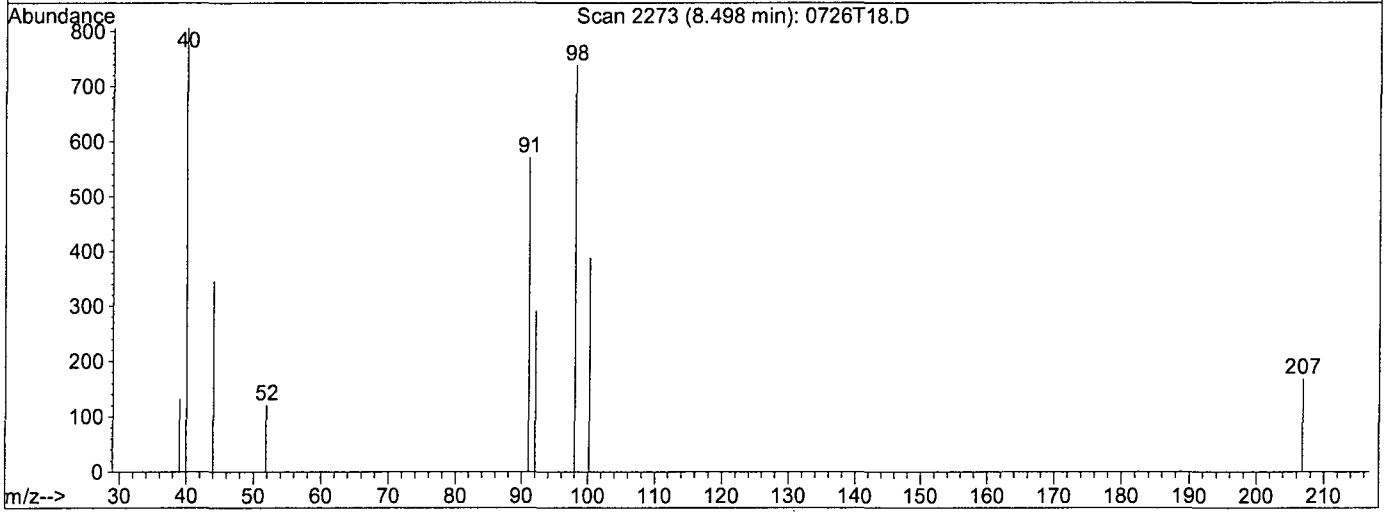


Quantitation Report

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

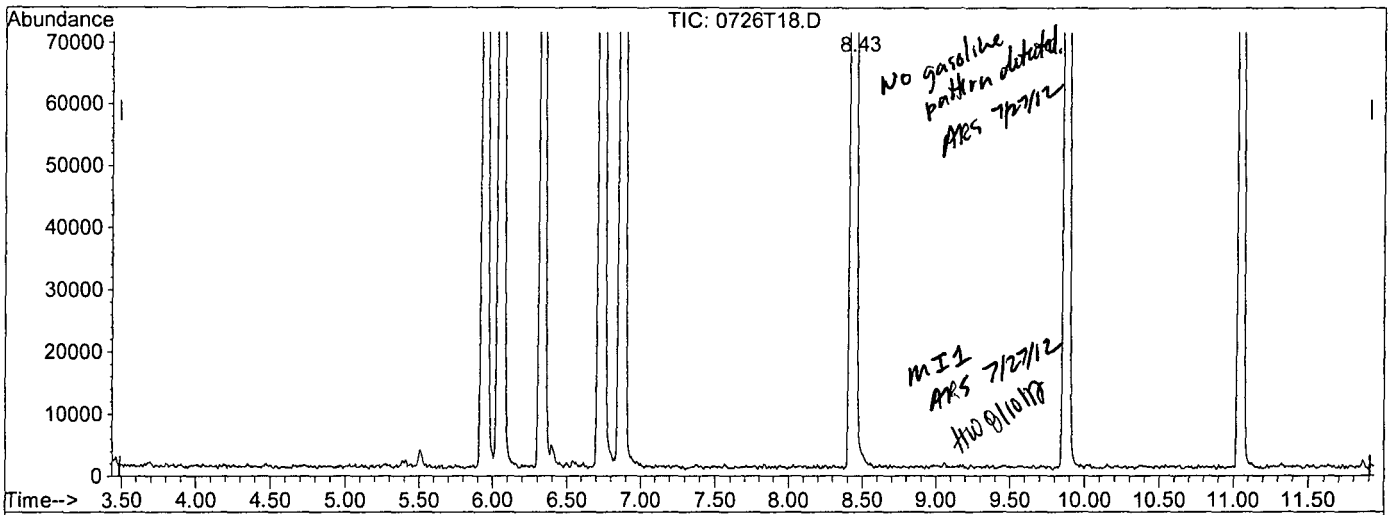
response 7926606

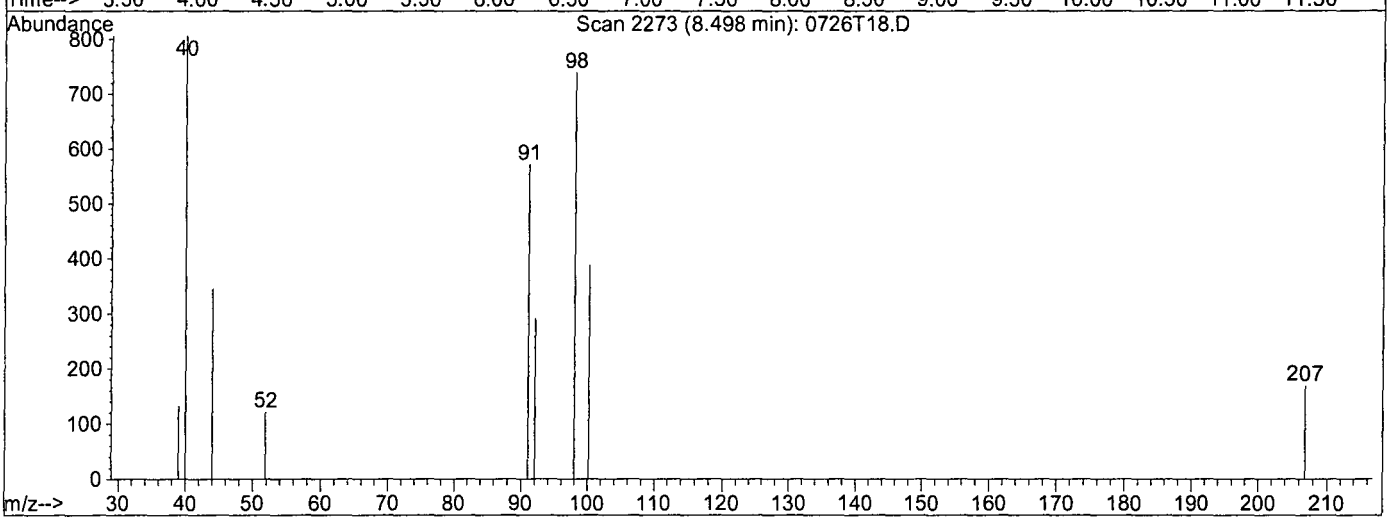
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.00 | 1.24# |
| 0.00 | 0.00 | 3.69# |
| 0.00 | 0.00 | 0.00 |

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

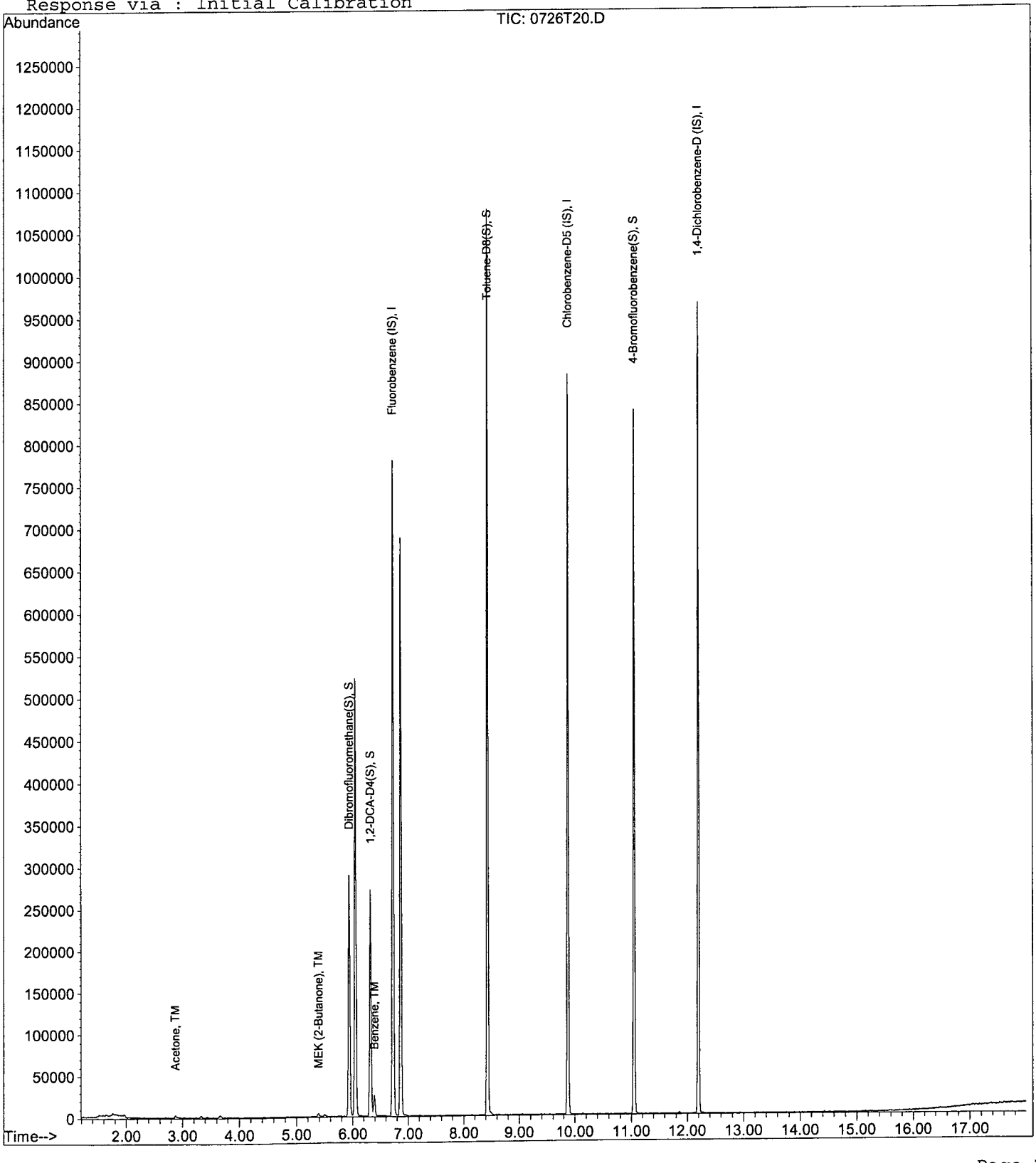
Quantitation Report

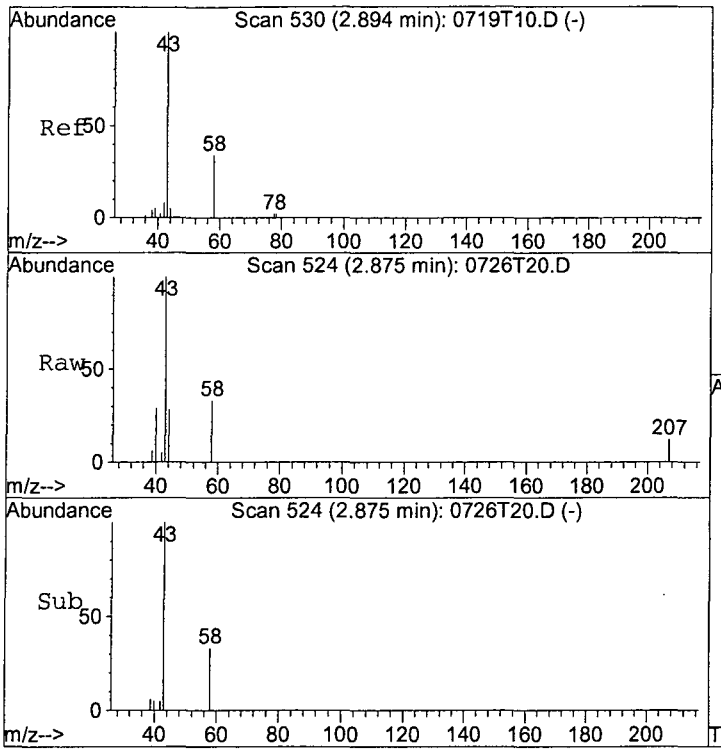
Data File : M:\THOR\DATA\T120725\0726T20.D
Acq On : 26 Jul 12 18:09
Sample : AY65167W01
Misc : 10ml w/5ul of IS&S: 06-7-12

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

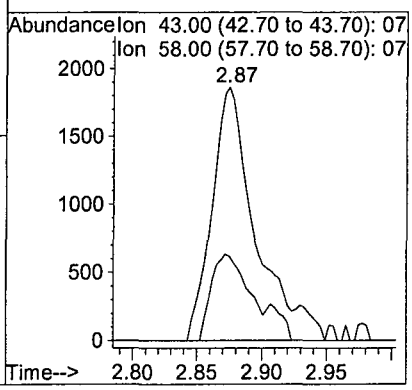


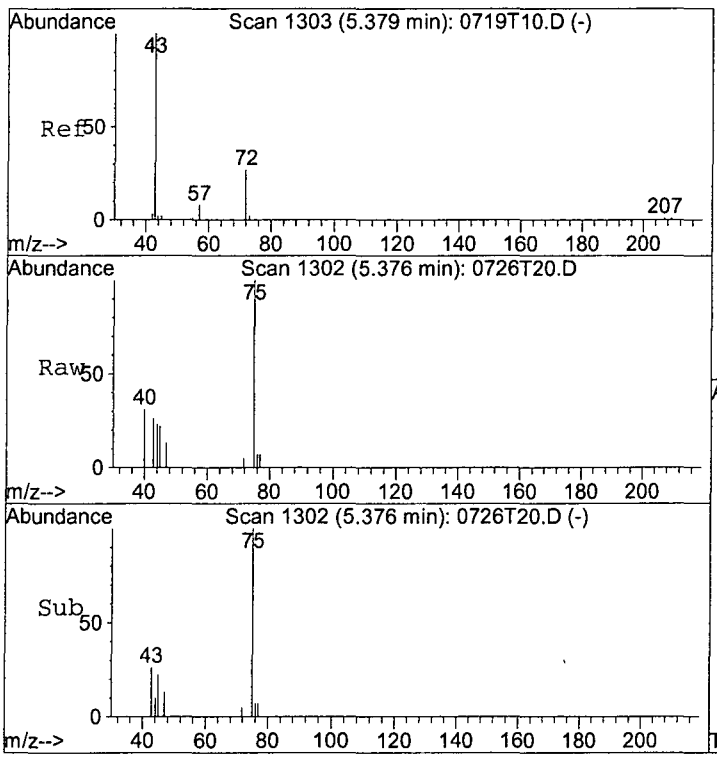



#11
Acetone
Concen: 2.27562 ppb
RT: 2.87 min Scan# 524
Delta R.T. -0.02 min
Lab File: 0726T20.D
Acq: 26 Jul 12 18:09

Tgt Ion: 43 Resp: 4341

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 33.2 | 23.4 | 43.4 |

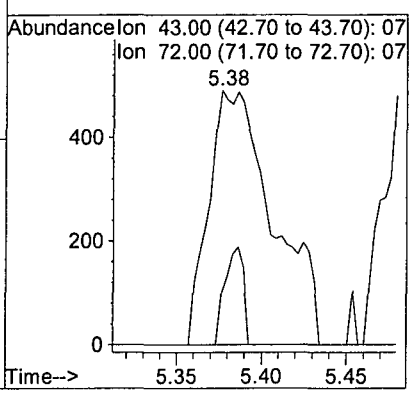


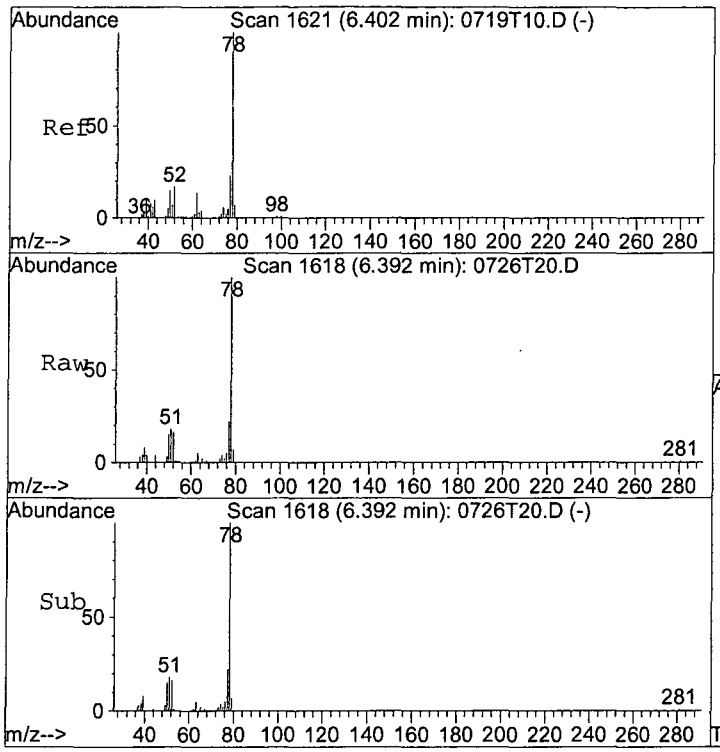




#26
MEK (2-Butanone)
Concen: 1.00886 ppb
RT: 5.38 min Scan# 1302
Delta R.T. -0.00 min
Lab File: 0726T20.D
Acq: 26 Jul 12 18:09

Tgt Ion: 43 Resp: 1287

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 72 | 20.6 | 19.9 | 36.9 |

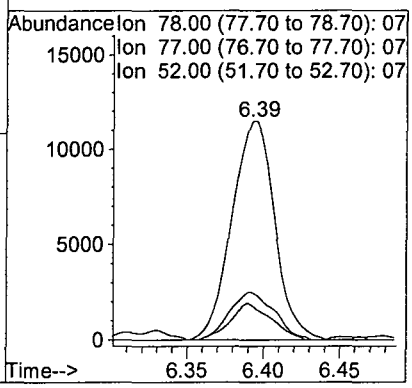





#40
Benzene
Concen: 1.30627 ppb
RT: 6.39 min Scan# 1618
Delta R.T. -0.01 min
Lab File: 0726T20.D
Acq: 26 Jul 12 18:09

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

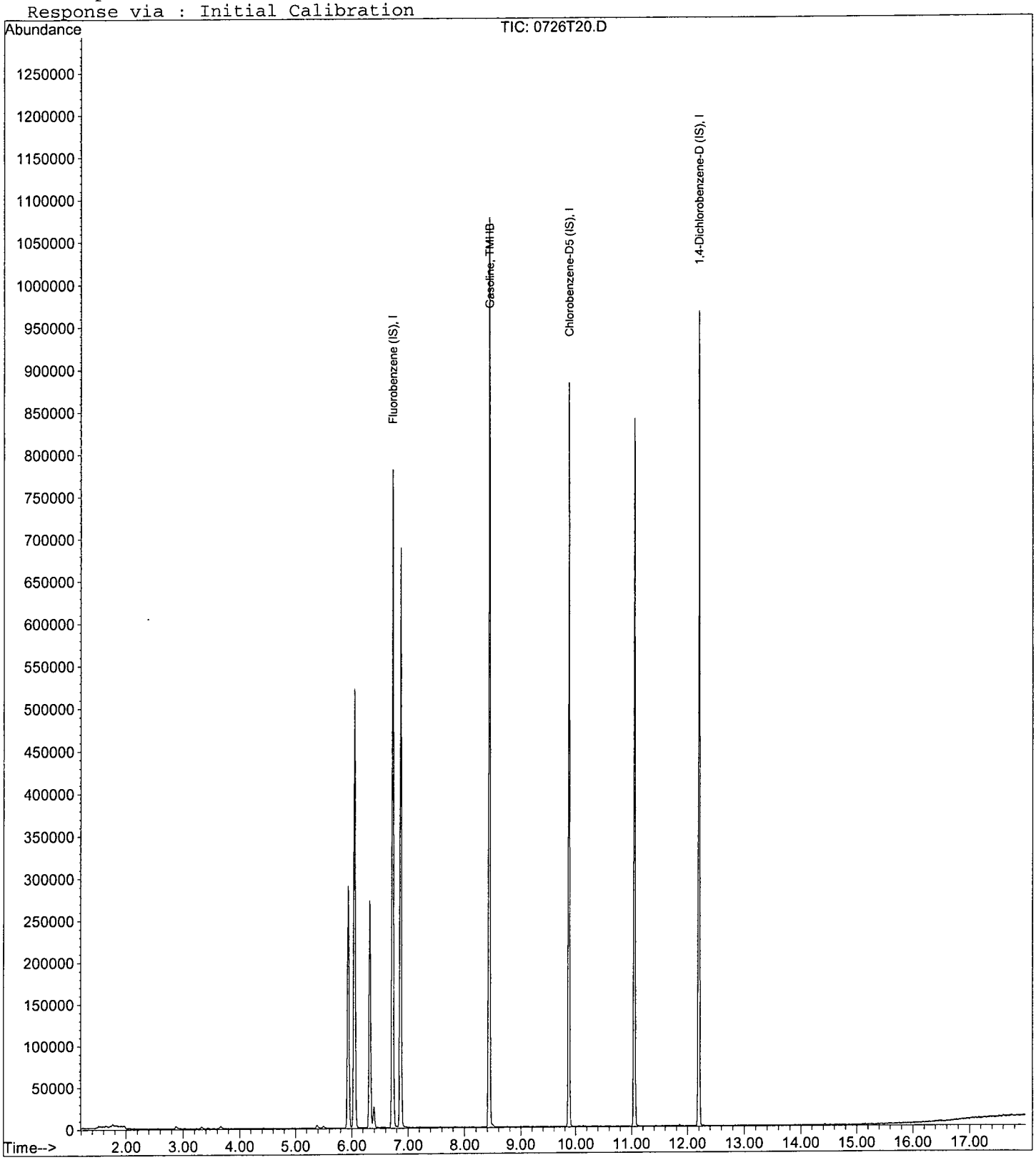
Quantitation Report

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

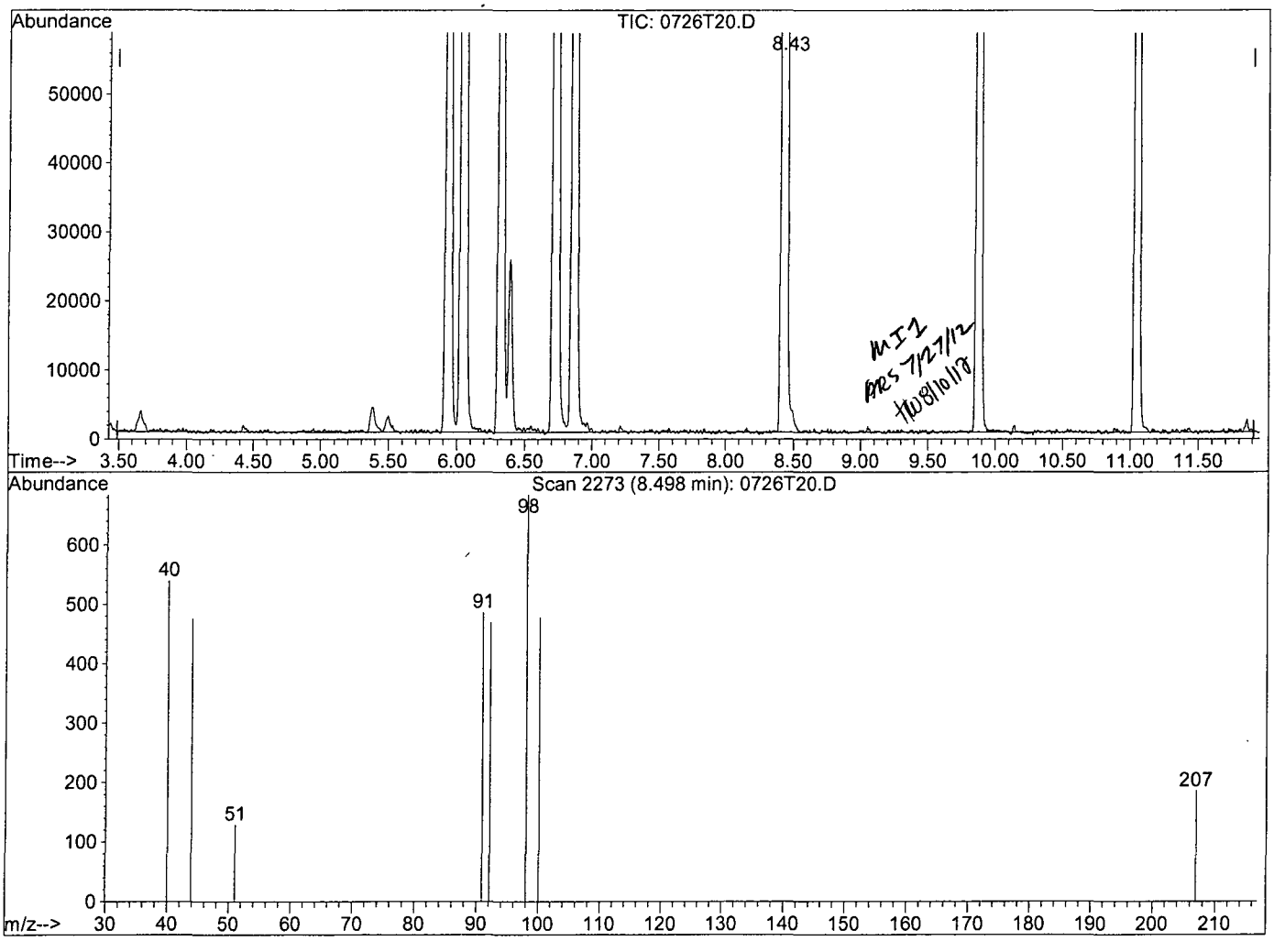
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



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

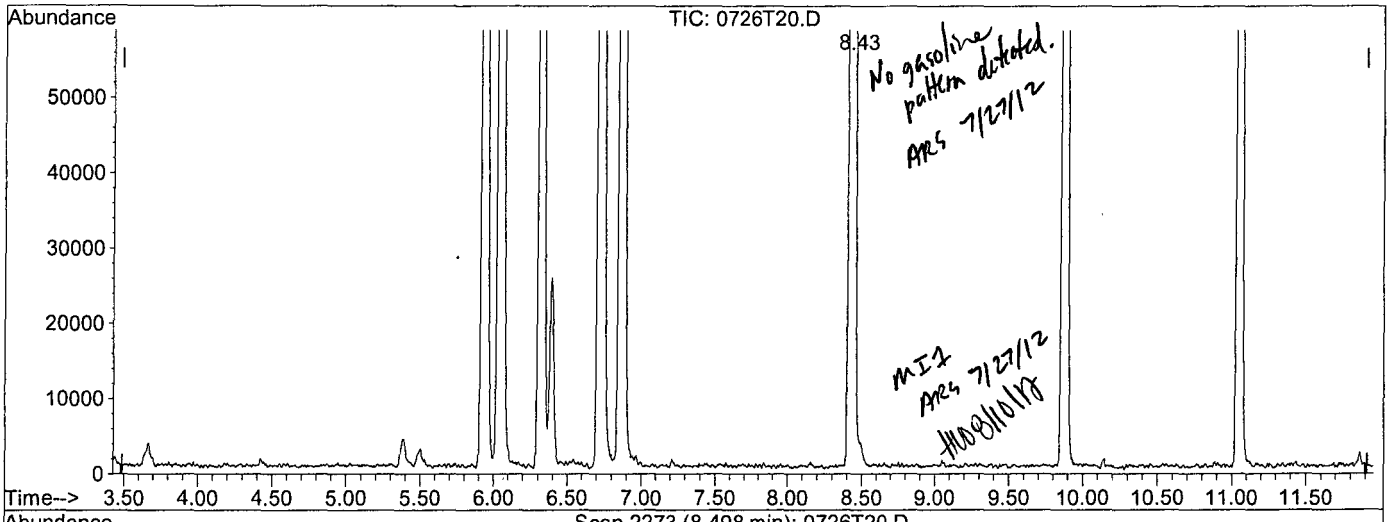
response 7469581

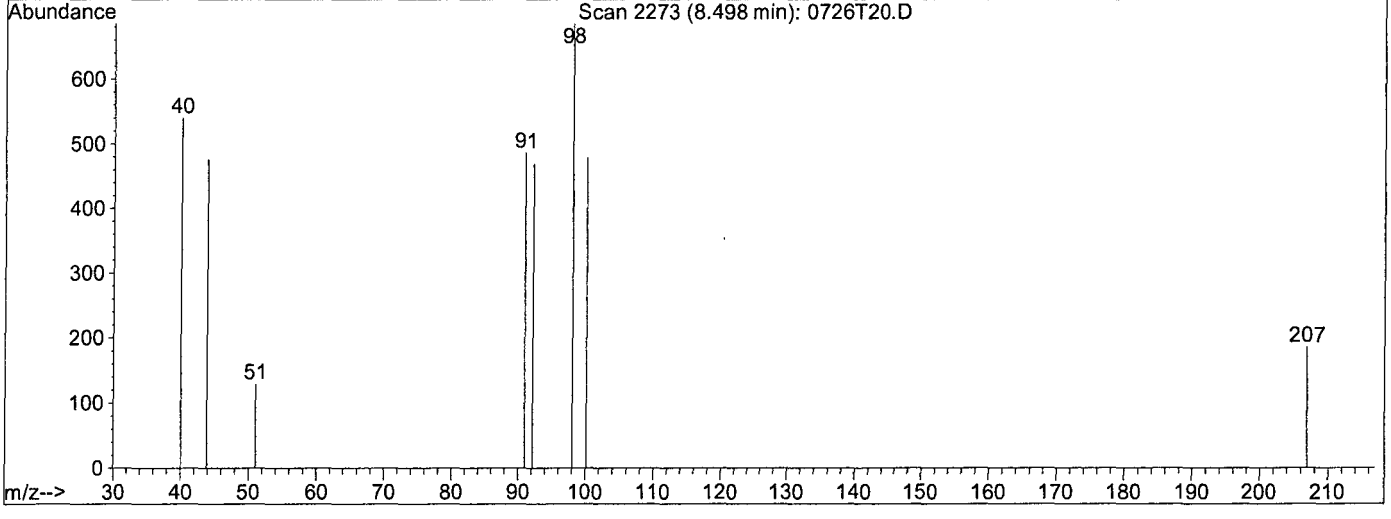
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.00 | 1.23# |
| 0.00 | 0.00 | 3.64# |
| 0.00 | 0.00 | 0.00 |

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

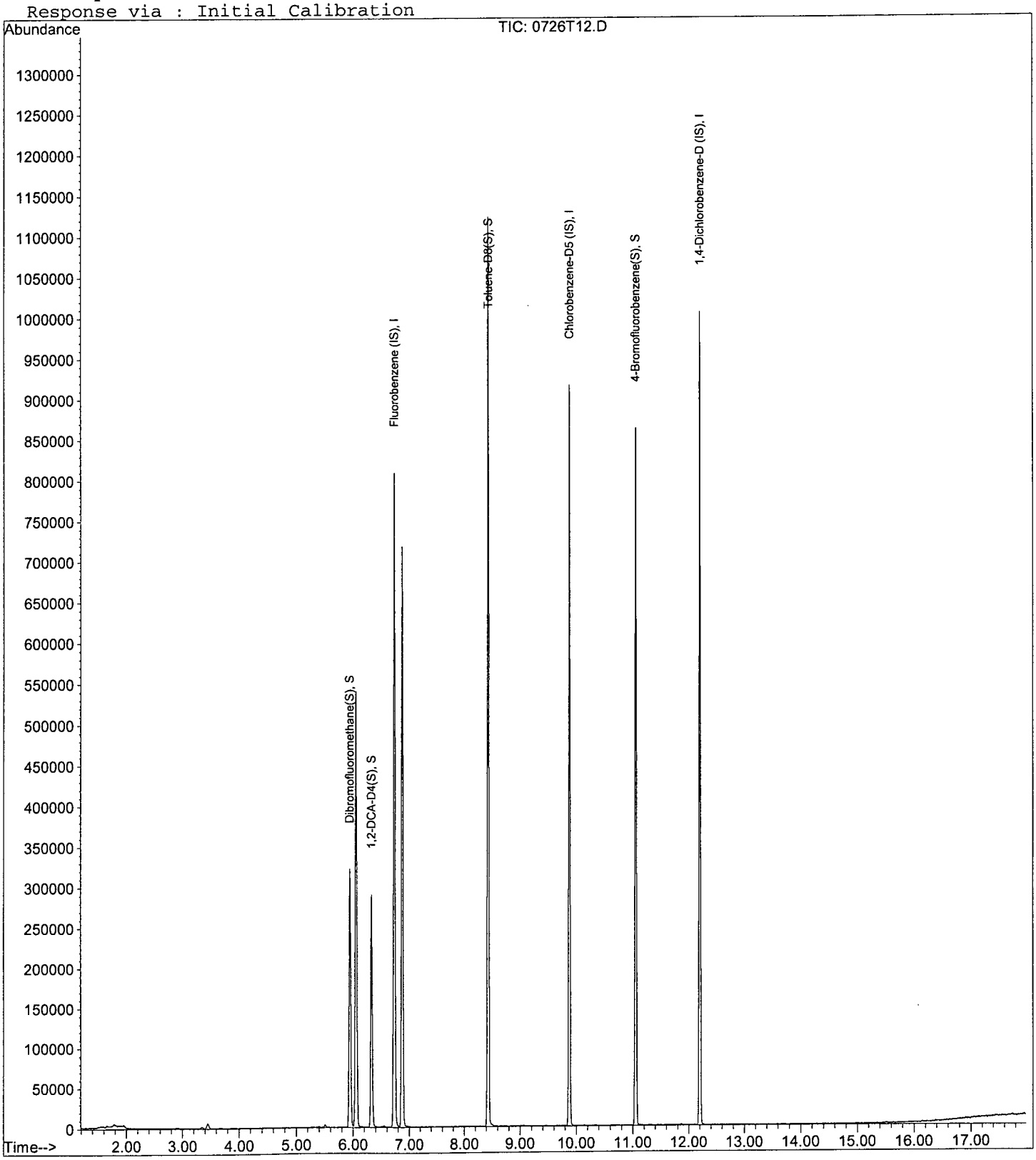
Quantitation Report

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

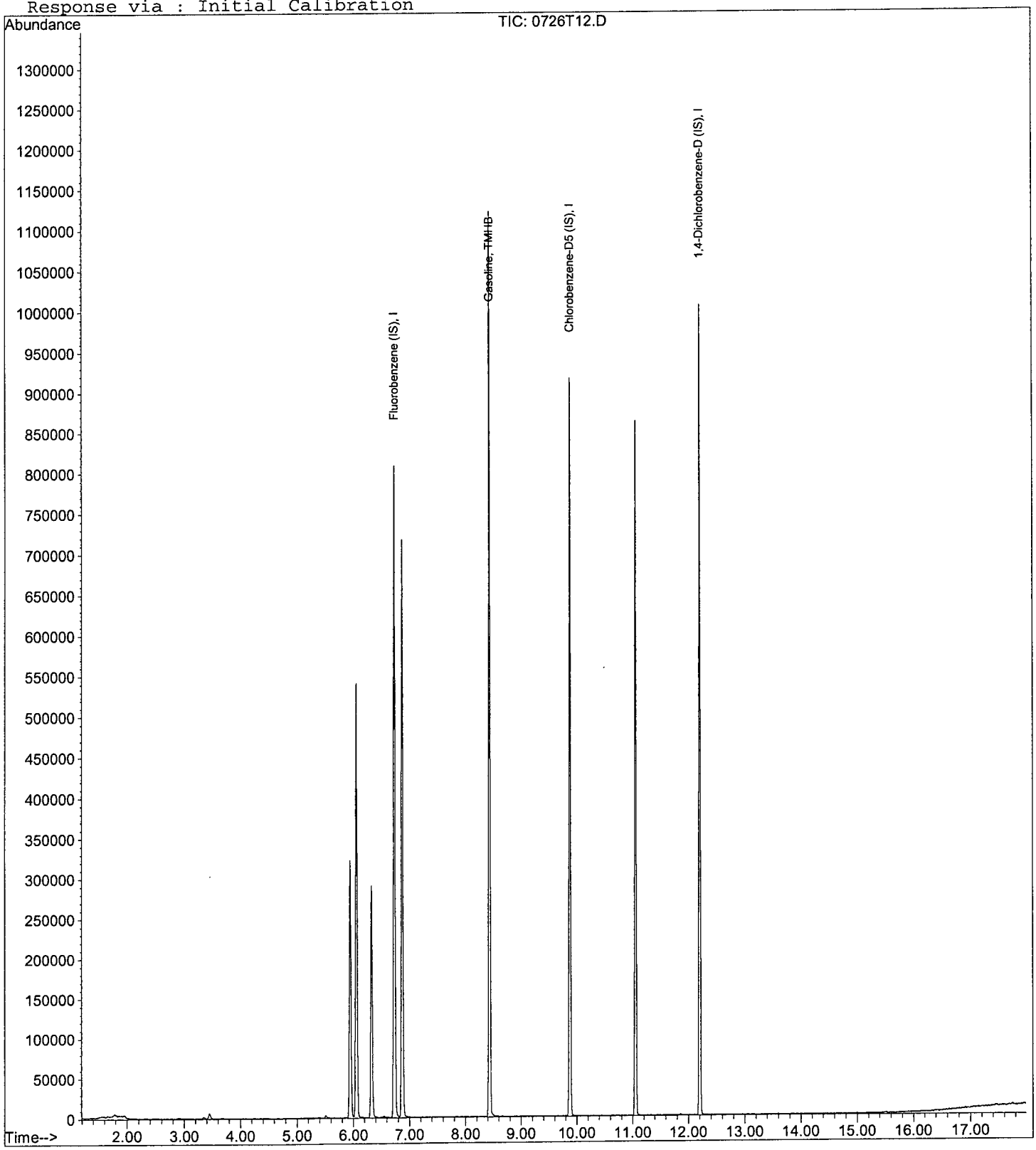
Quantitation Report

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

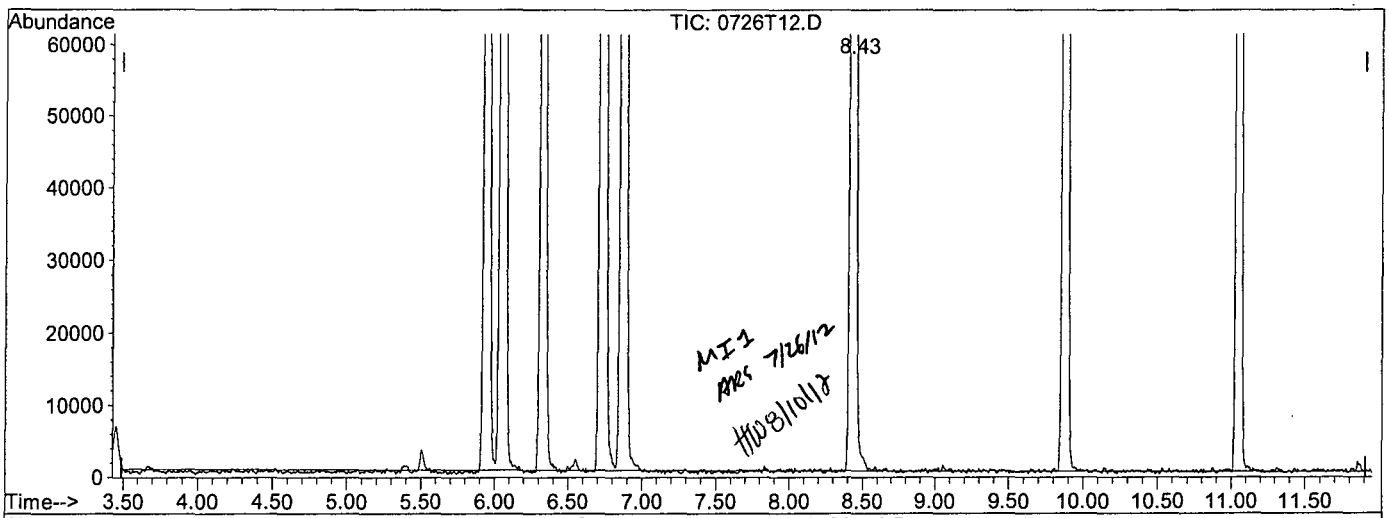
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

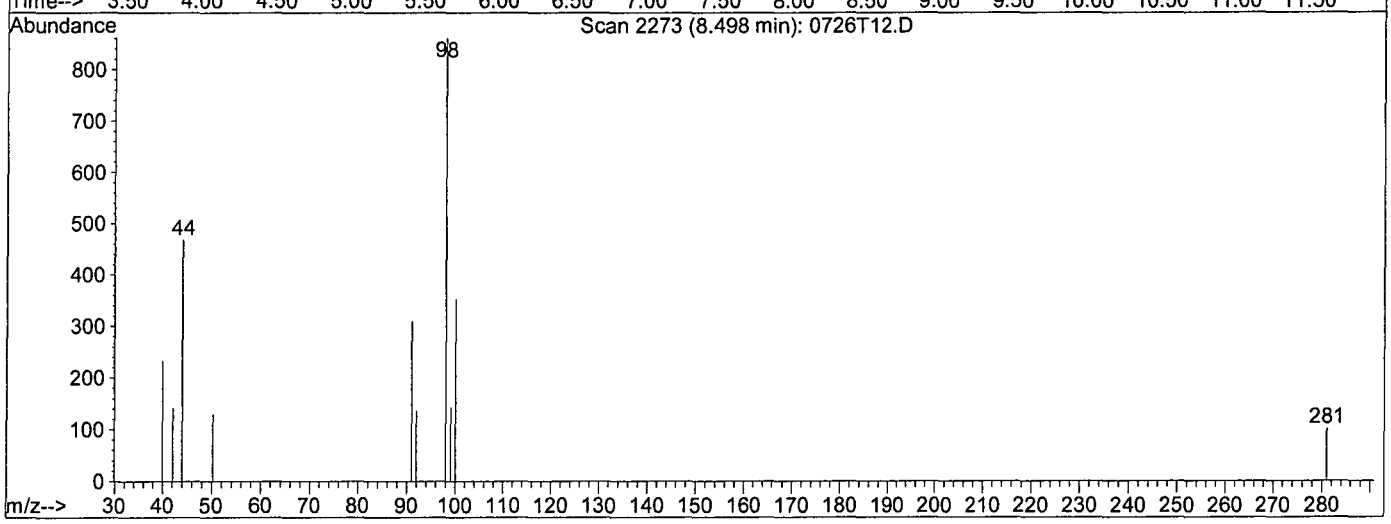


Quantitation Report

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

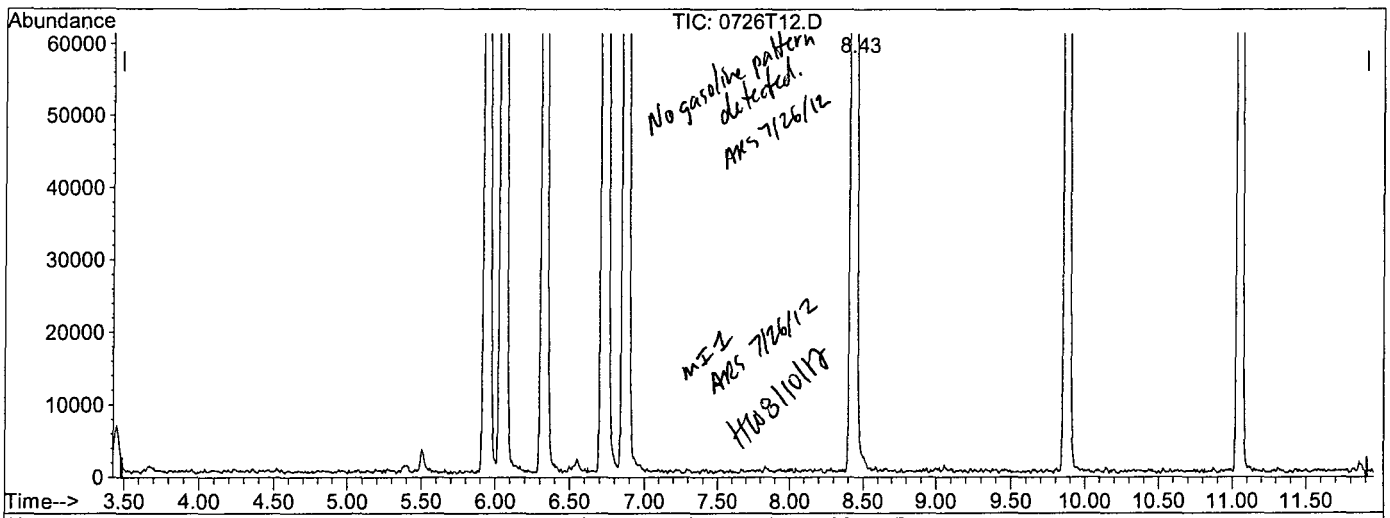
response 7728158

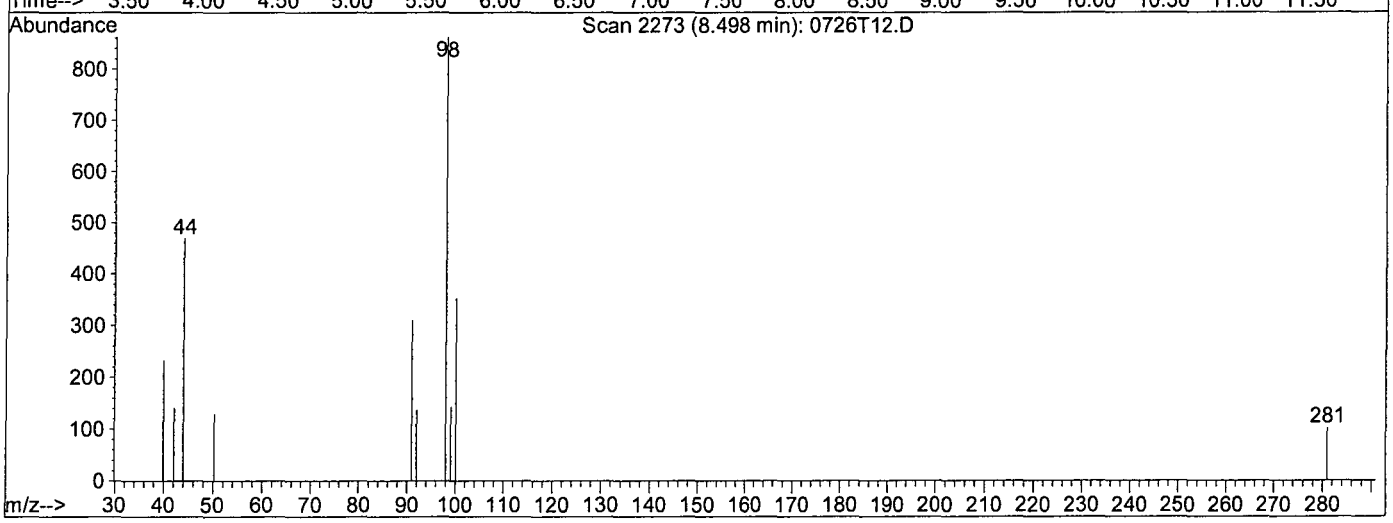
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.00 | 1.27# |
| 0.00 | 0.00 | 3.68# |
| 0.00 | 0.00 | 0.00 |

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 | | | | | | | | | | | | | | | | |
| 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

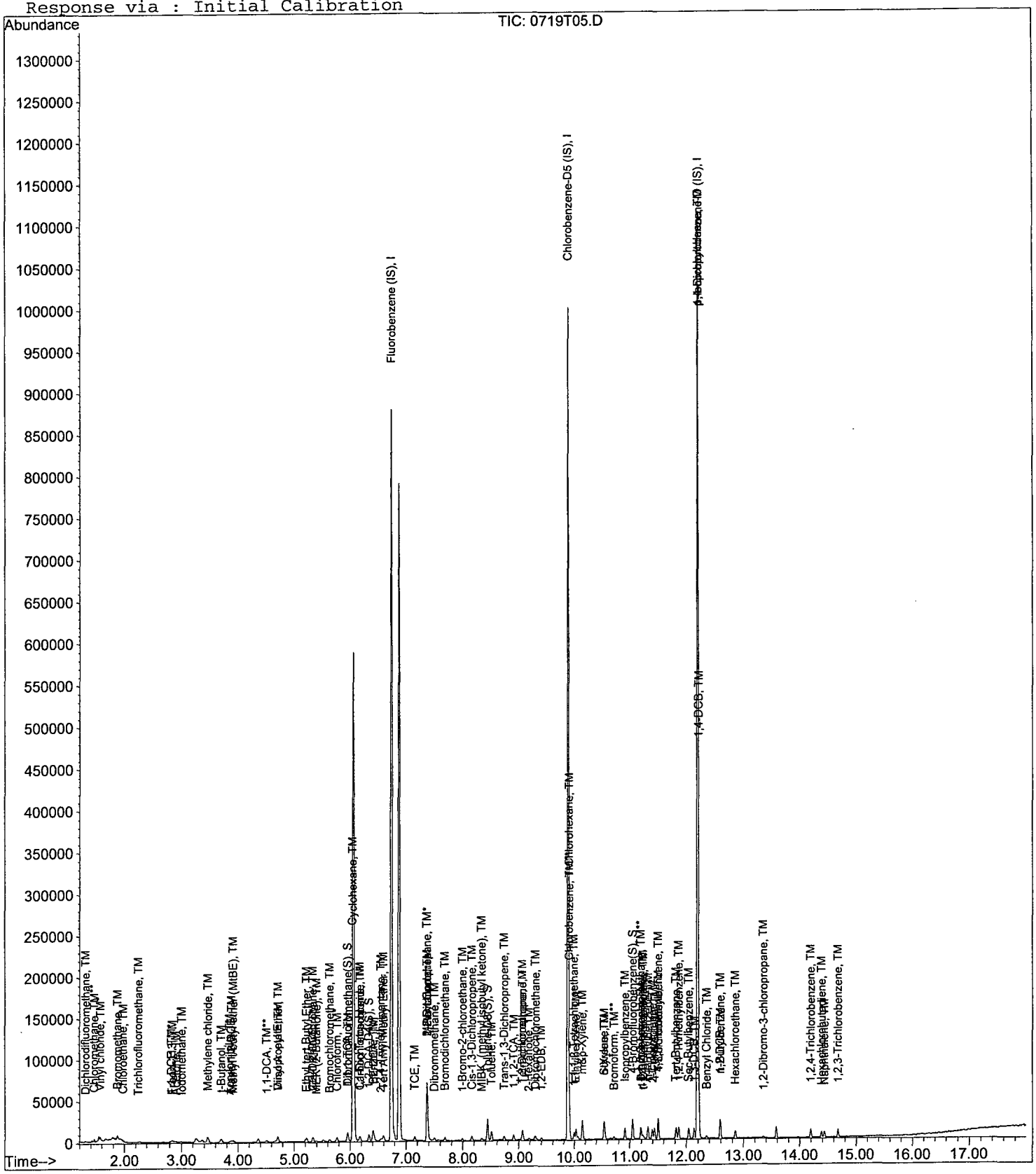
Quantitation Report

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

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

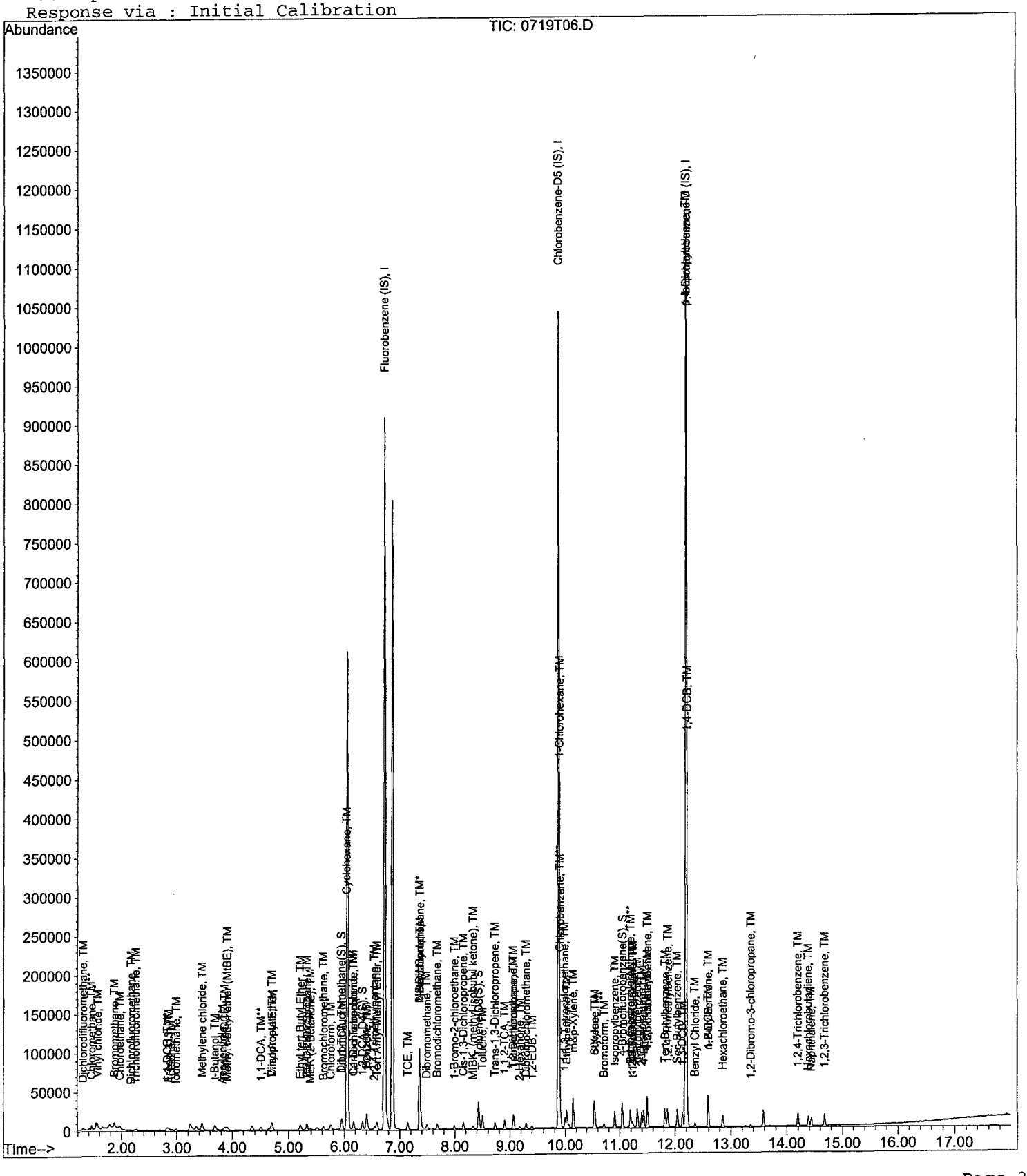
Quantitation Report

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

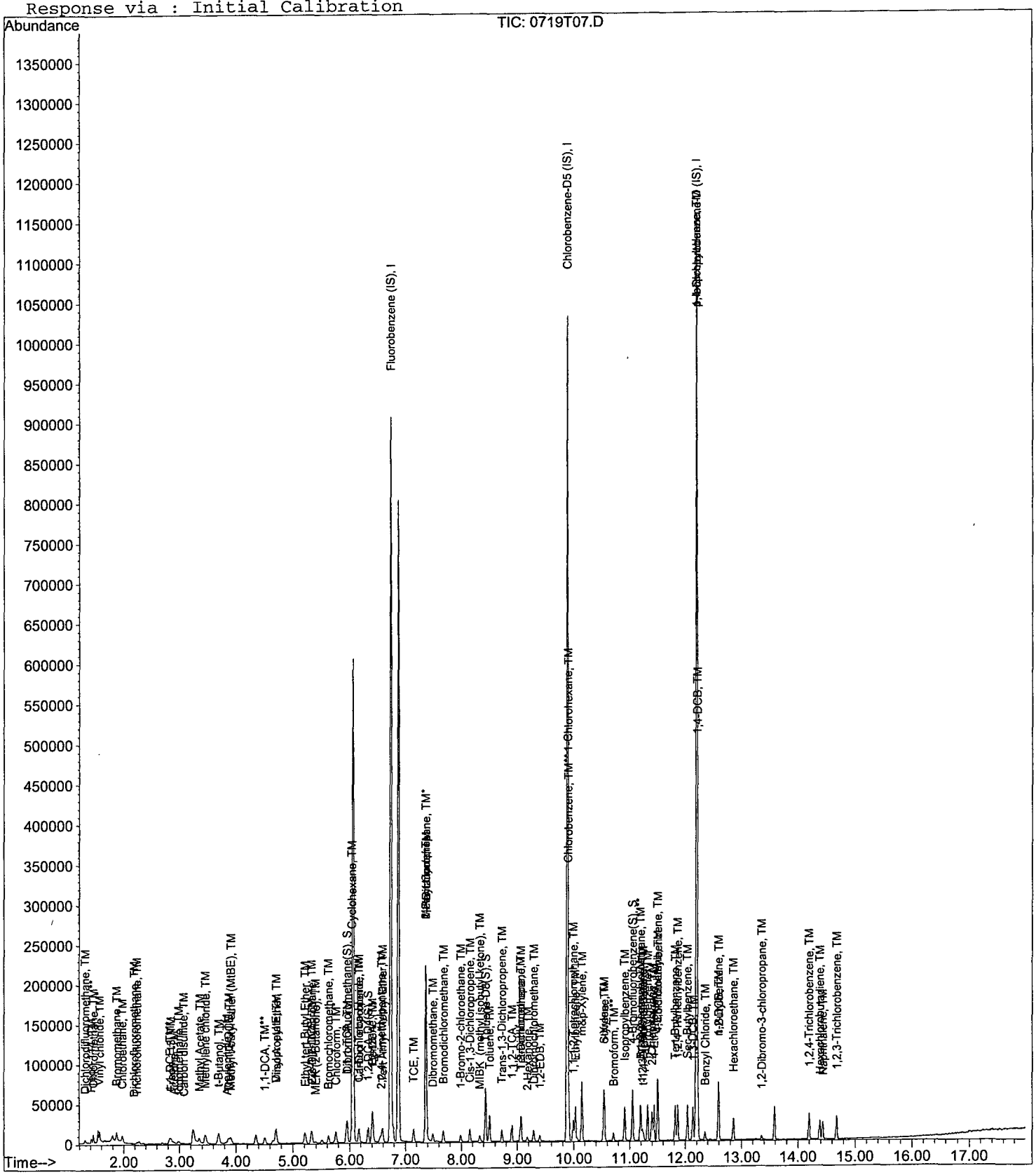
Quantitation Report

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

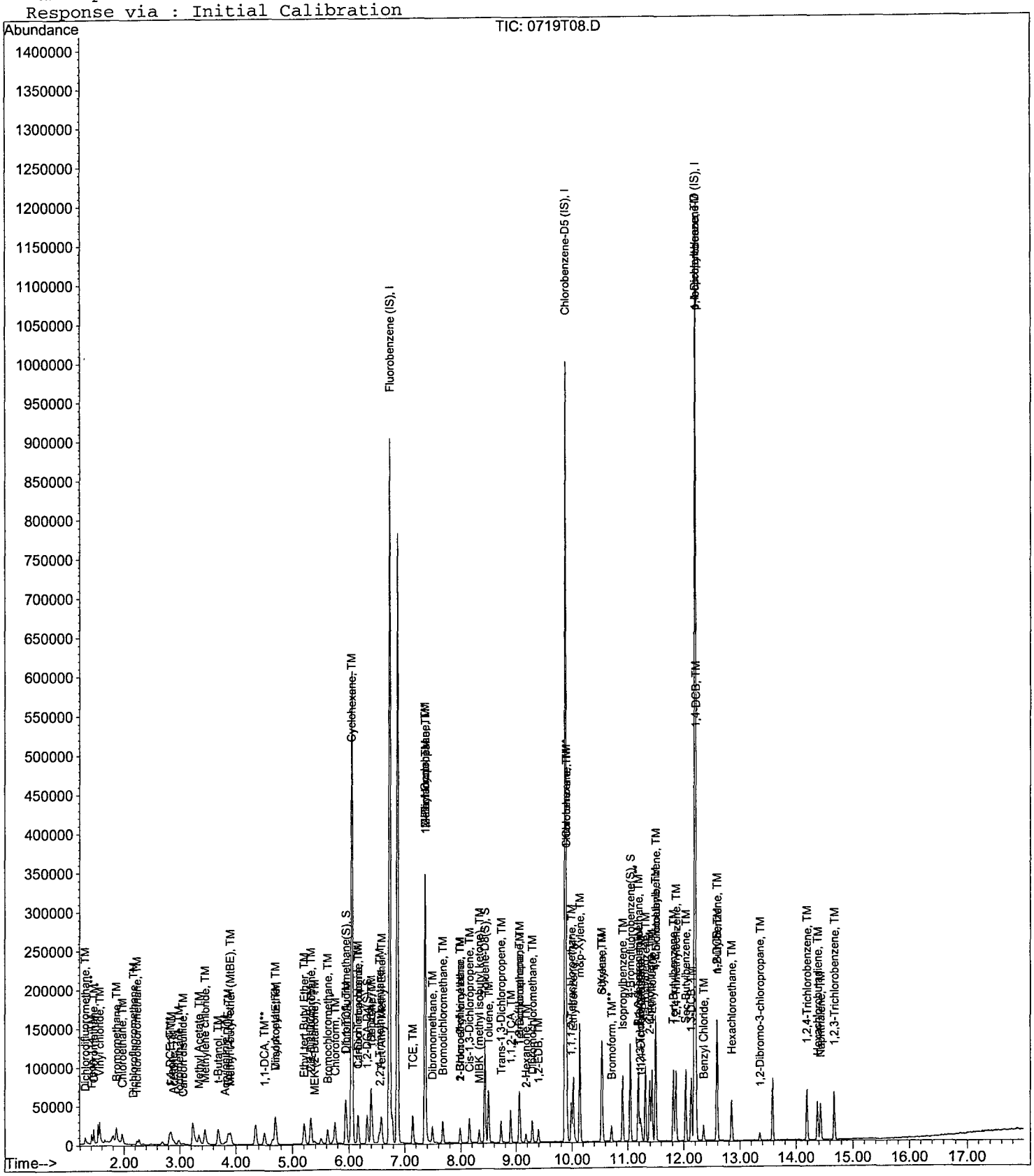
Quantitation Report

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

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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 |

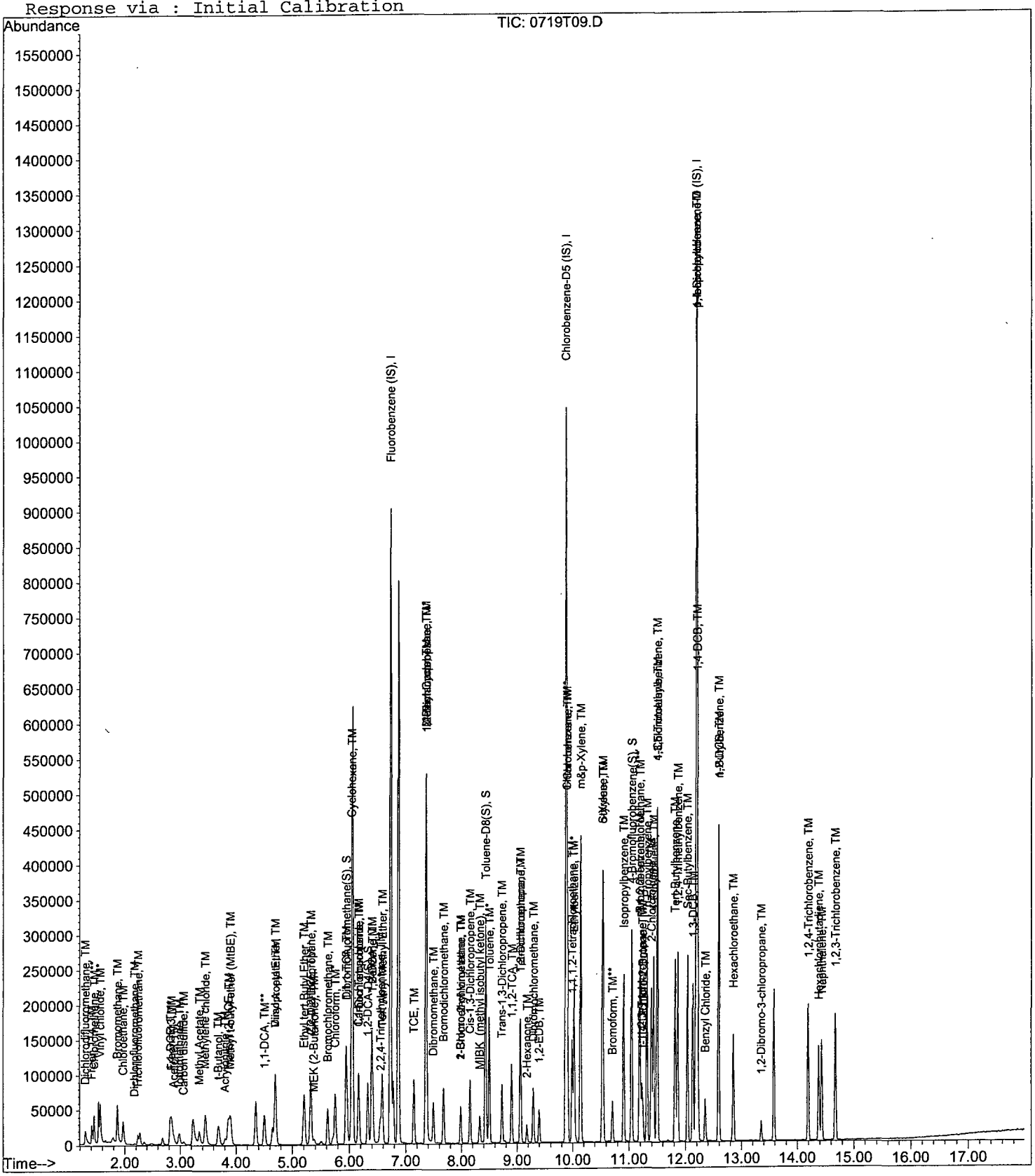
(#) = qualifier out of range (m) = manual integration

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 |

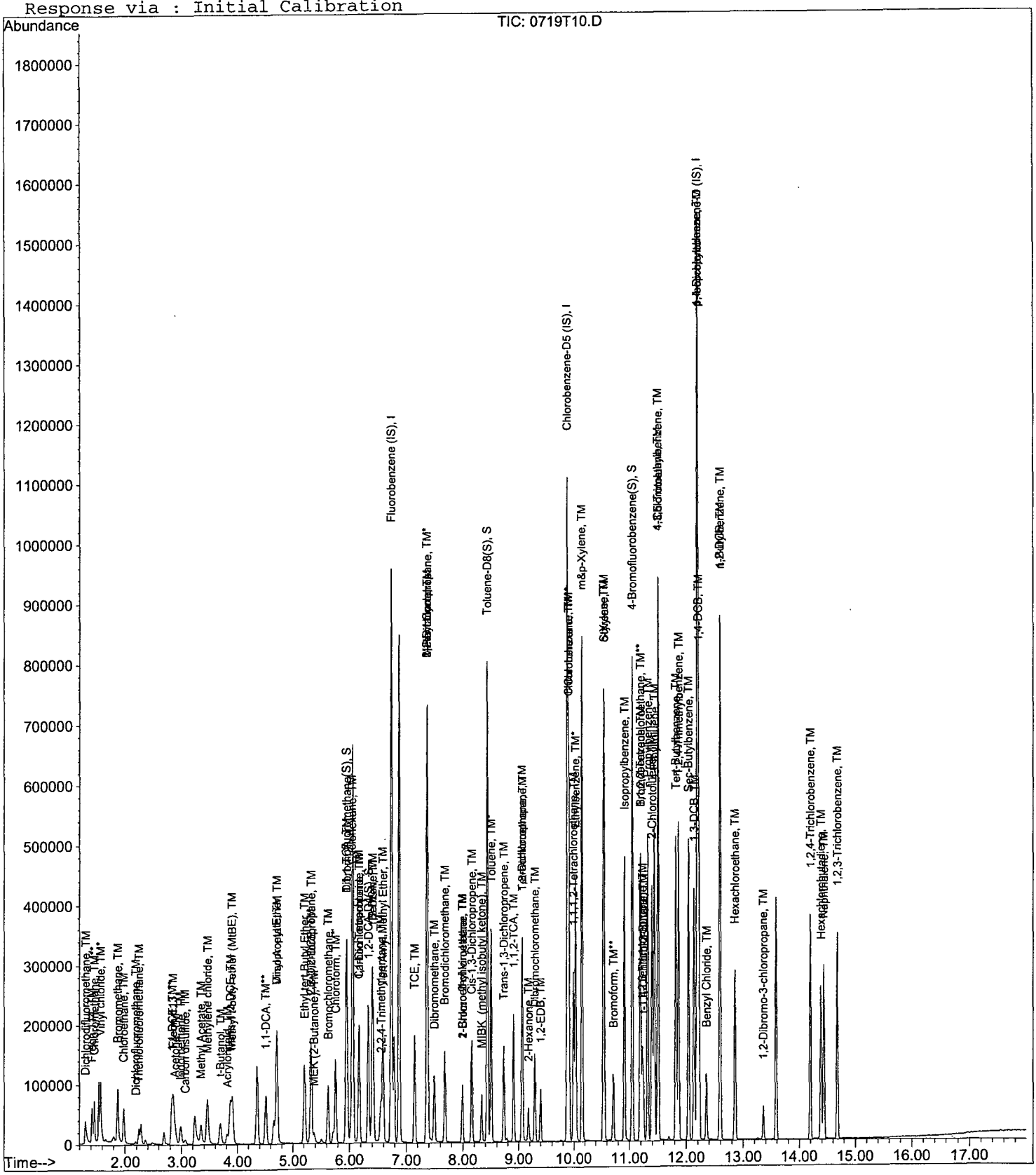
(#) = qualifier out of range (m) = manual integration

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 |

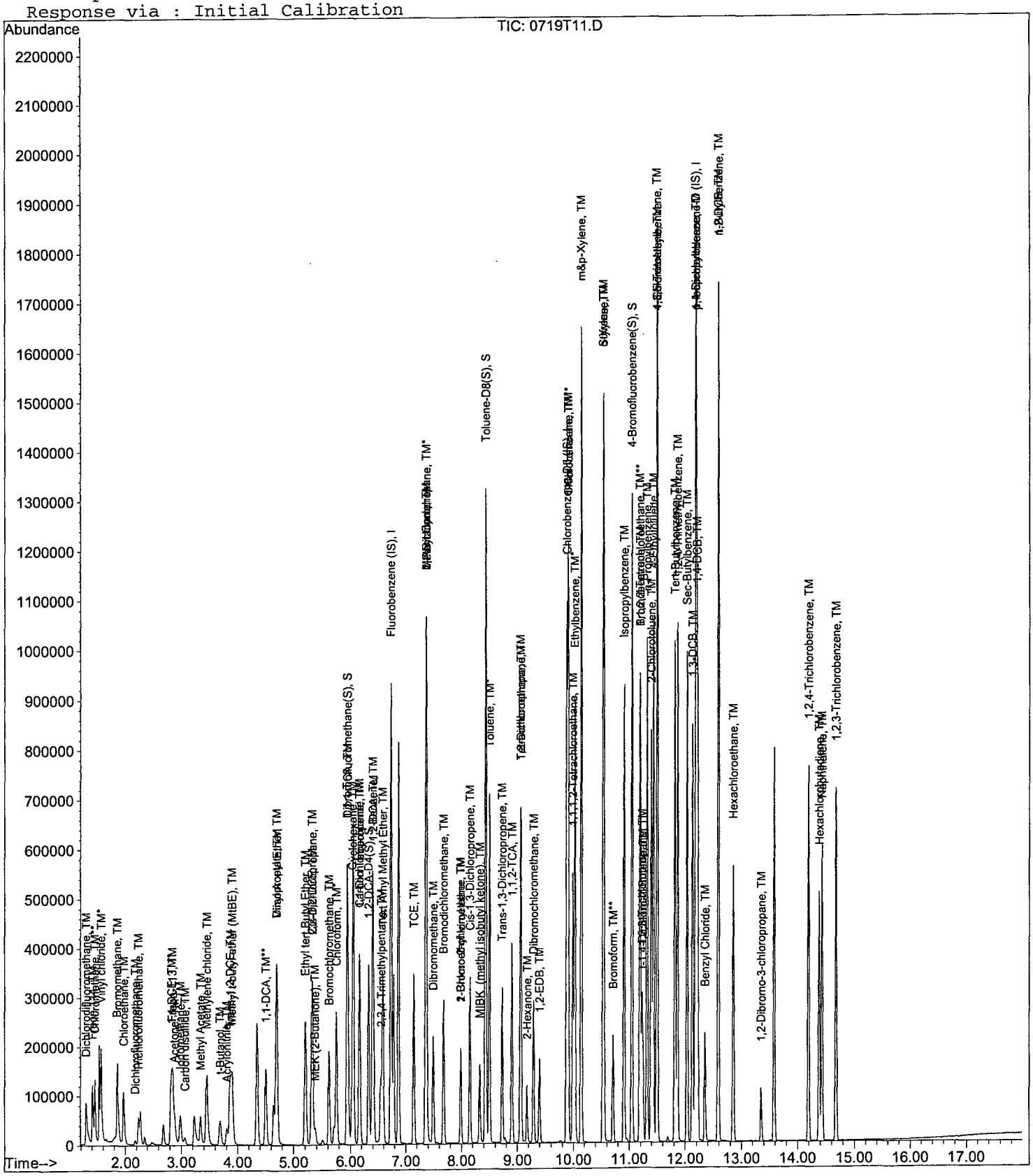
(#) = qualifier out of range (m) = manual integration

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 |

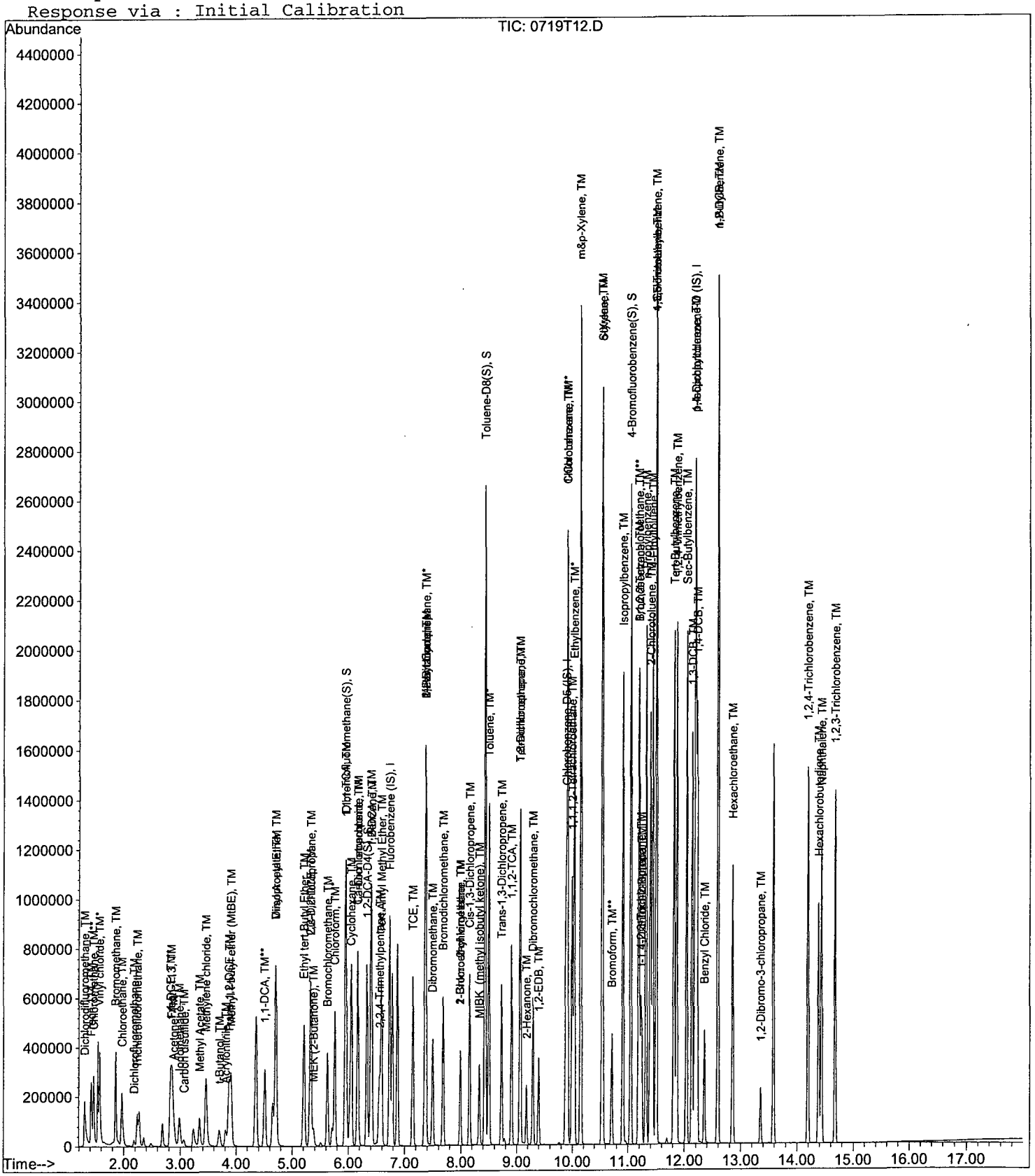
(#) = qualifier out of range (m) = manual integration

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 |

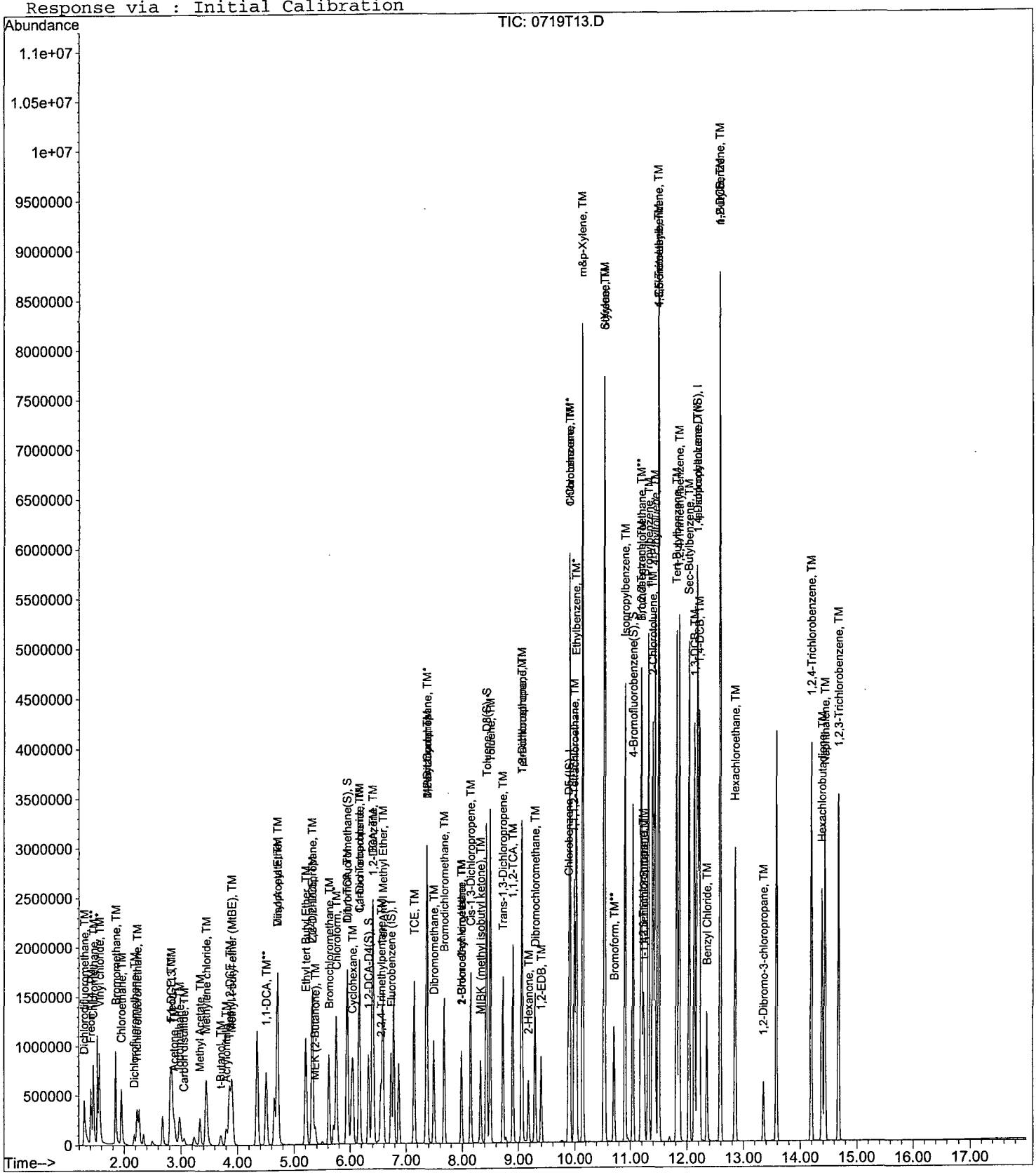
(#) = qualifier out of range (m) = manual integration

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

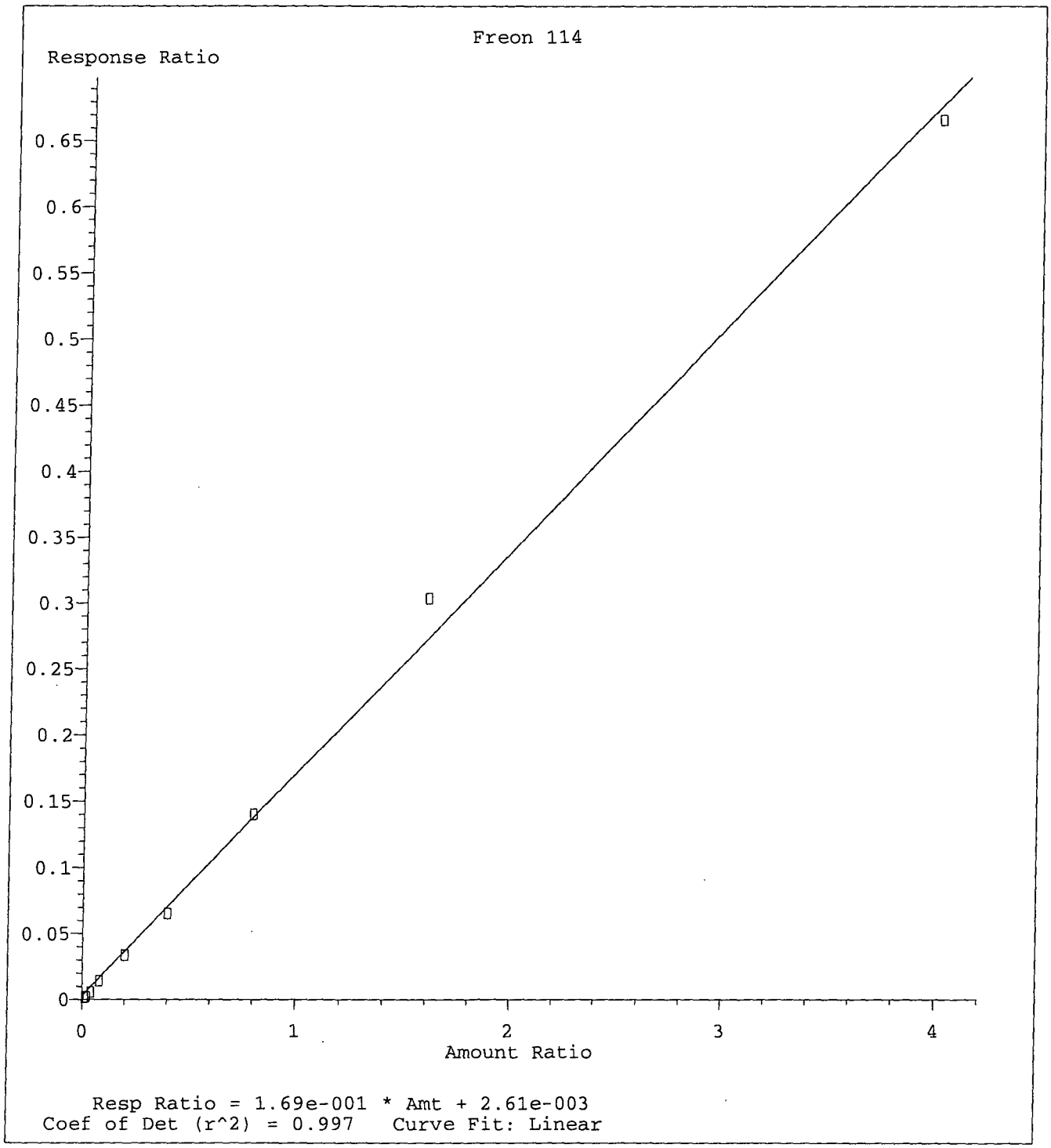
Vial: 13
Operator: DG,RS,HW,ARS,SV
Inst : Thor
Multiplr: 1.00

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

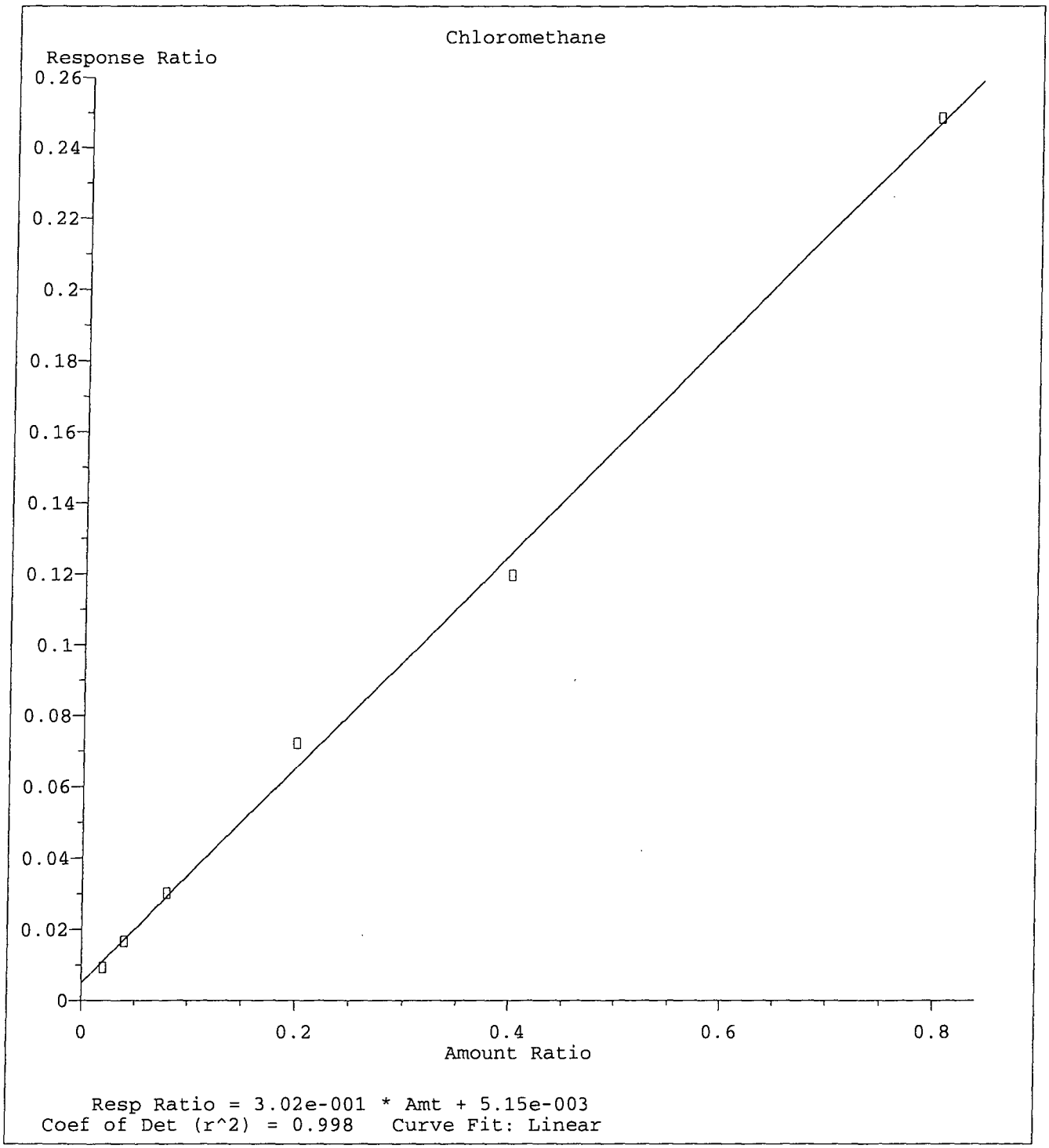
Method : M:\THOR\DATA\T120719\TALLW.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Fri Jul 20 08:28:10 2012
Response via : Initial Calibration



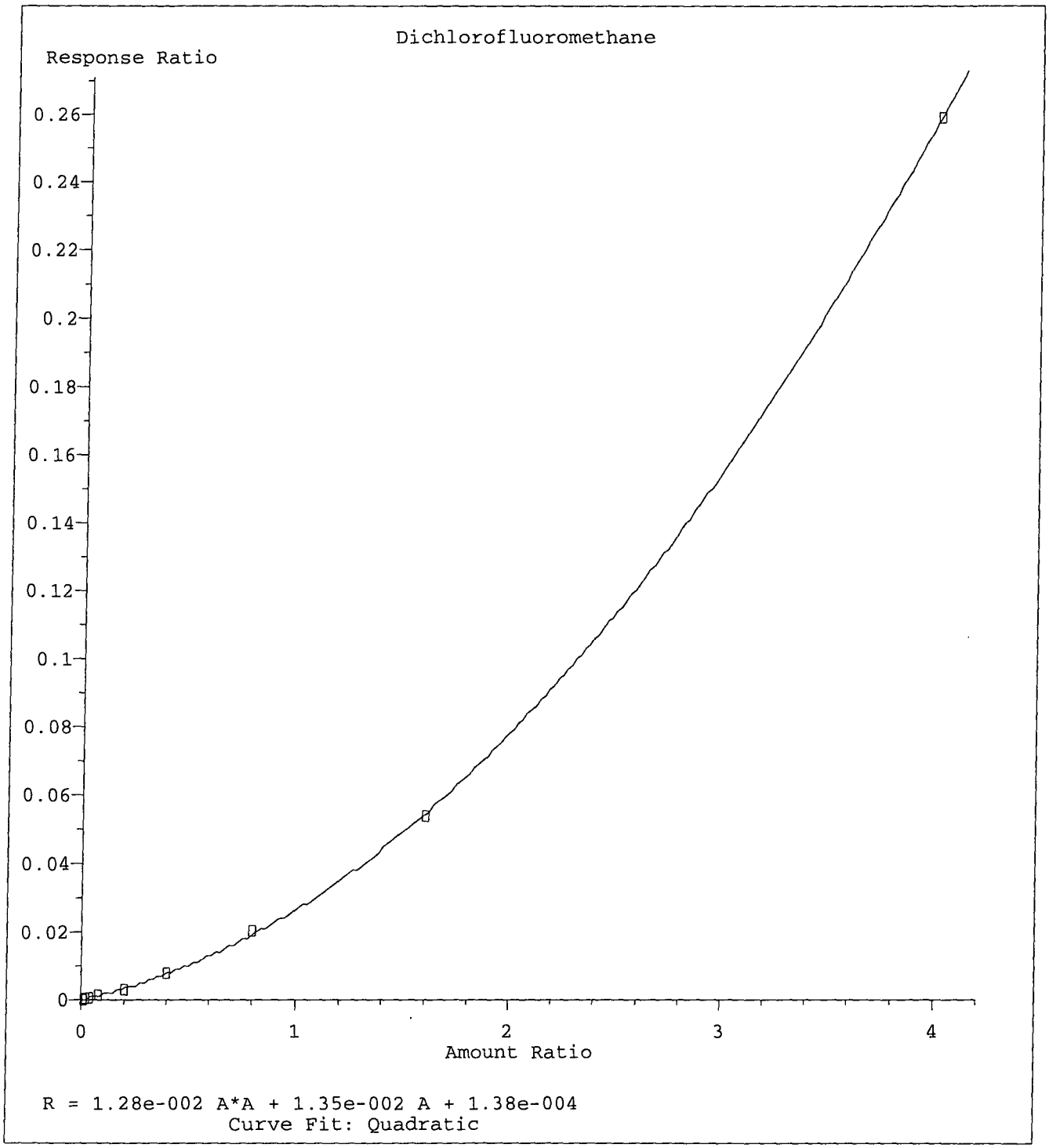

220



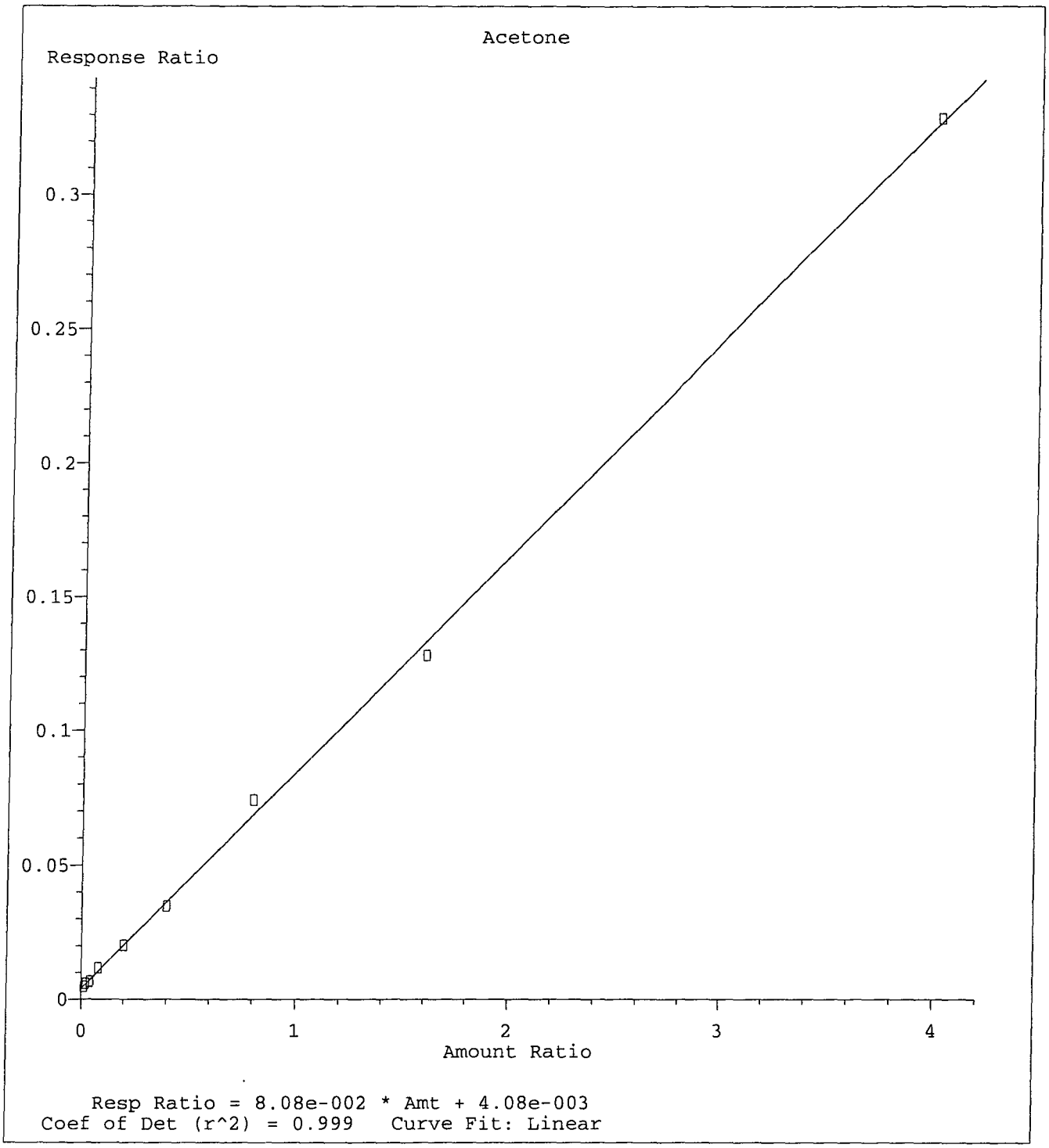

Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



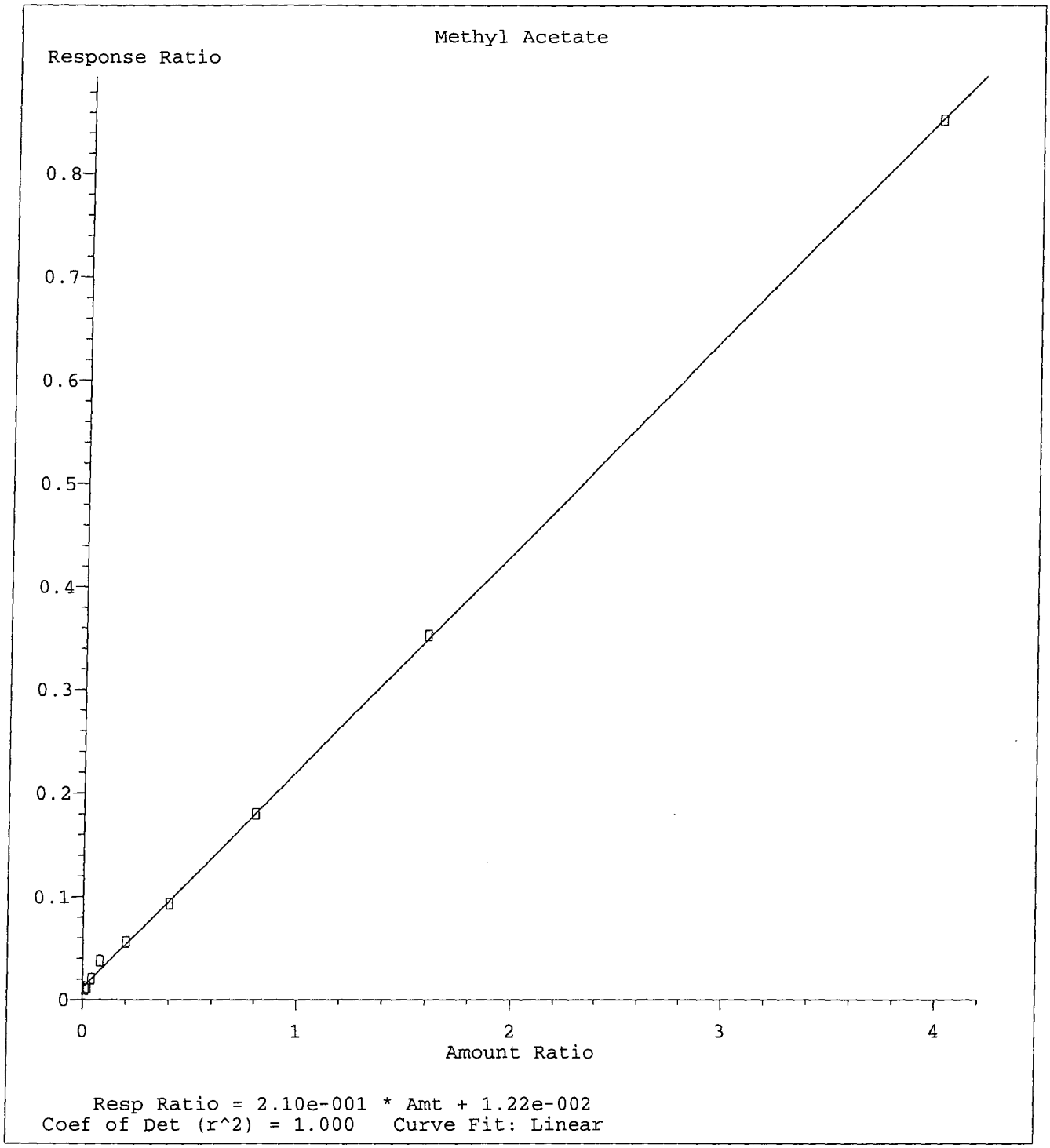

Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



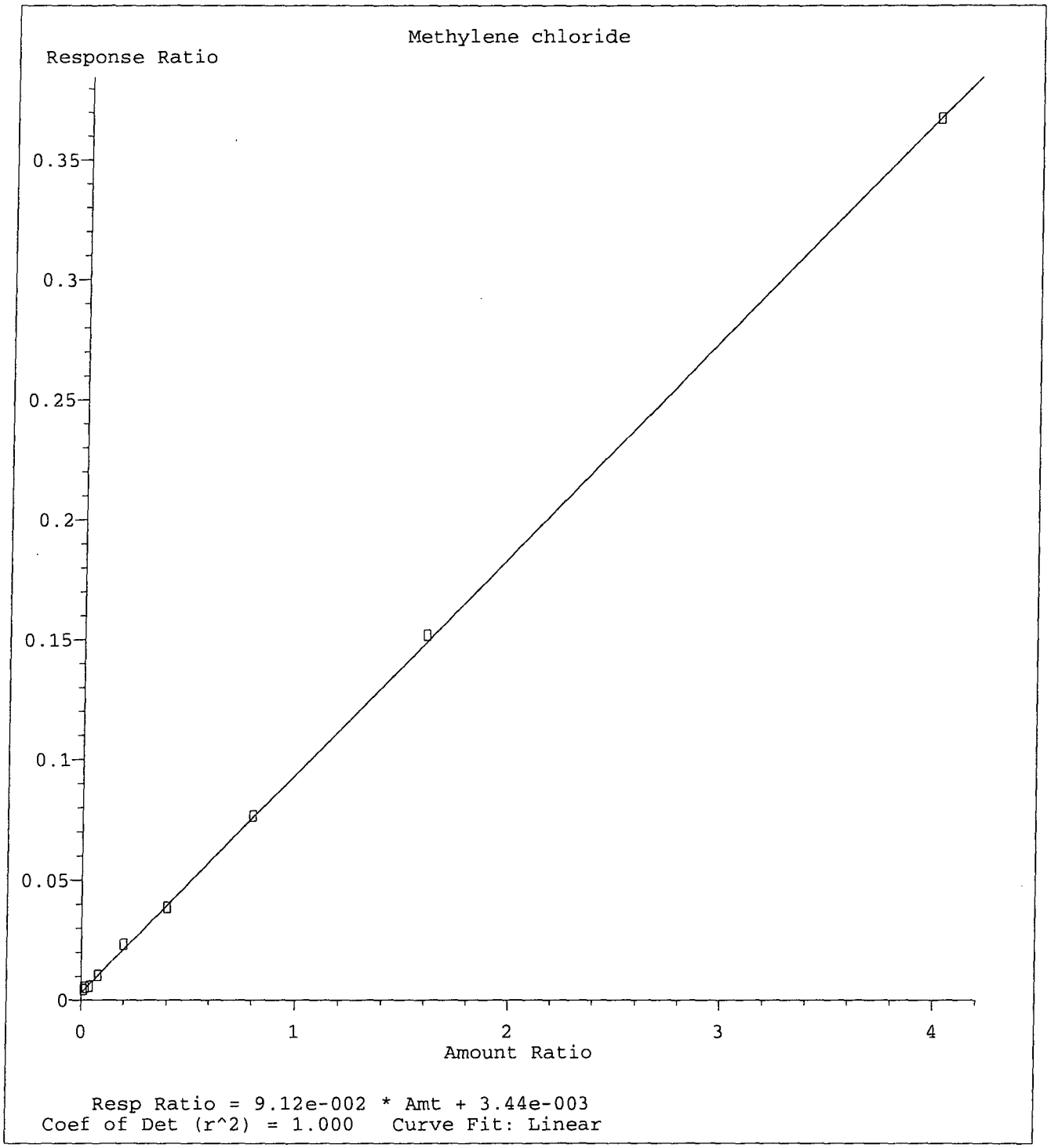

Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



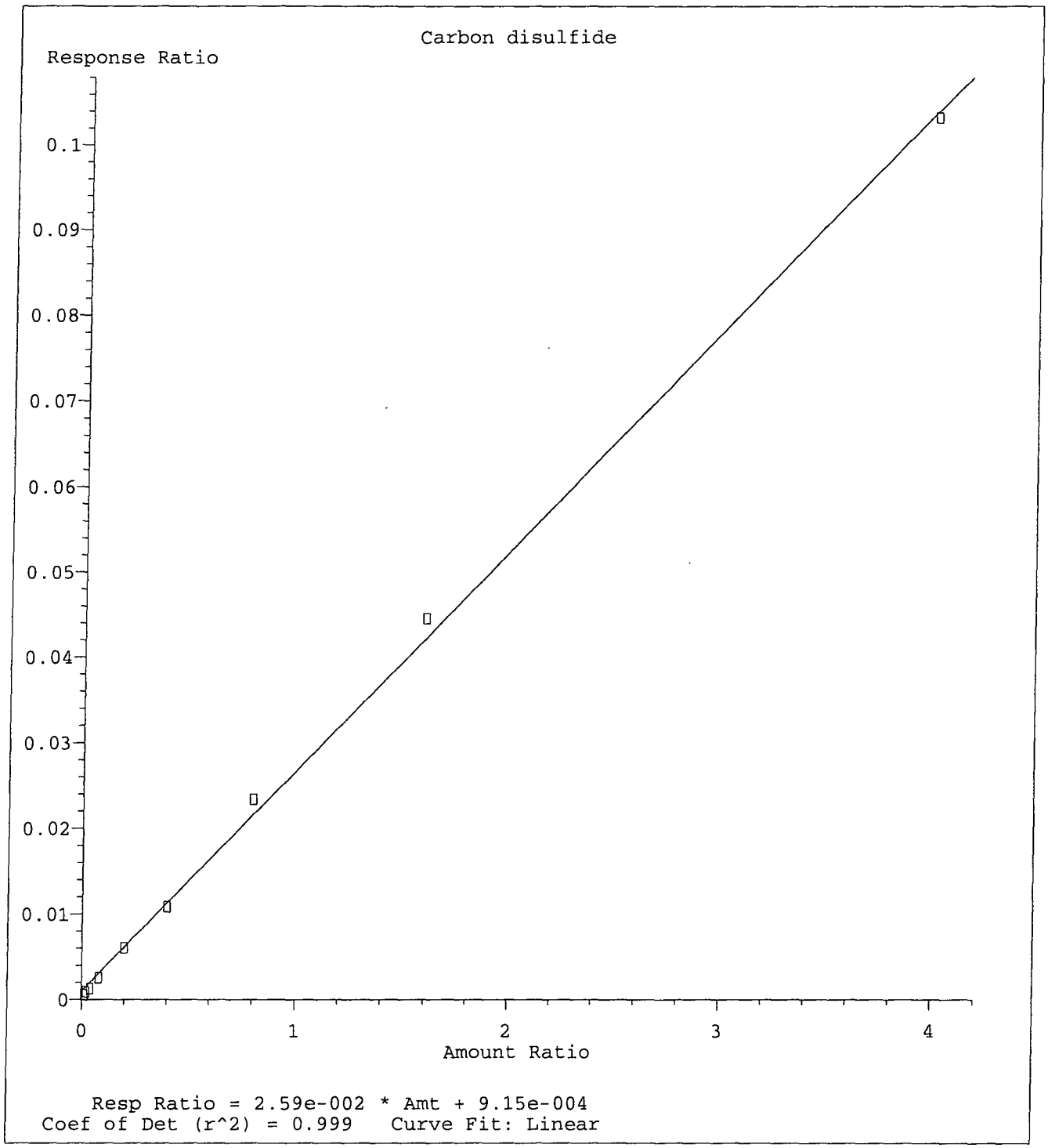

Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



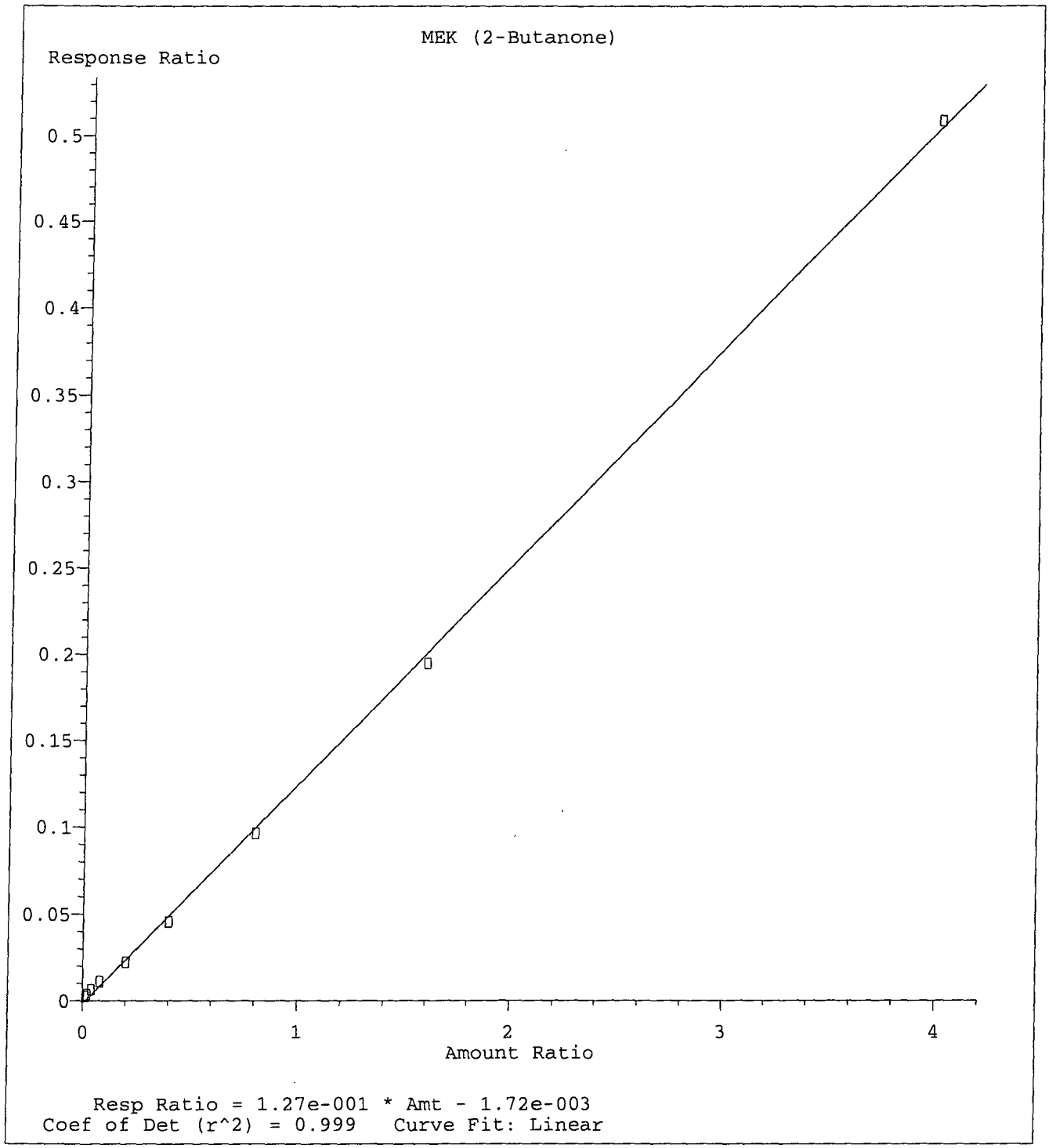

Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012



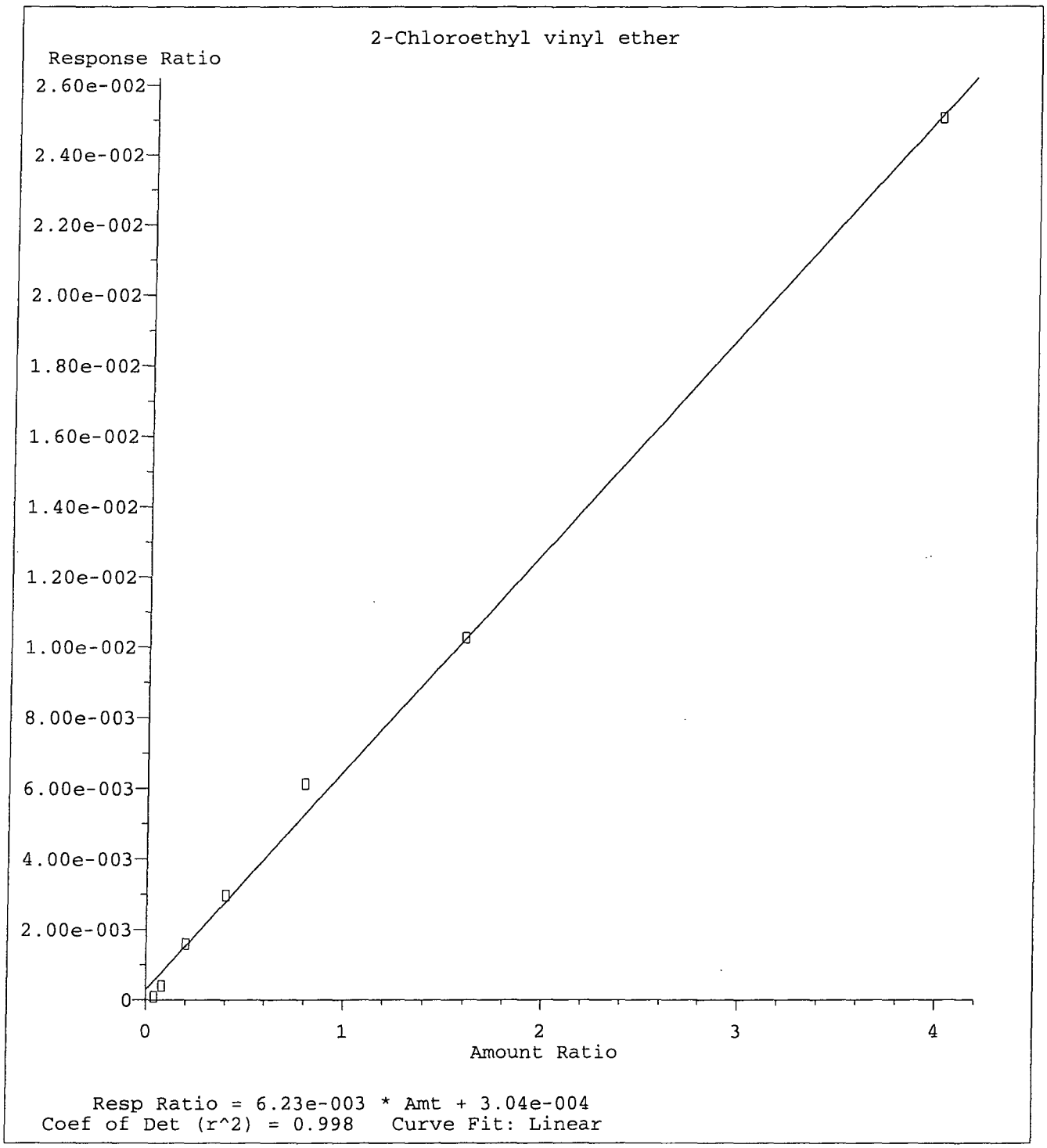

Method Name: M:\THOR\DATA\T120719\TALLW.M
Calibration Table Last Updated: Fri Jul 20 10:40:23 2012




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 | | | | | | | | |
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| 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

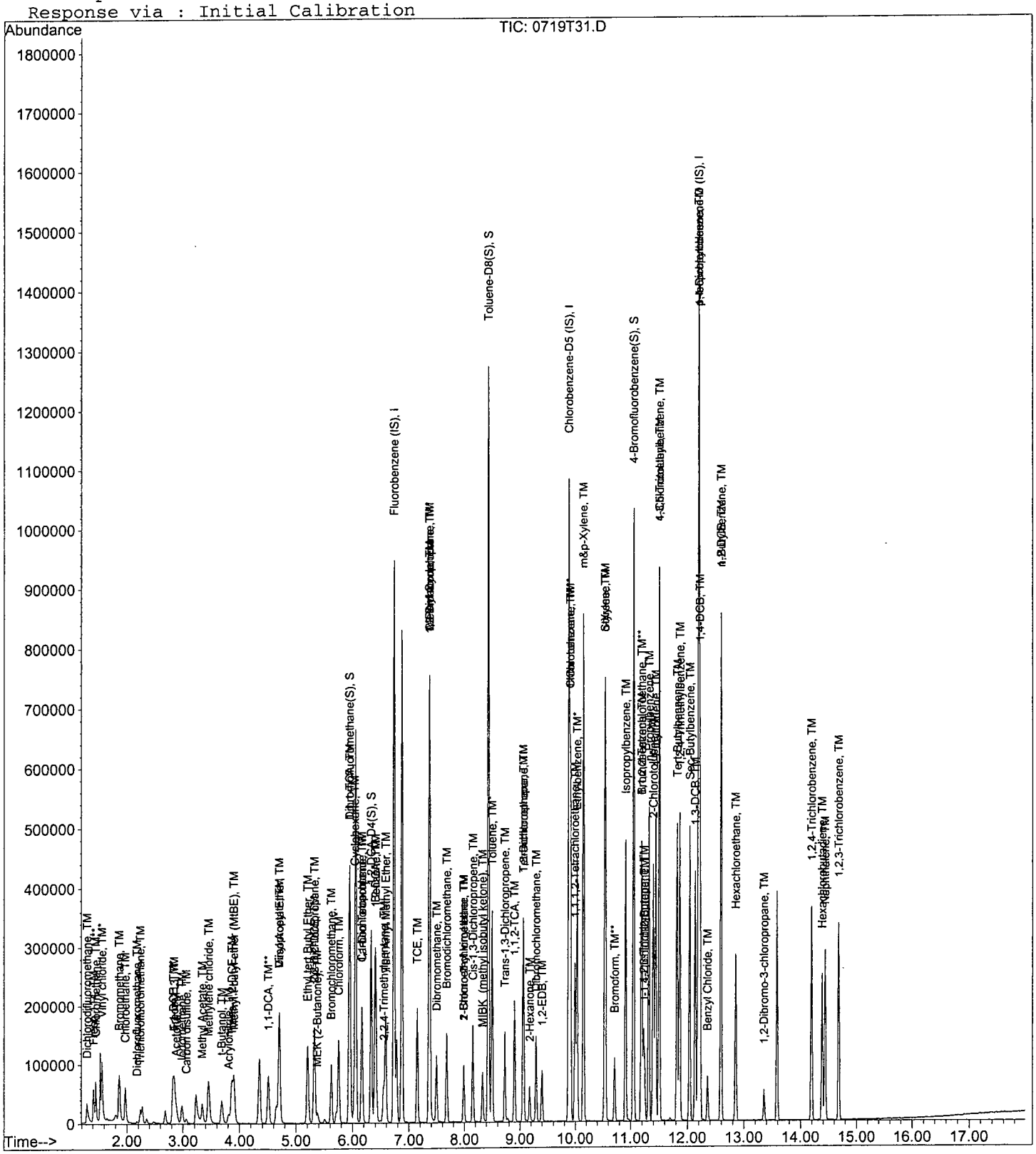
(#) = qualifier out of range (m) = manual integration
0719T31.D TALLW.M Fri Jul 20 10:53:42 2012

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 | | | | | | | |
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| 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 |

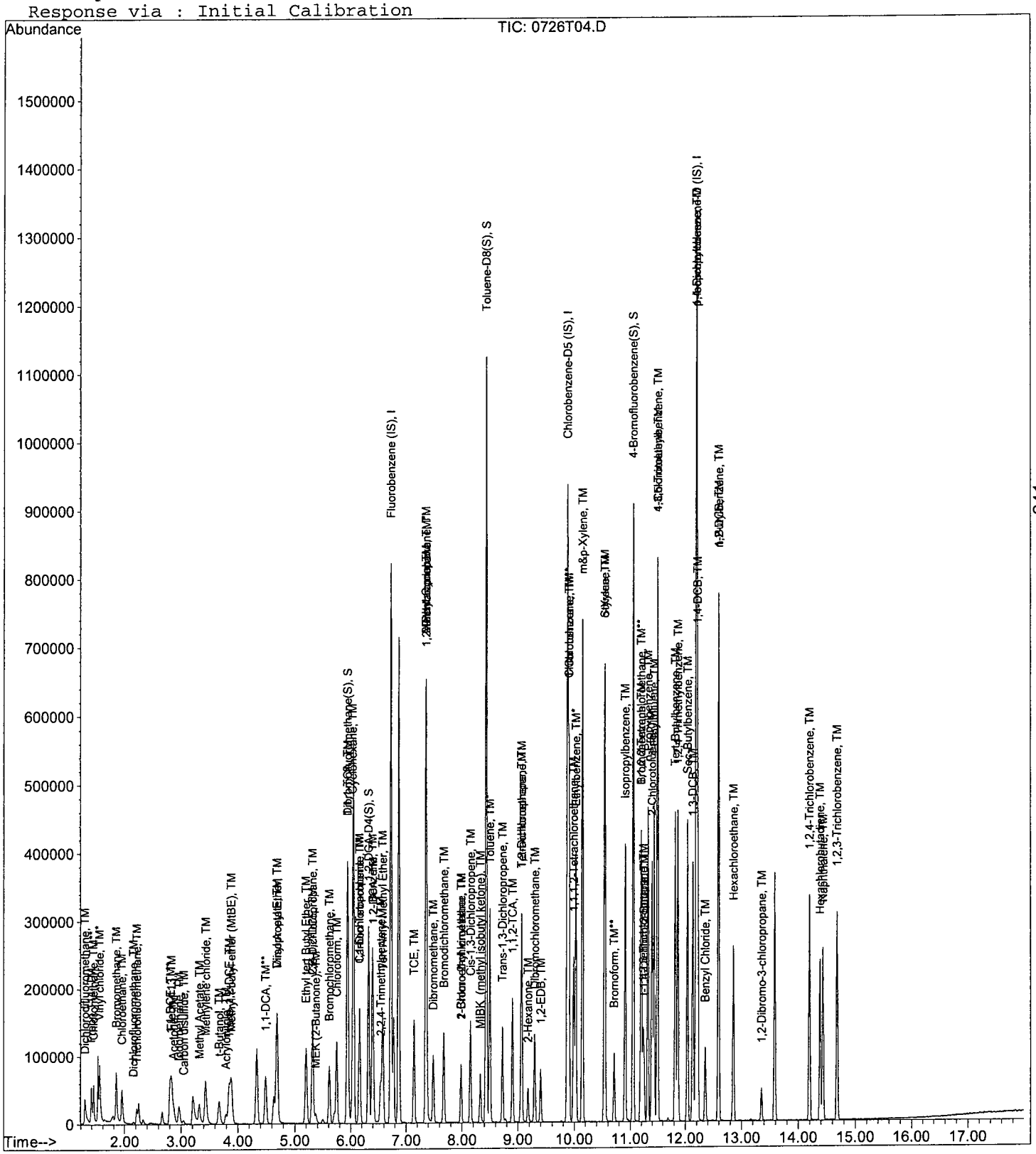
(#) = qualifier out of range (m) = manual integration

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 | | | | | | | | | | | | | | | | |
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| 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

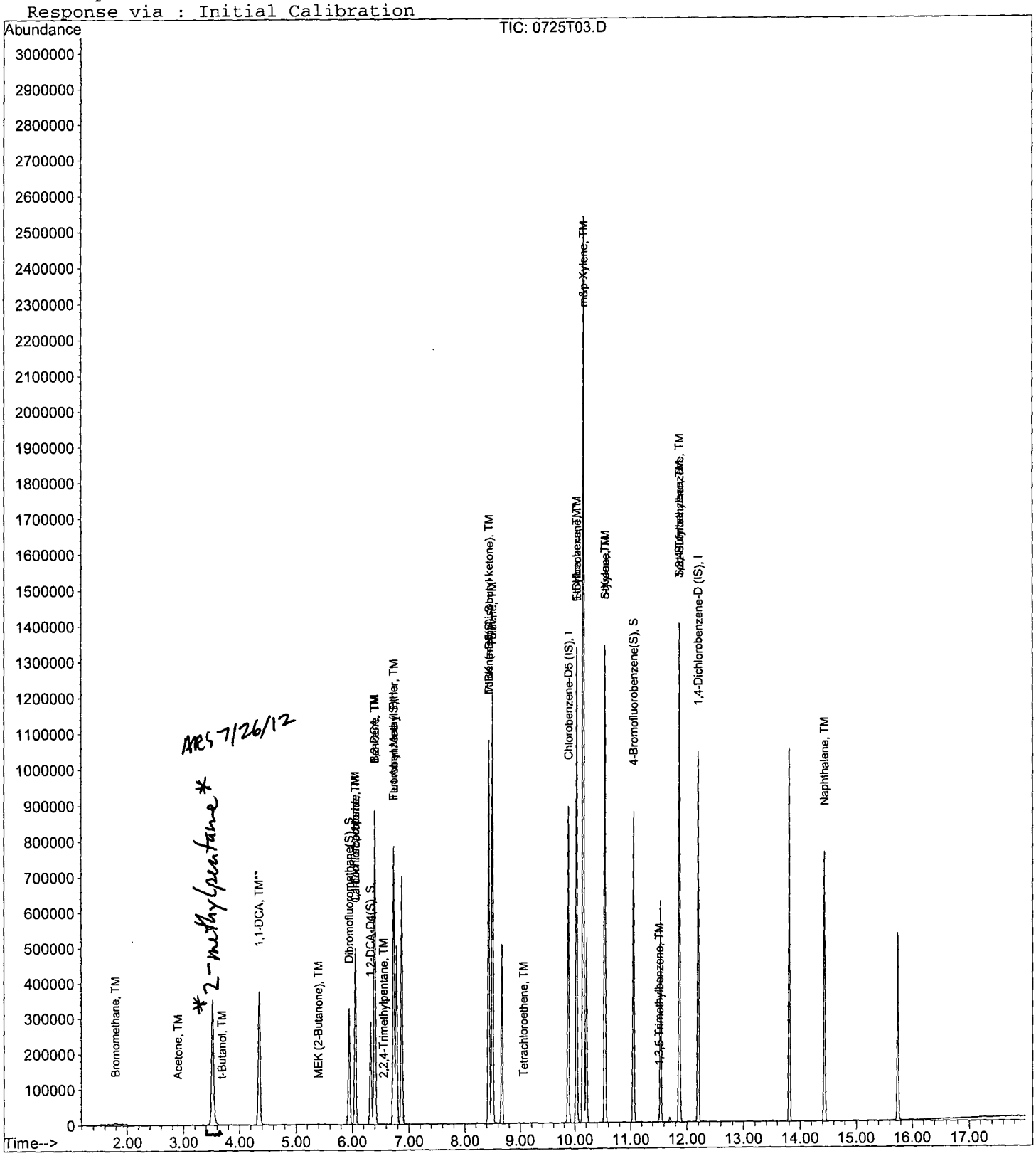
Quantitation Report

Data File : M:\THOR\DATA\T120725\0725T03.D
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

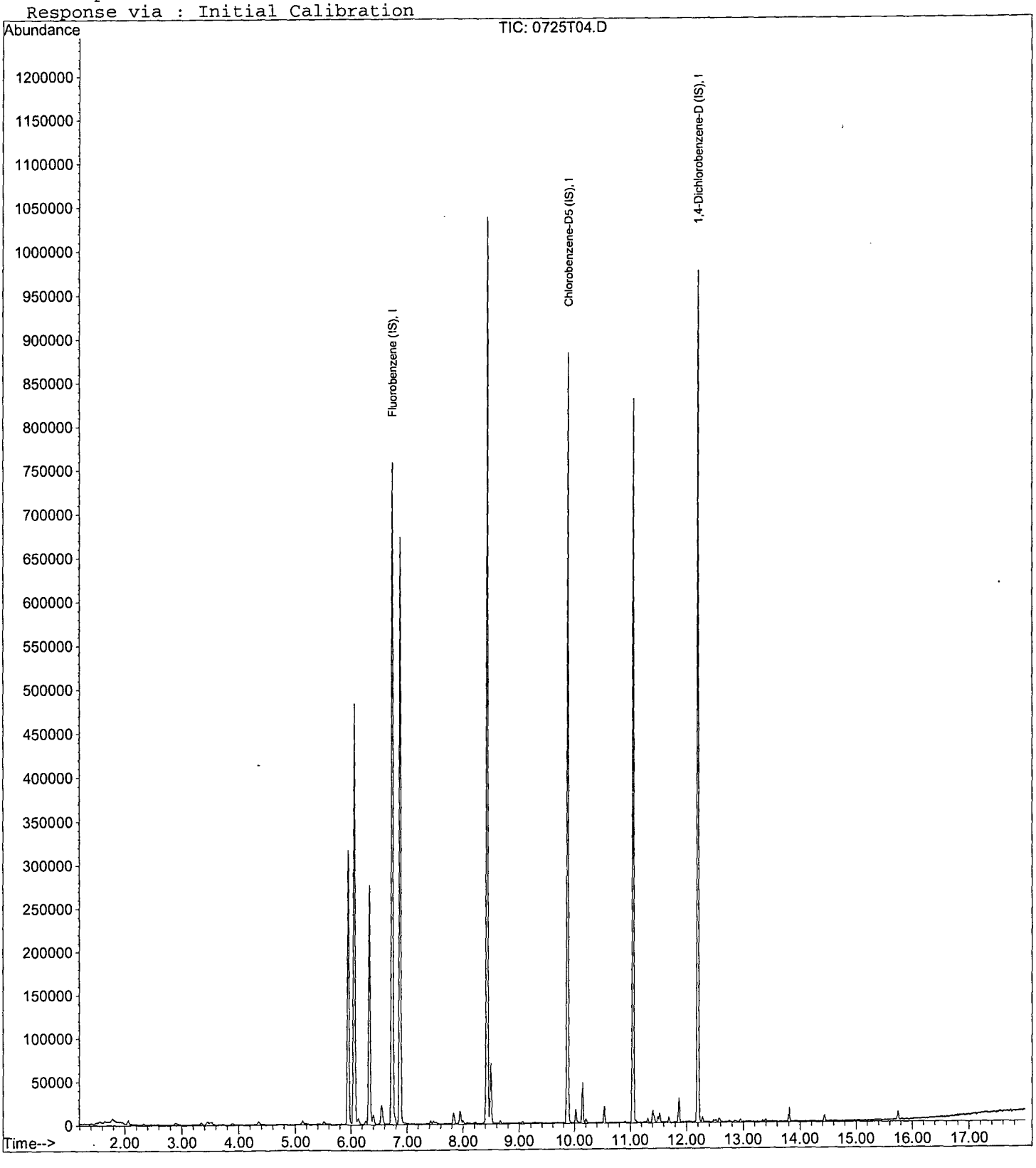
Quantitation Report

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

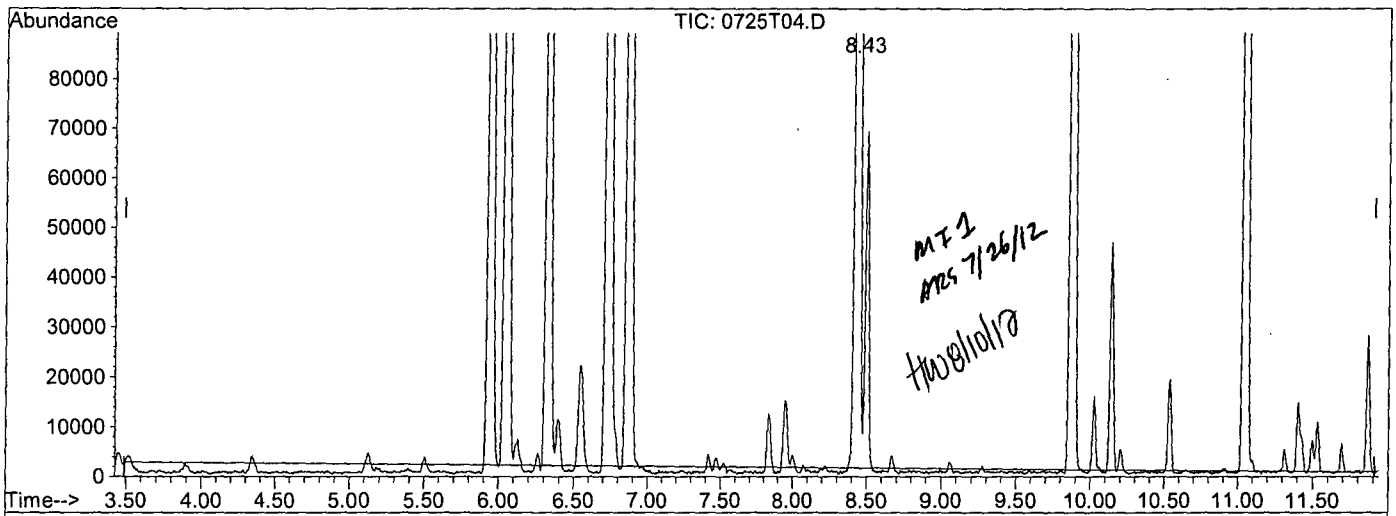
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

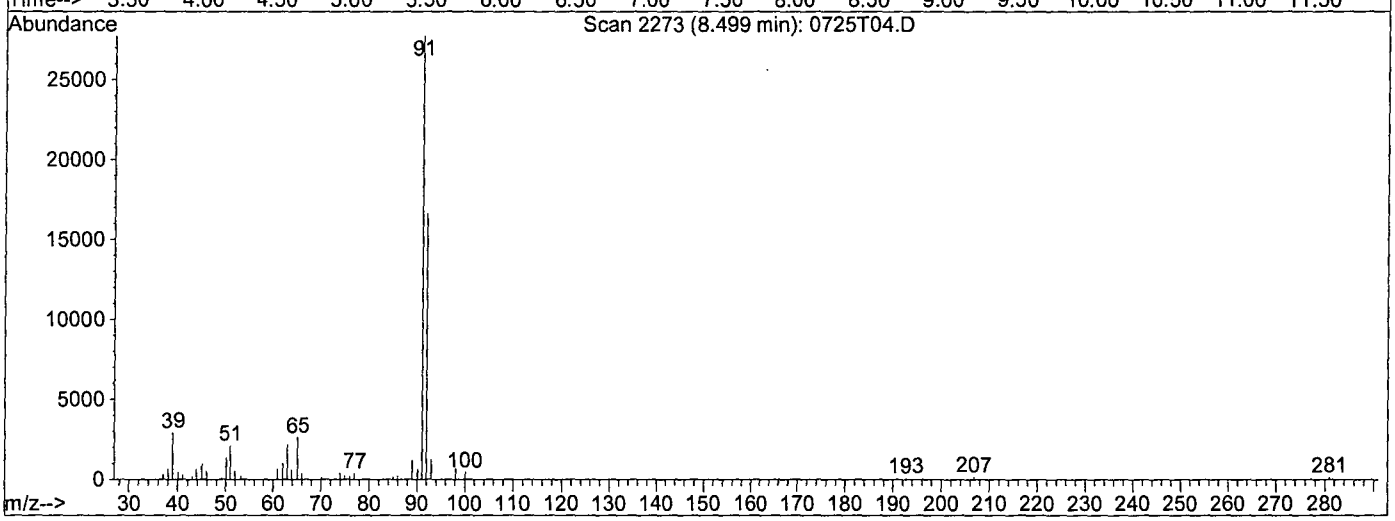


Quantitation Report

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

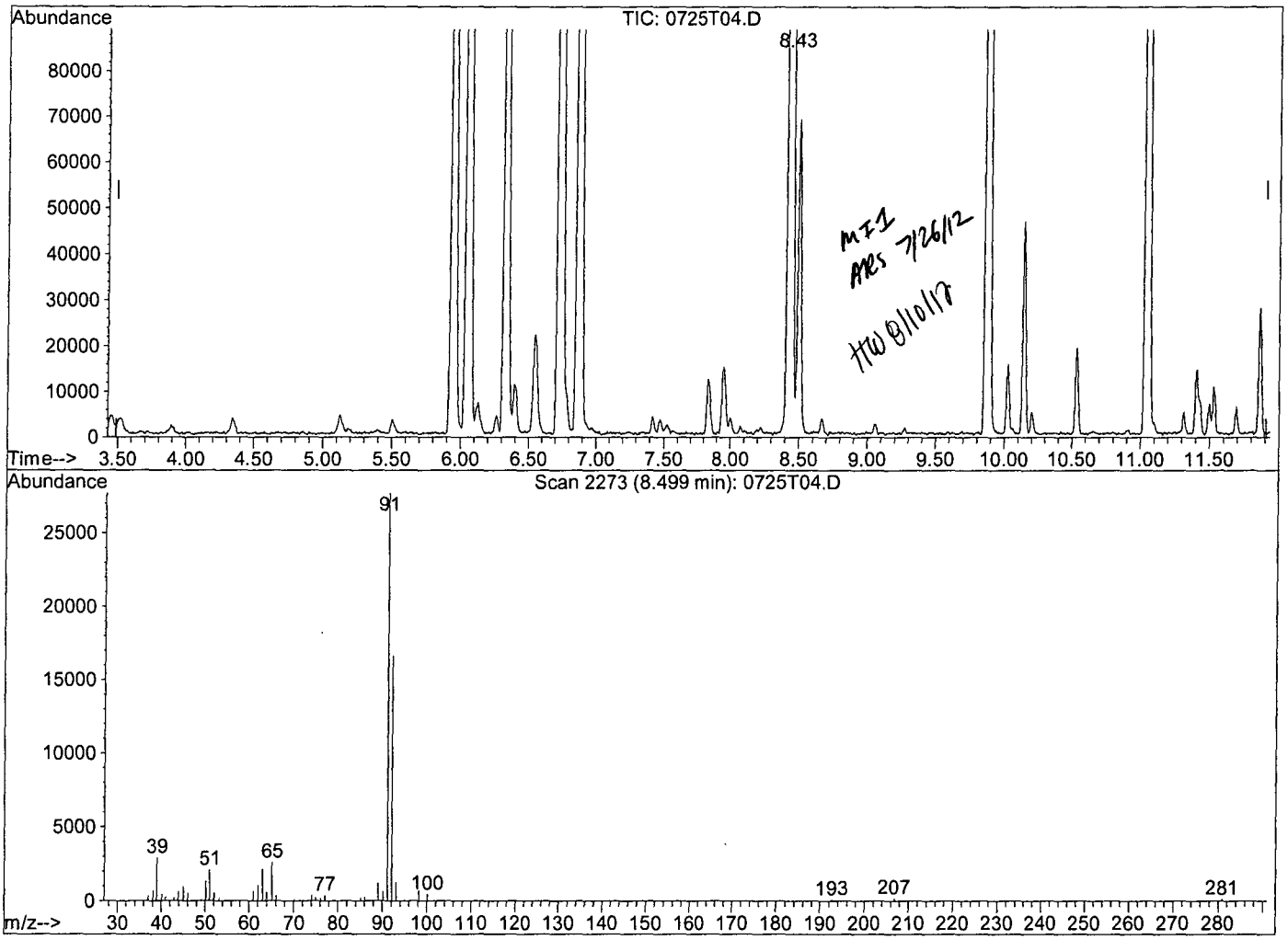
response 7759068

| 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

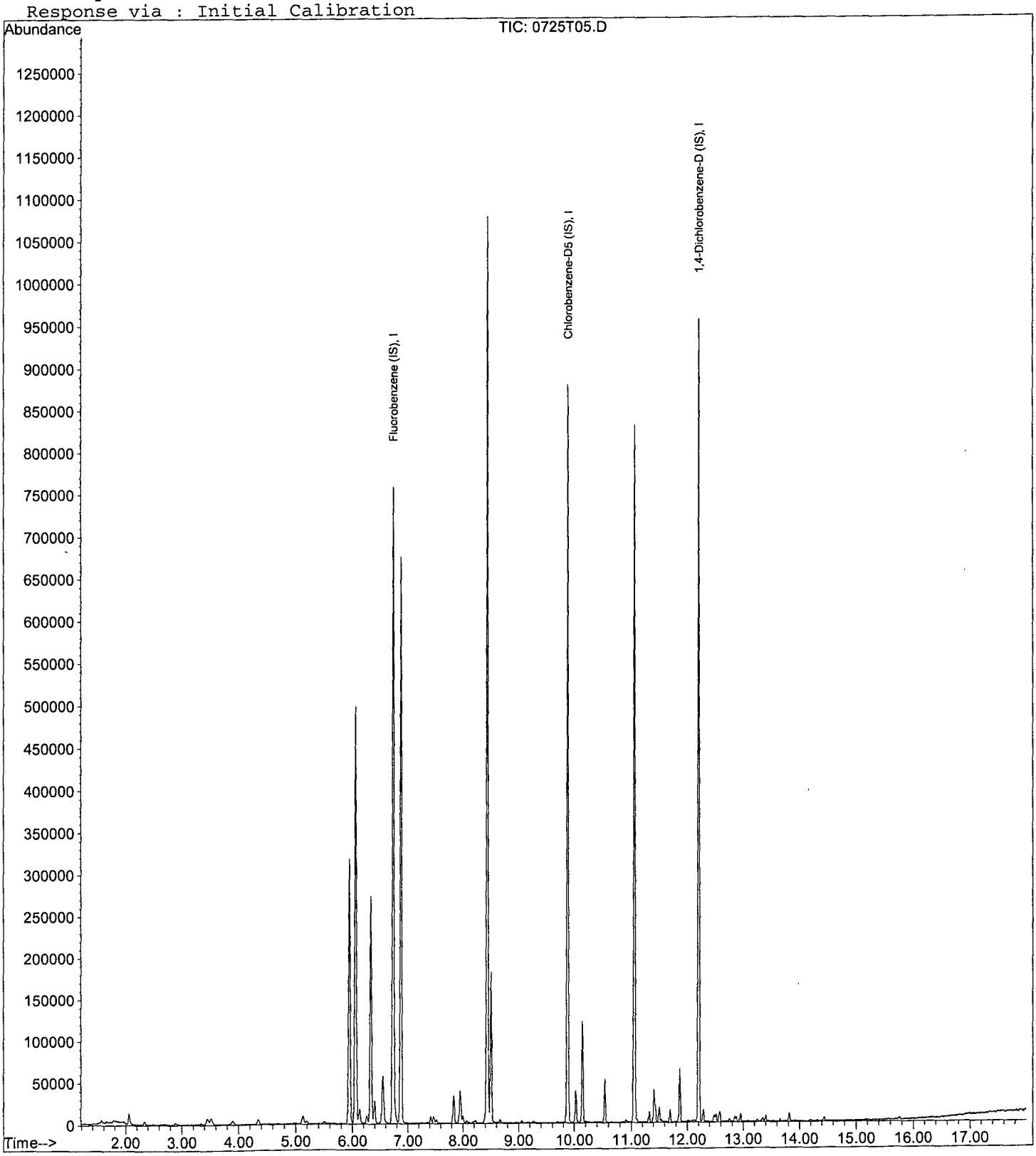
Quantitation Report

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

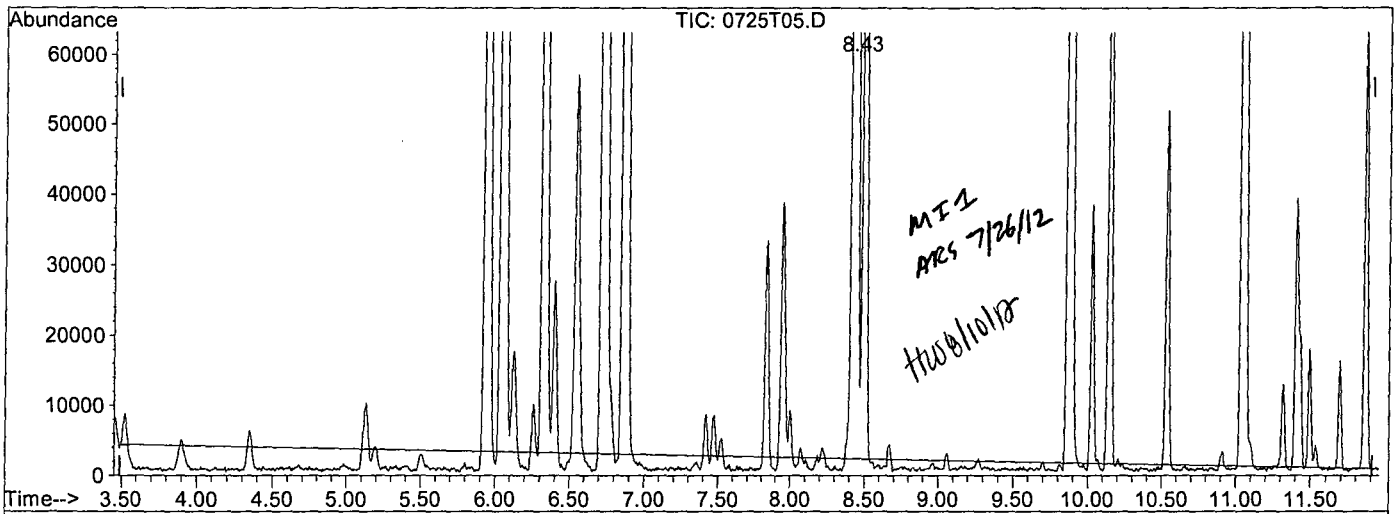
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

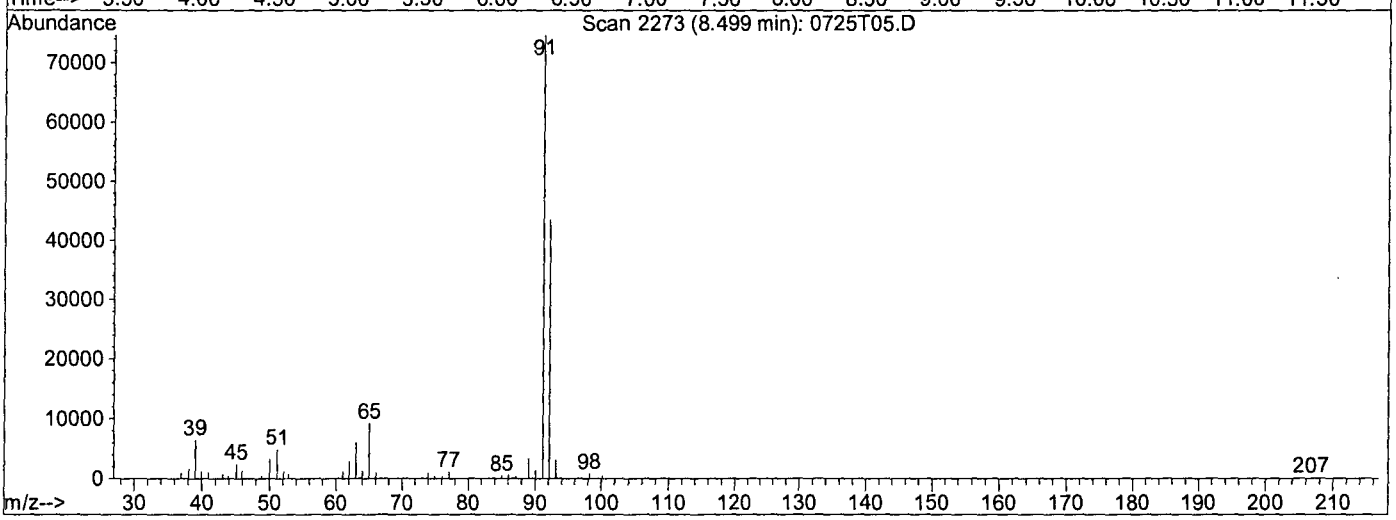


Quantitation Report

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

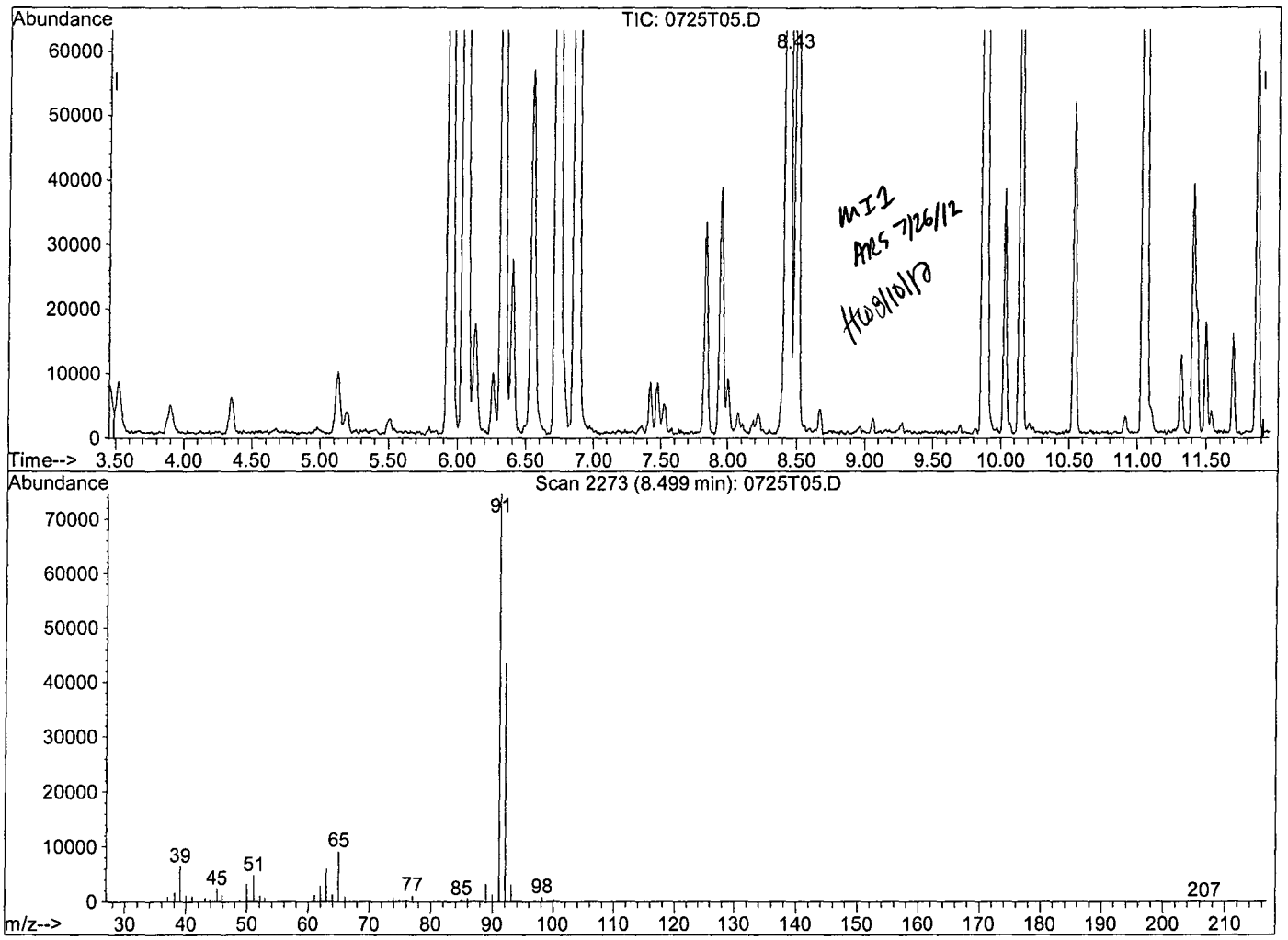
response 8658785

| 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

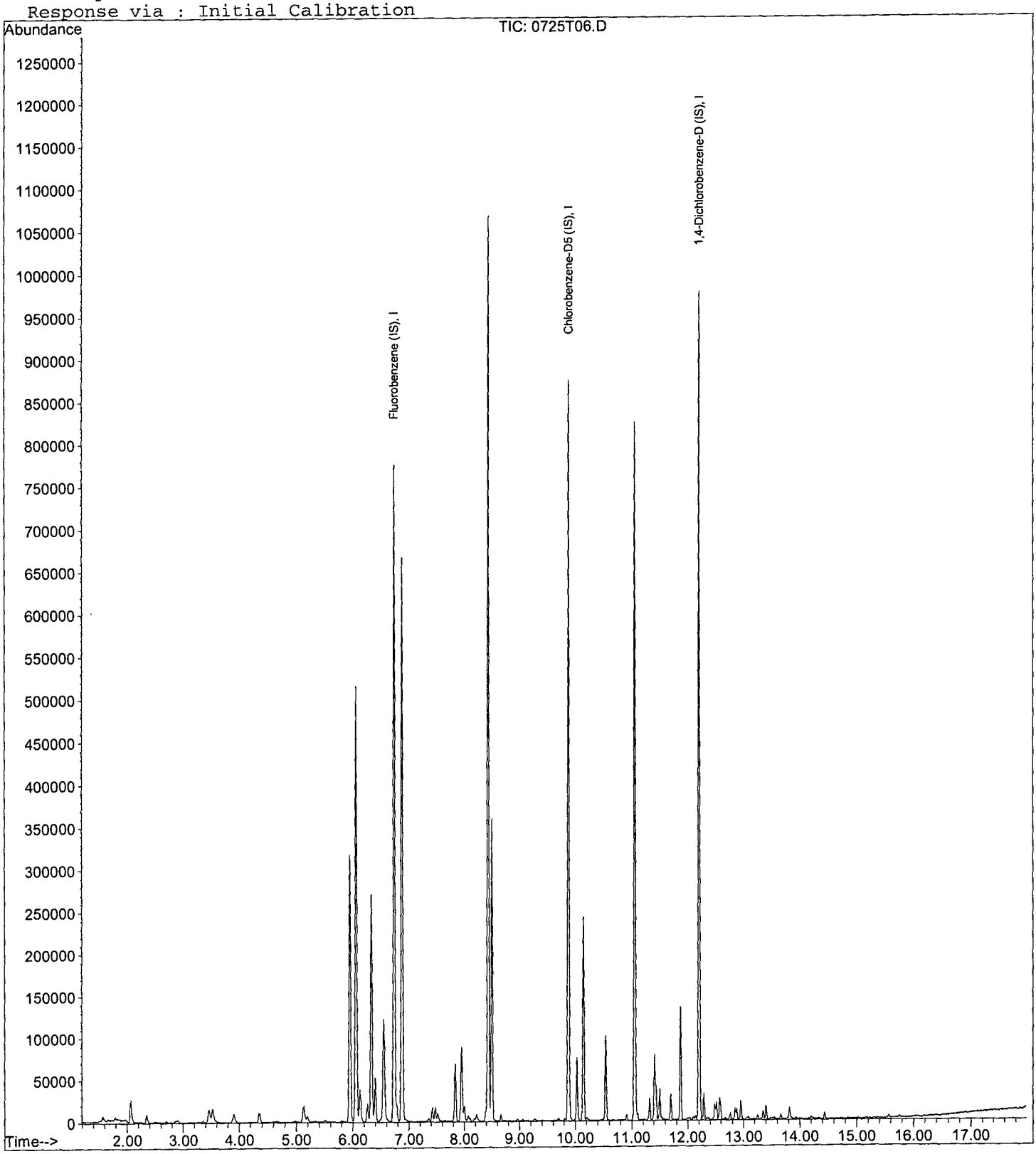
Quantitation Report

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

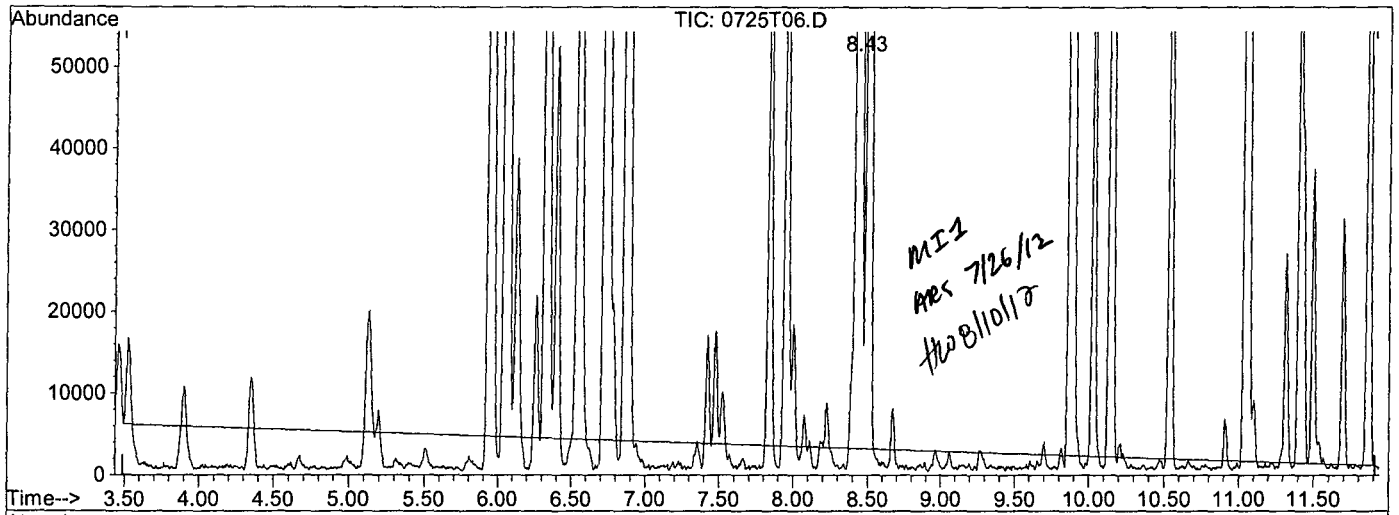
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

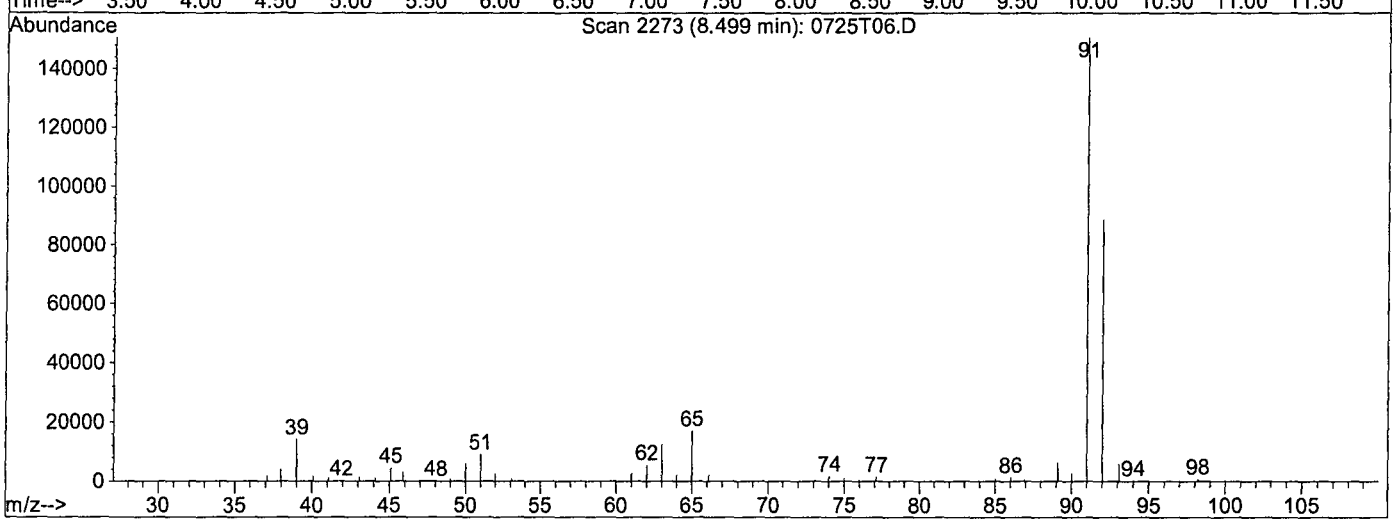


Quantitation Report

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

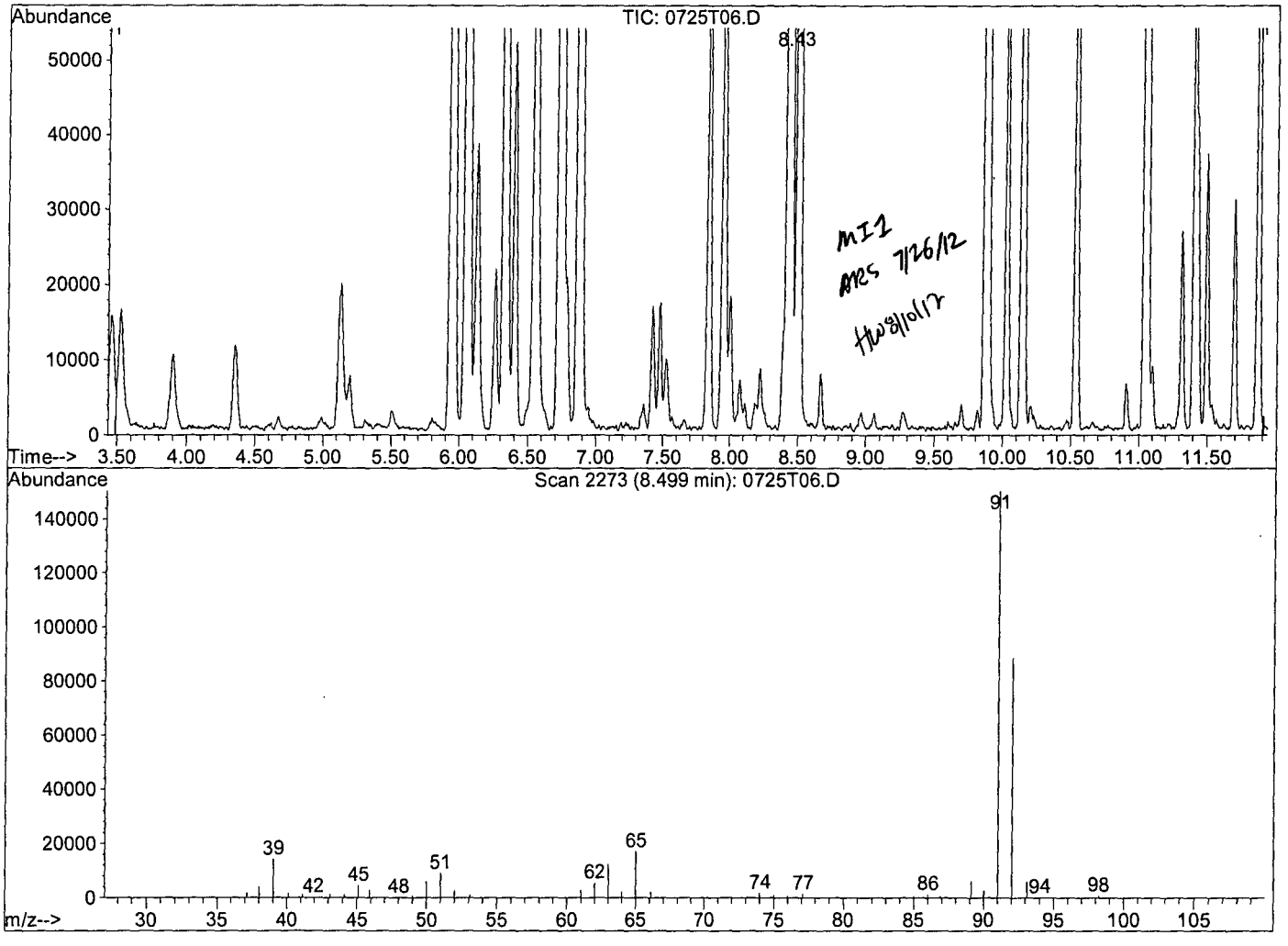
response 10233059

| 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

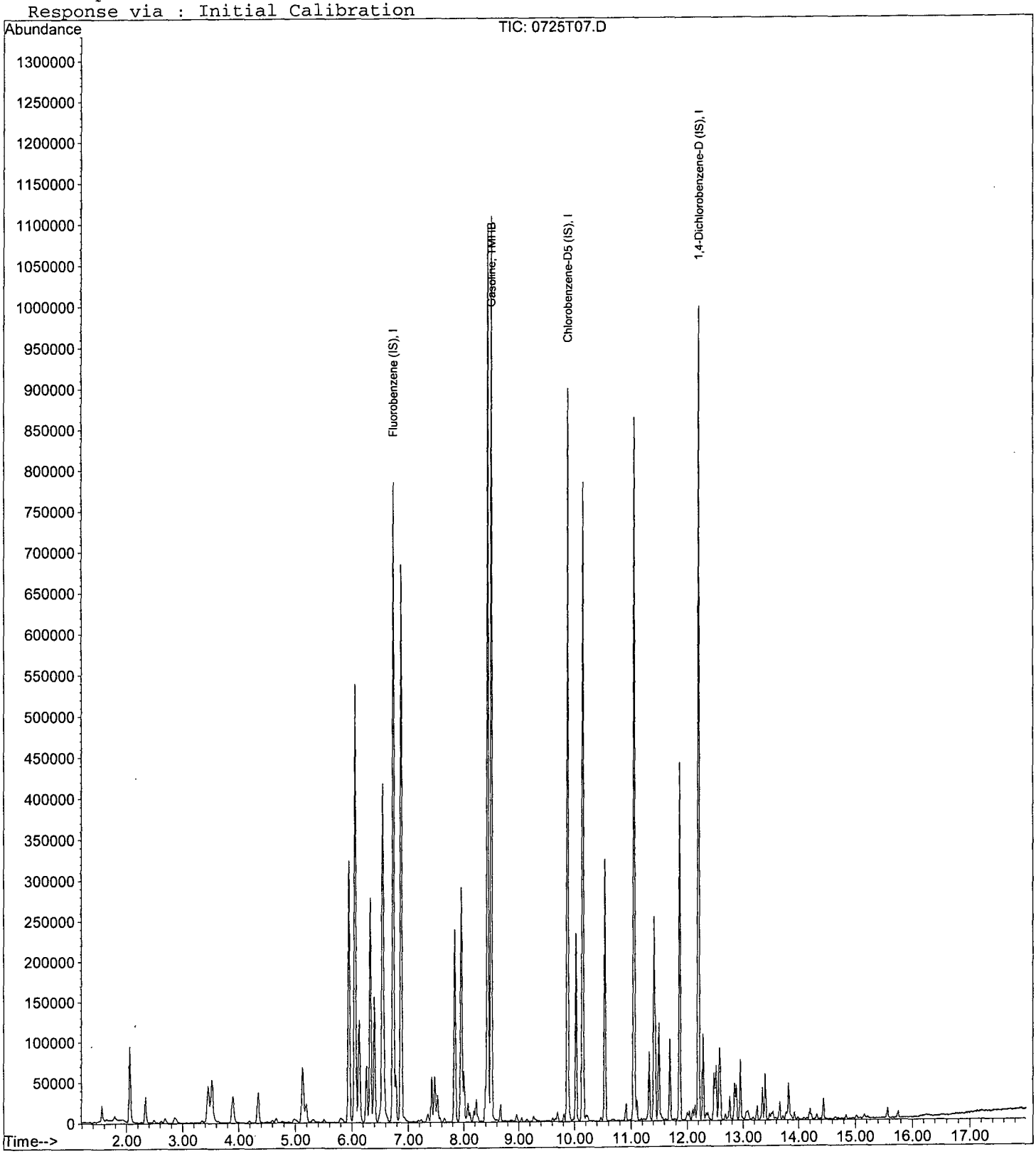
Quantitation Report

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

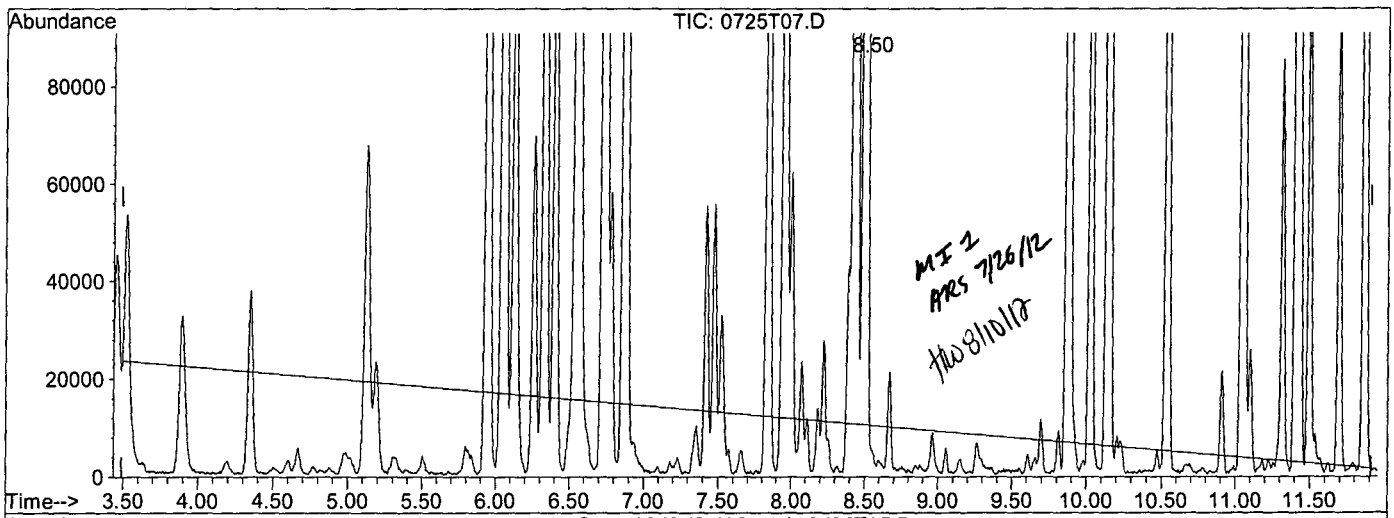
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

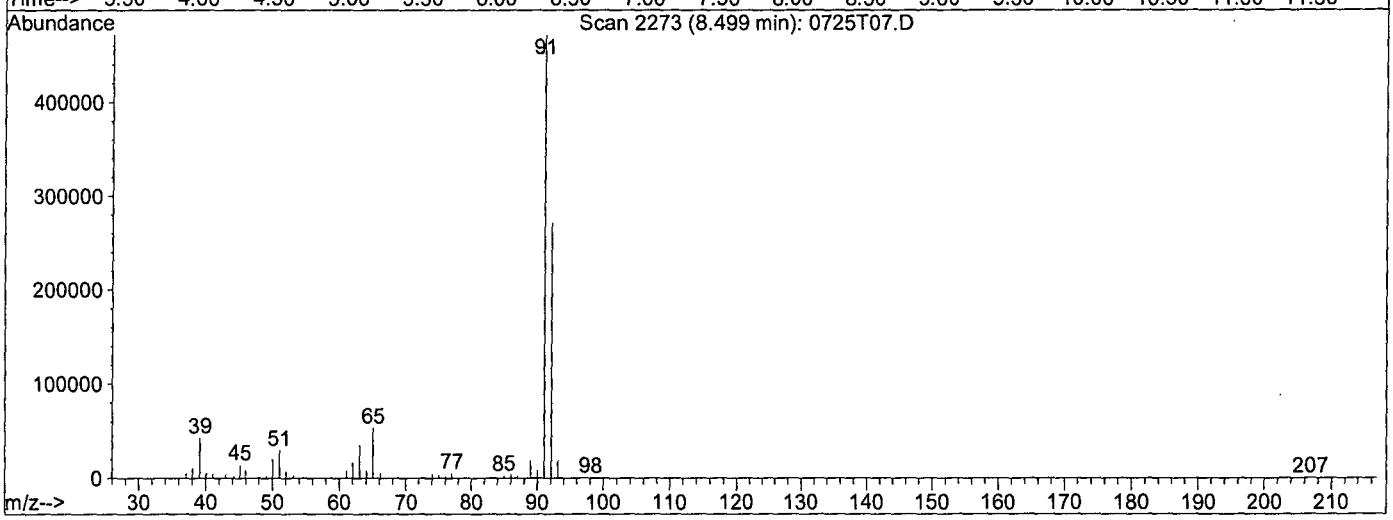


Quantitation Report

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

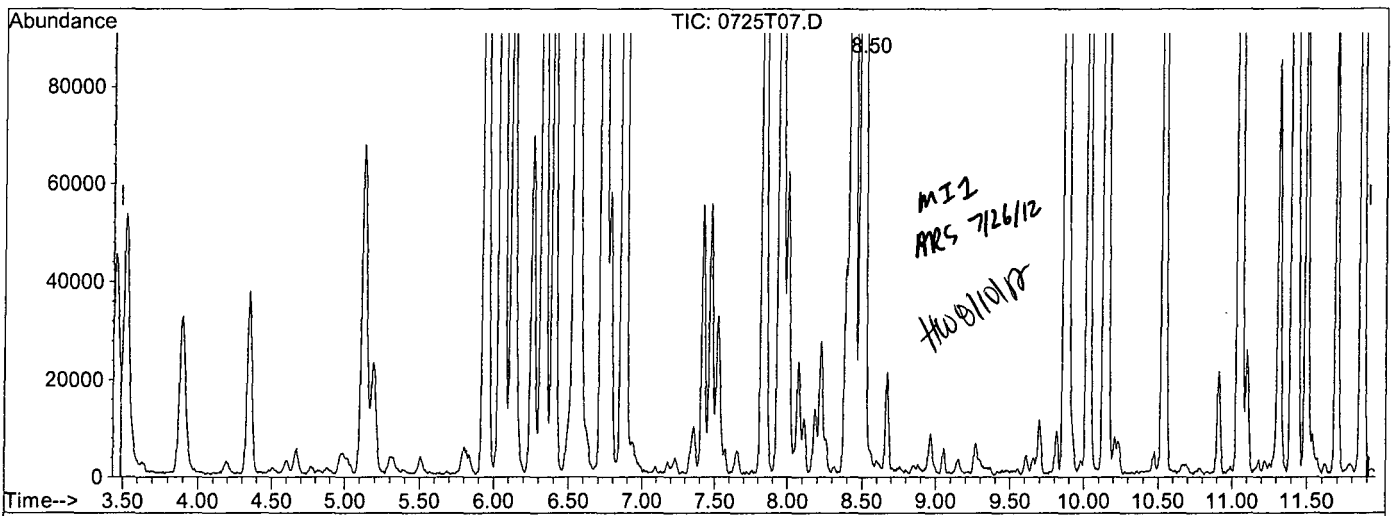
response 17146776

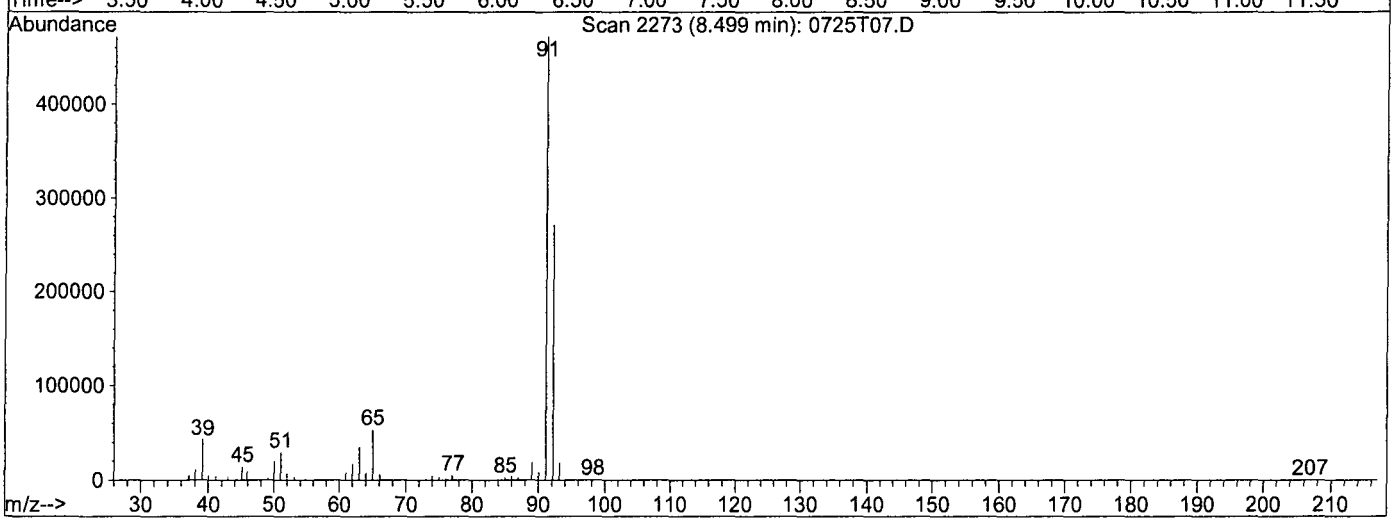
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.00 | 0.55# |
| 0.00 | 0.00 | 1.63# |
| 0.00 | 0.00 | 0.00 |

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

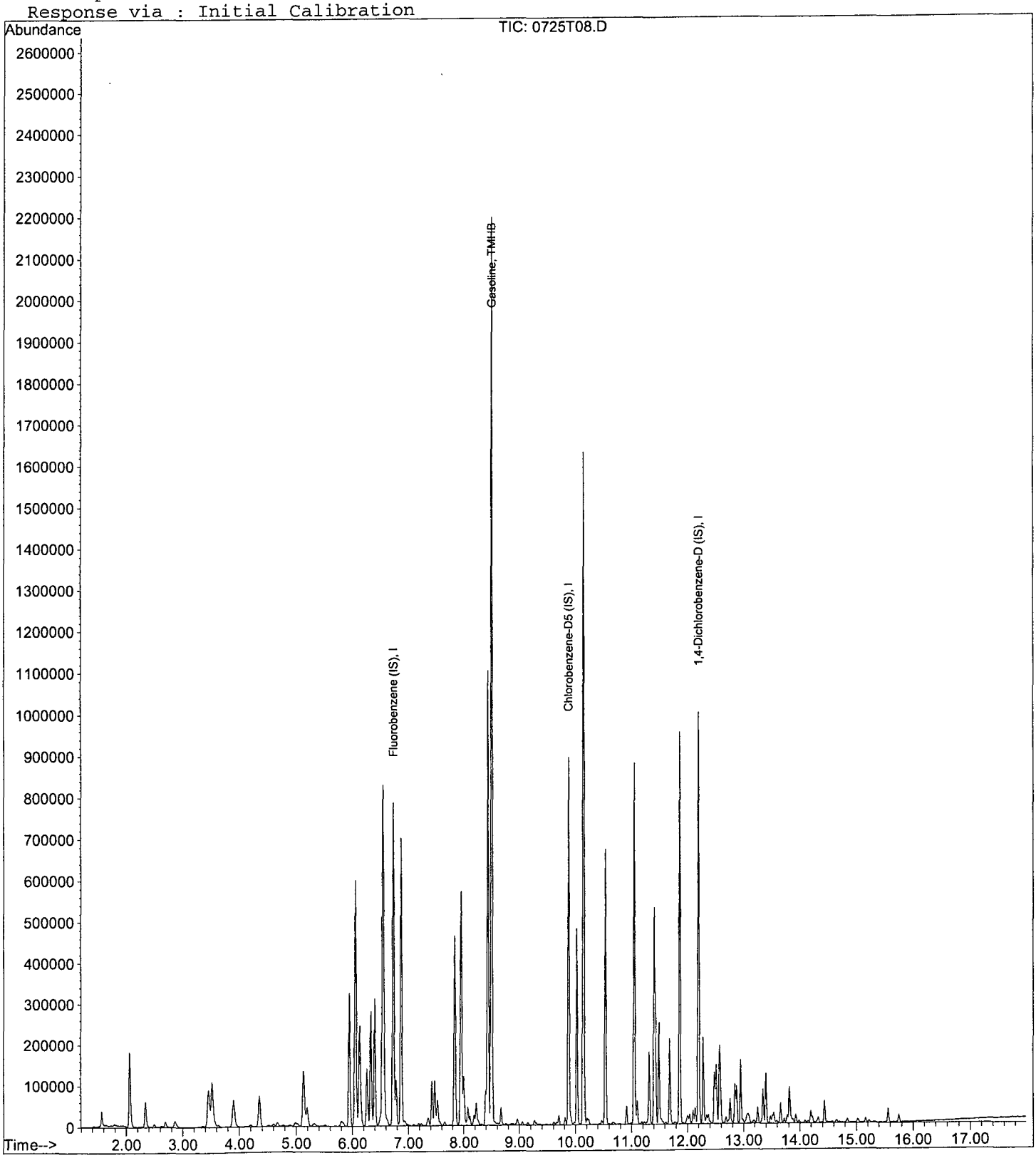
Quantitation Report

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

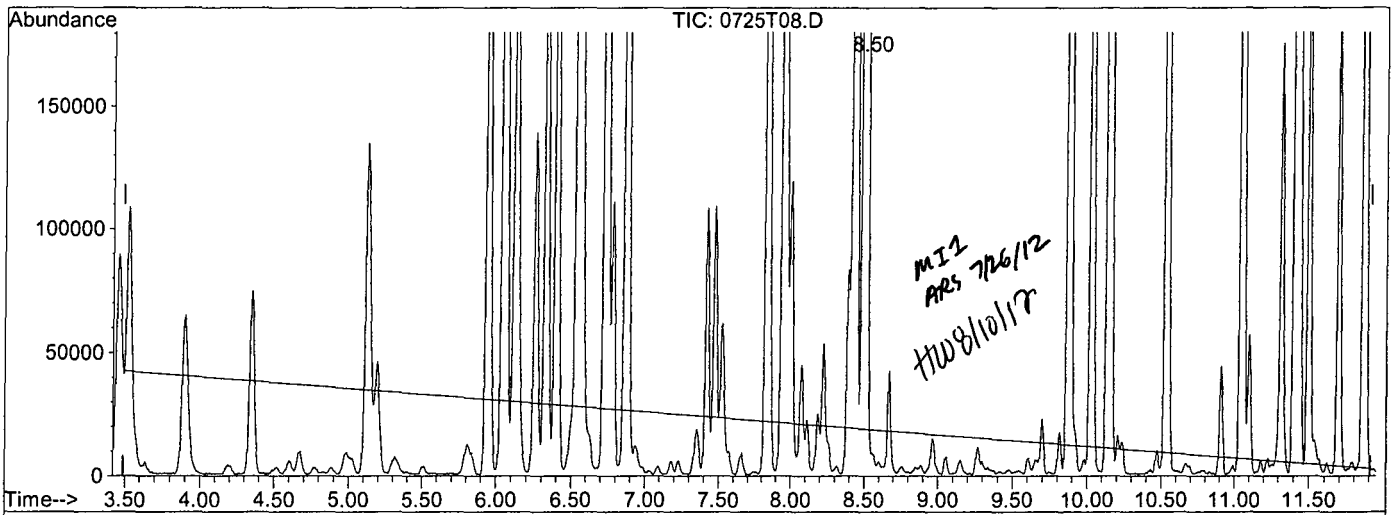
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

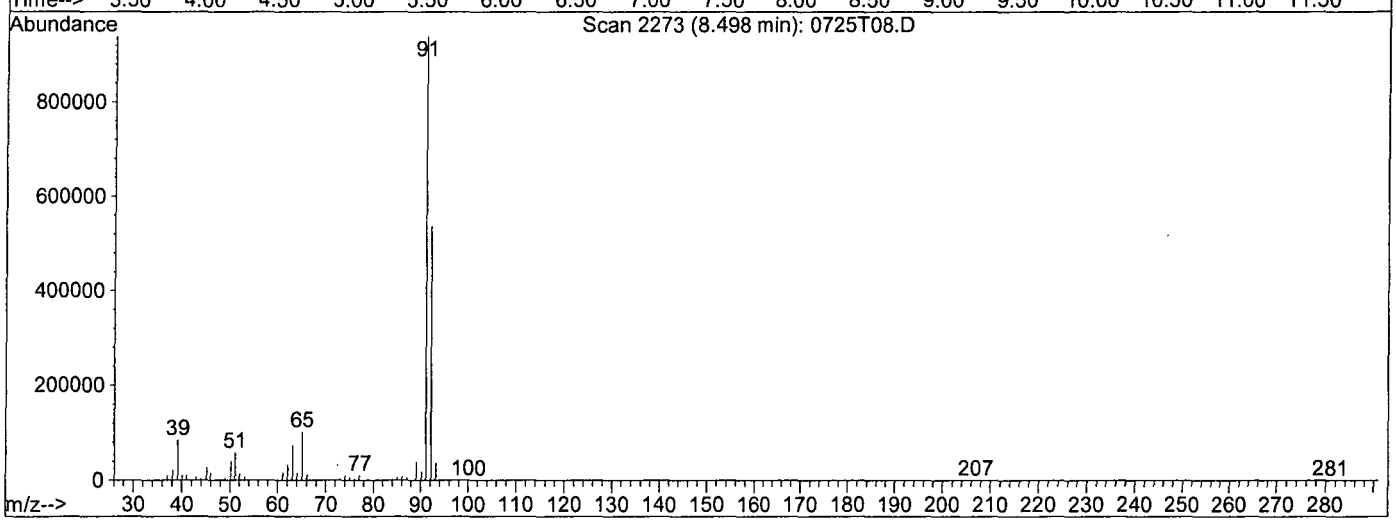


Quantitation Report

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

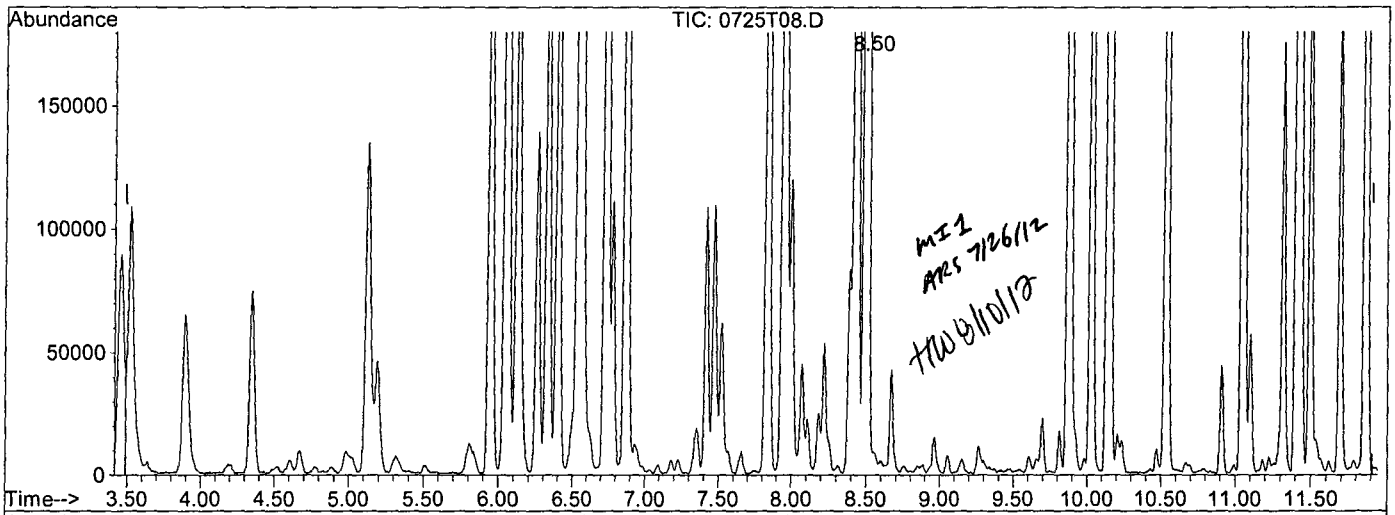
response 26879245

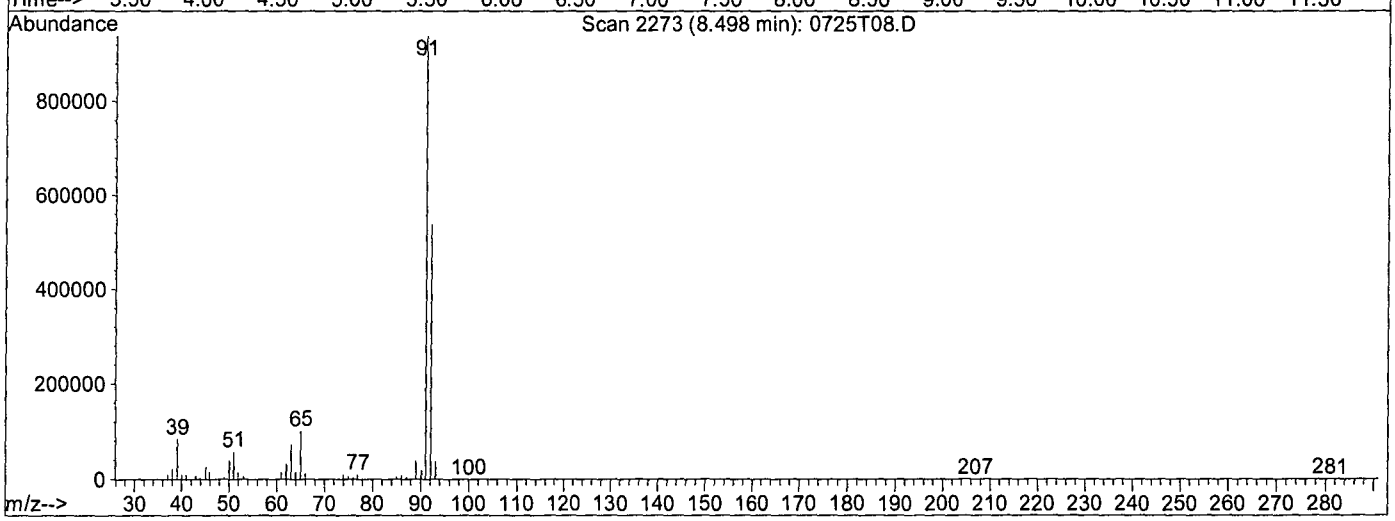
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.50 | 0.36# |
| 0.00 | 1.40 | 1.04# |
| 0.00 | 0.00 | 0.00 |

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

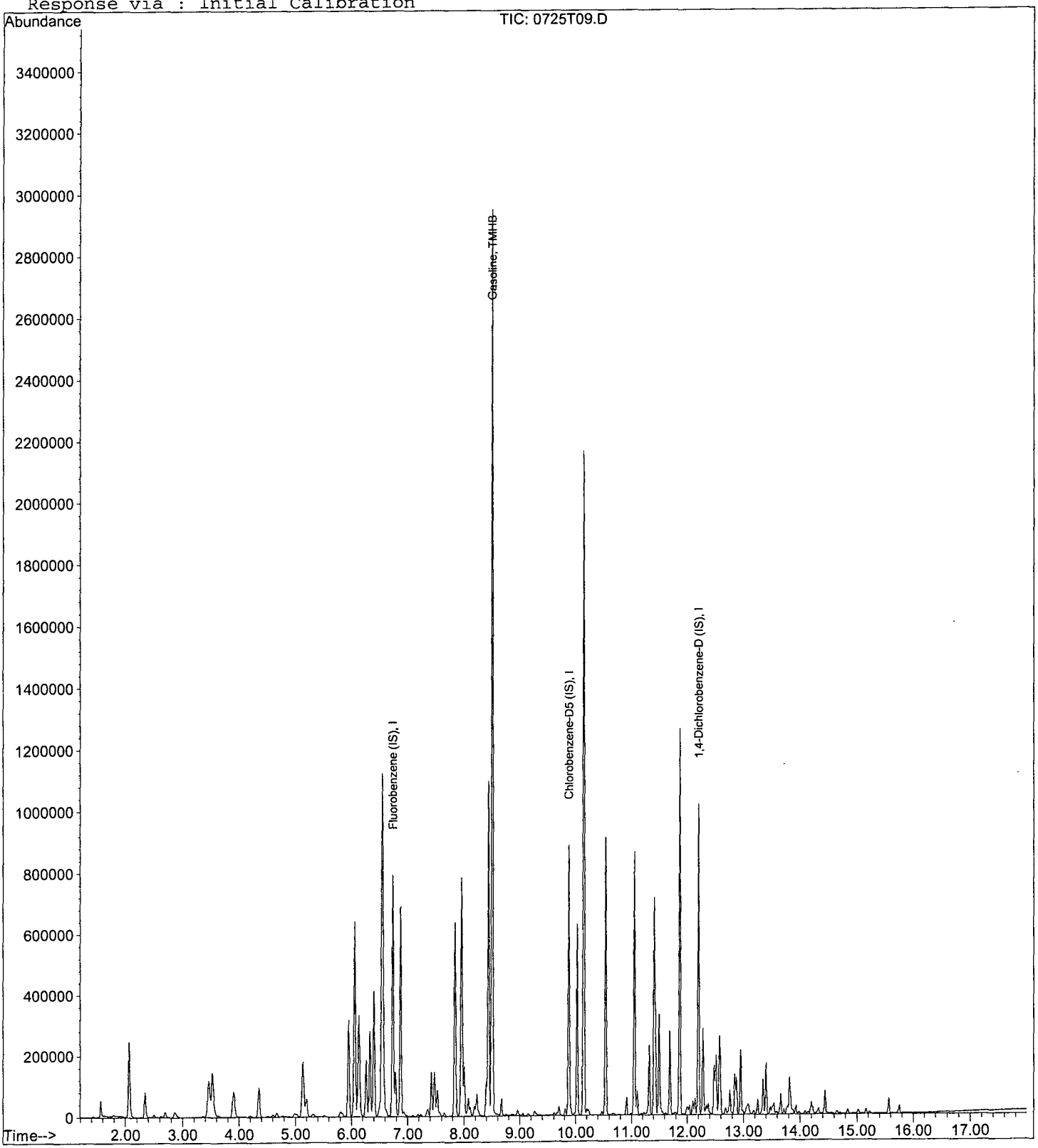
Quantitation Report

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

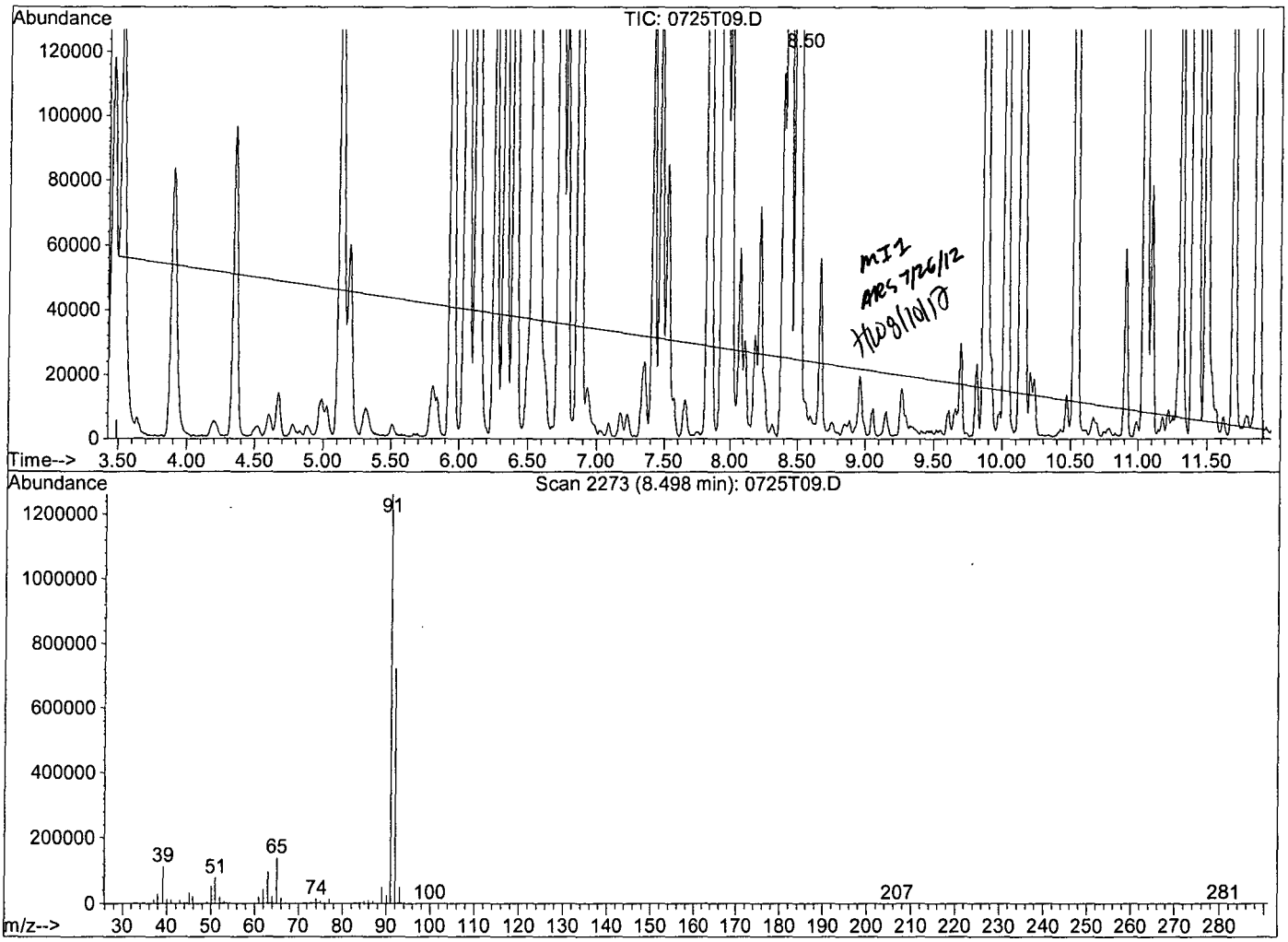
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration



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

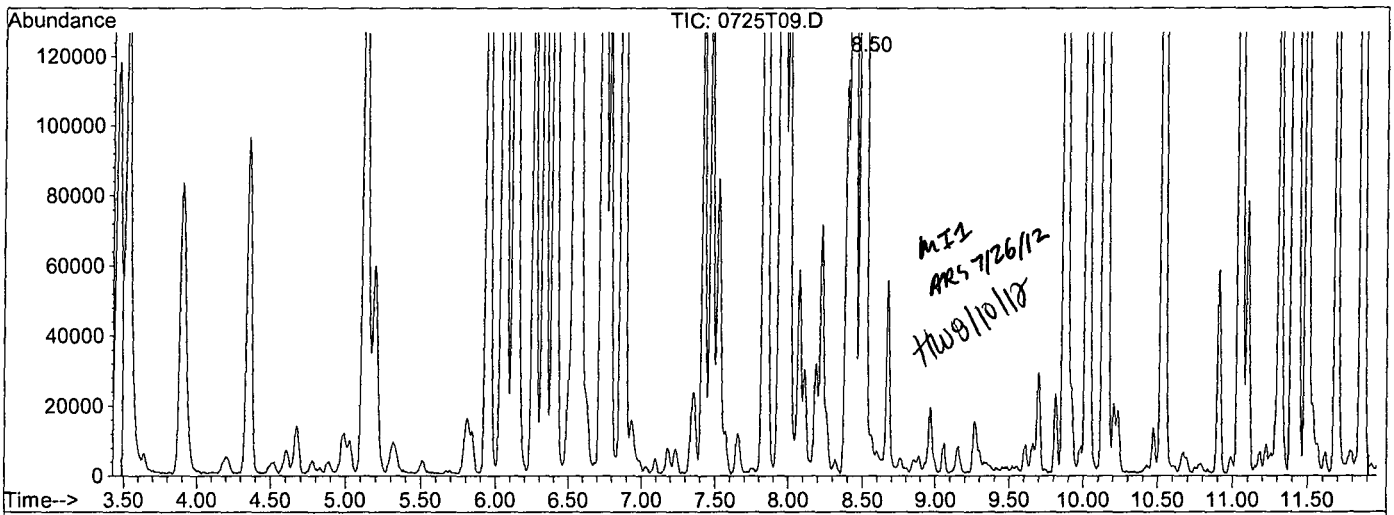
response 33364245

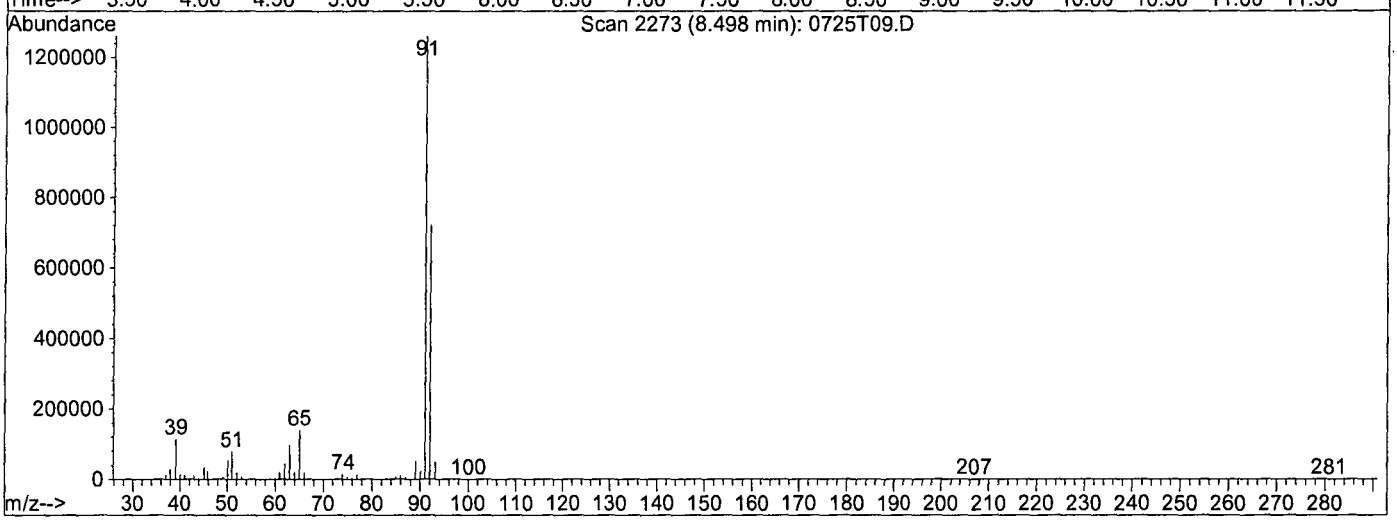
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.50 | 0.30# |
| 0.00 | 1.40 | 0.86# |
| 0.00 | 0.00 | 0.00 |

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

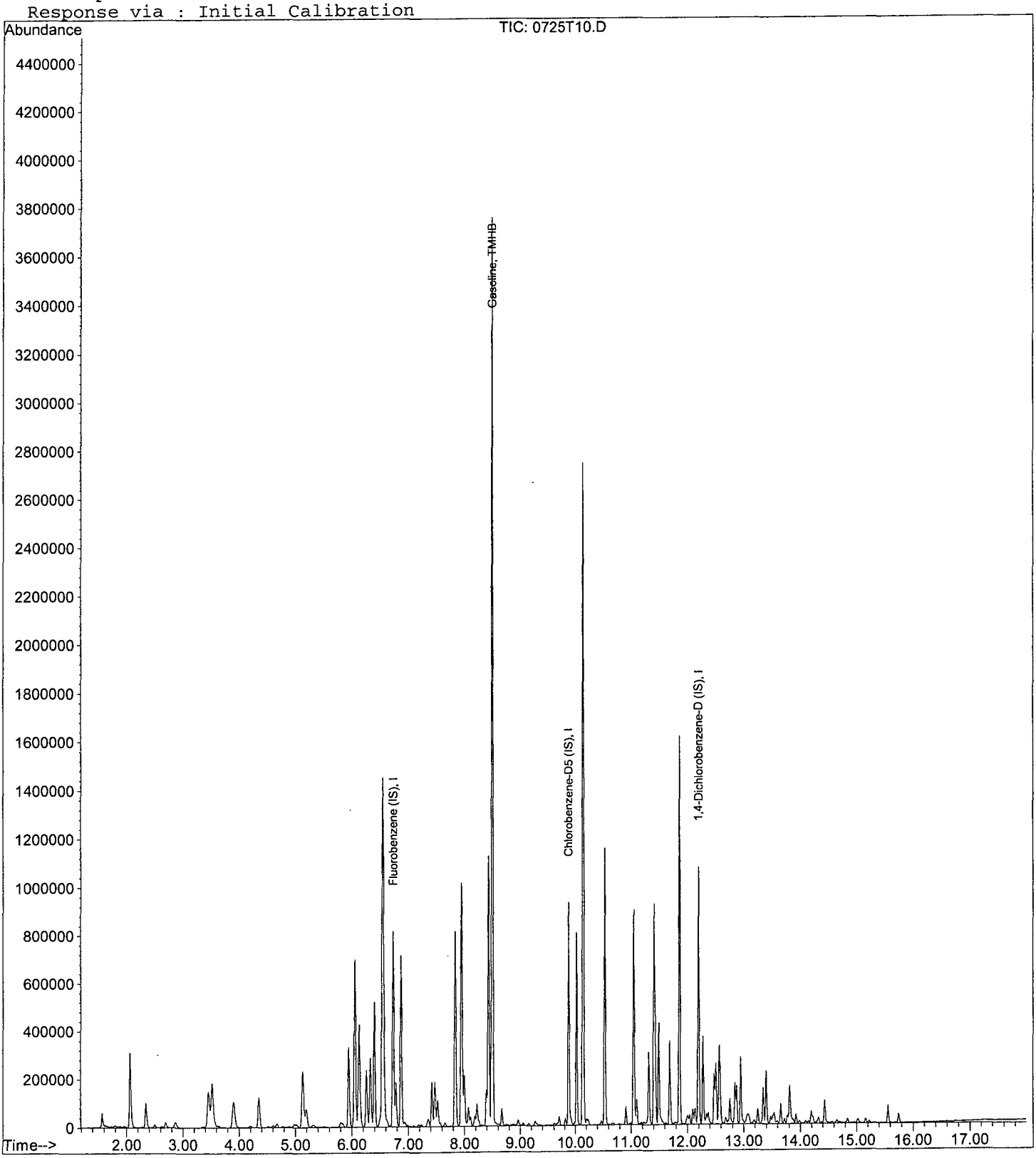
Quantitation Report

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

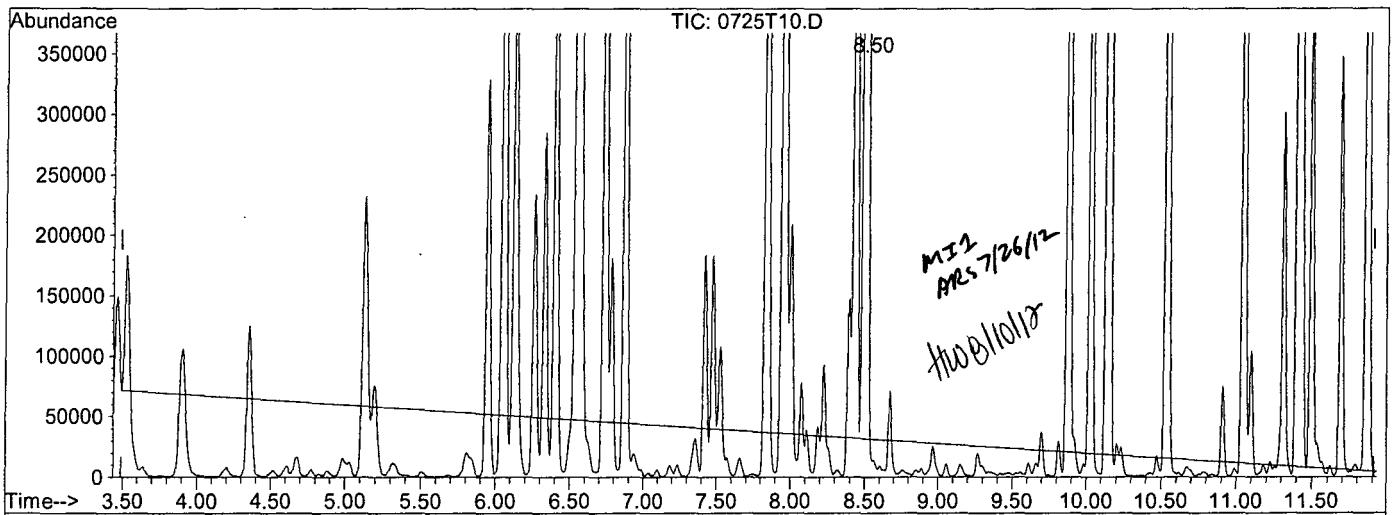
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

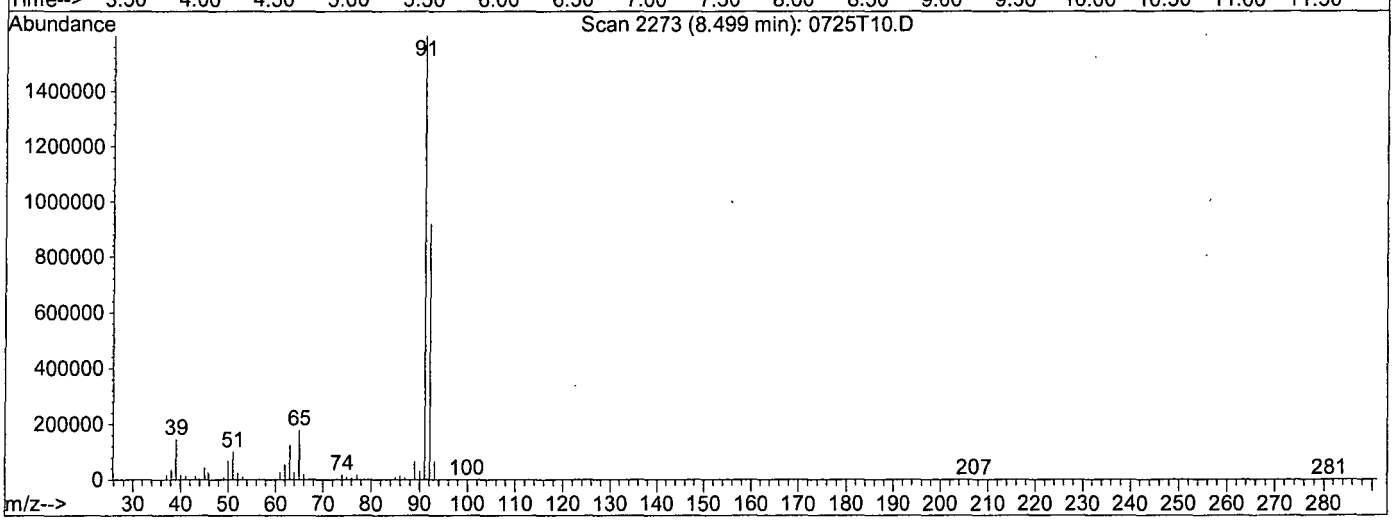


Quantitation Report

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

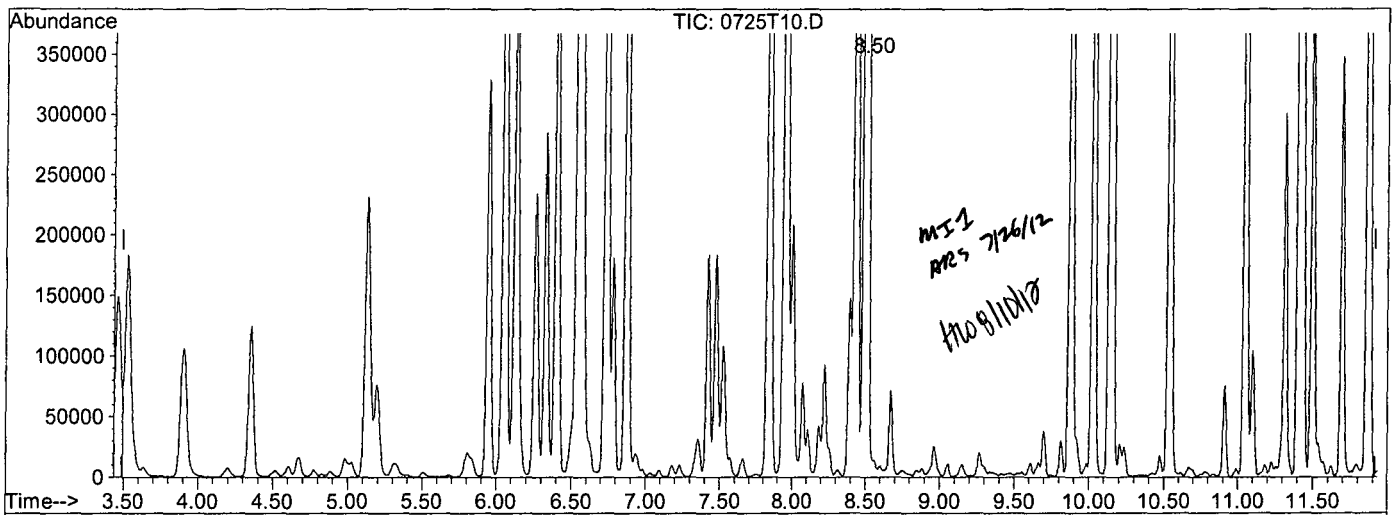
response 41276485

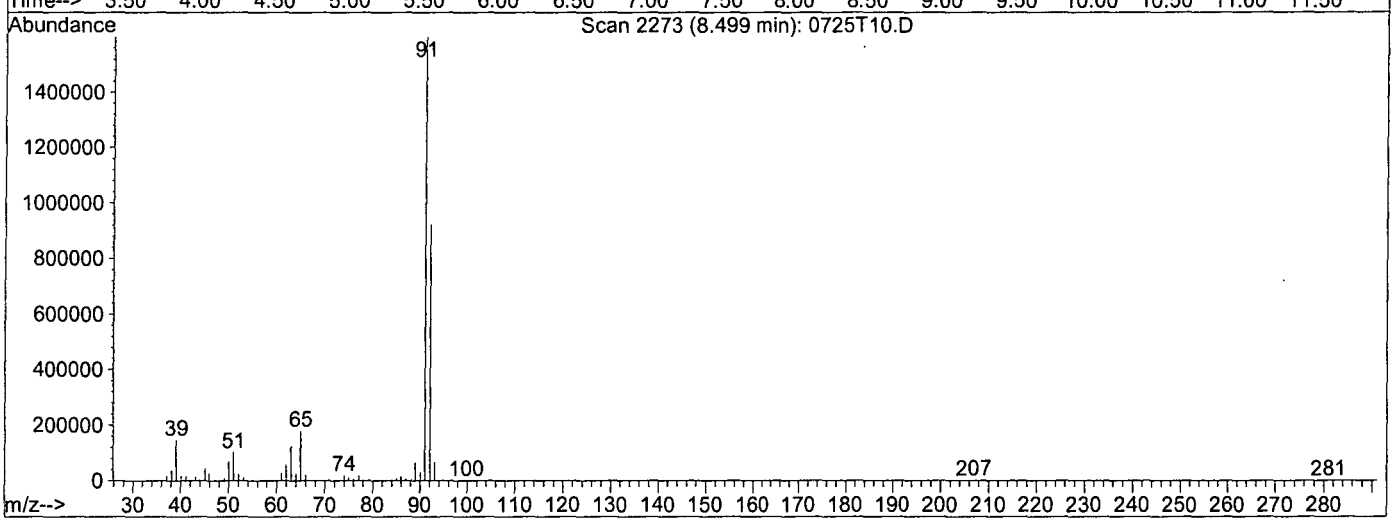
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.50 | 0.25# |
| 0.00 | 1.40 | 0.73# |
| 0.00 | 0.00 | 0.00 |

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



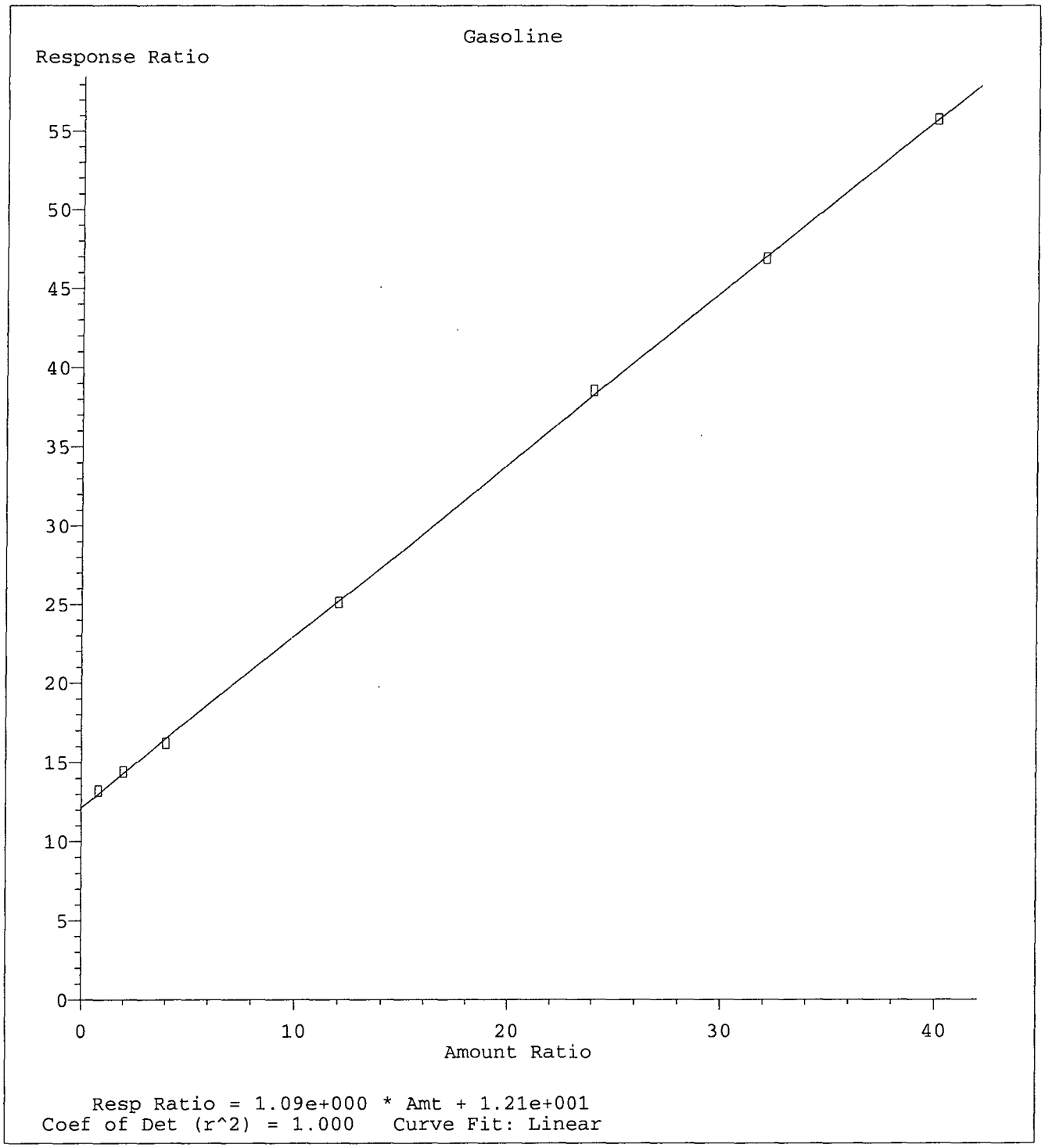

TIC: 0725T10.D

(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 | | | | | | | |
| 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 | | | 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

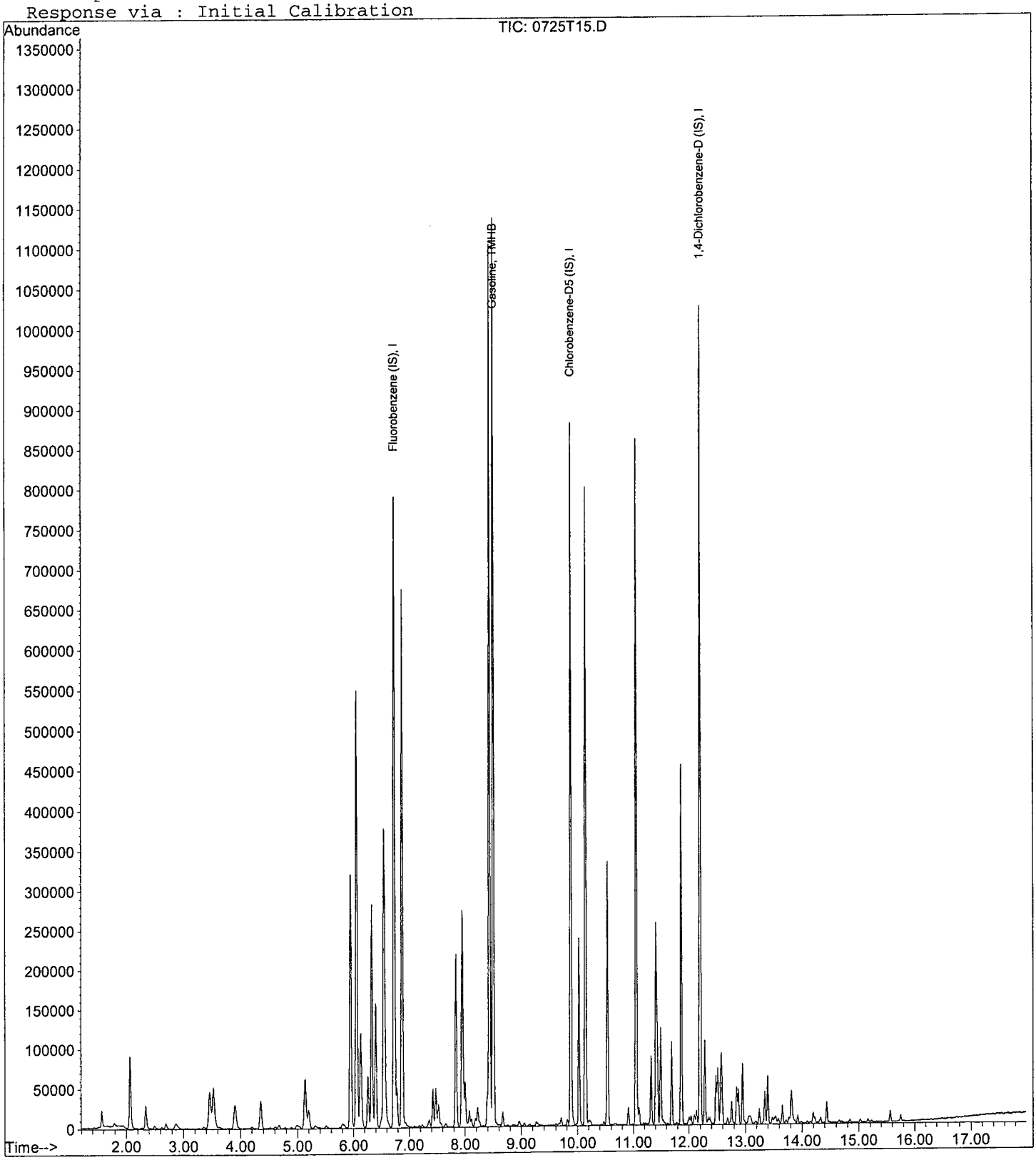
Quantitation Report

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

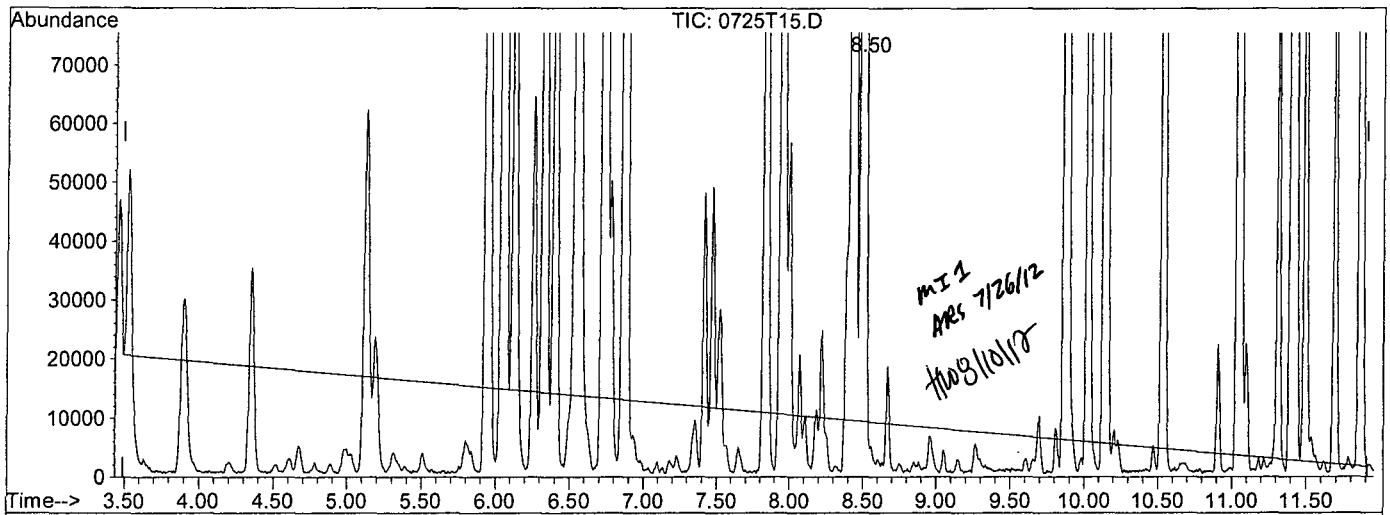
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

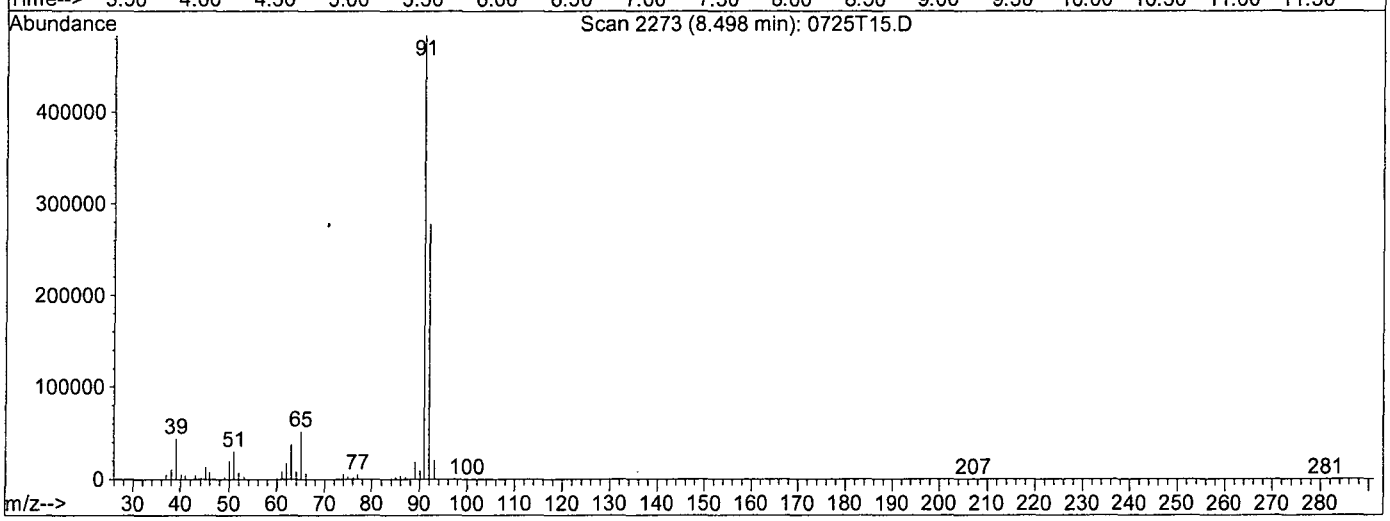


Quantitation Report

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

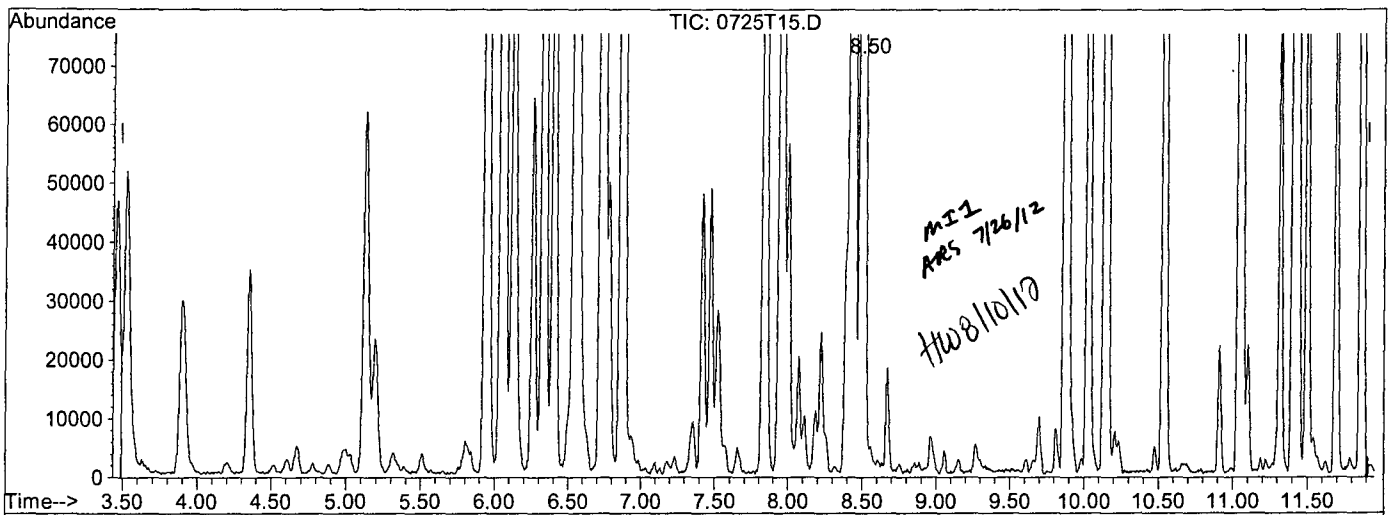
response 17002901

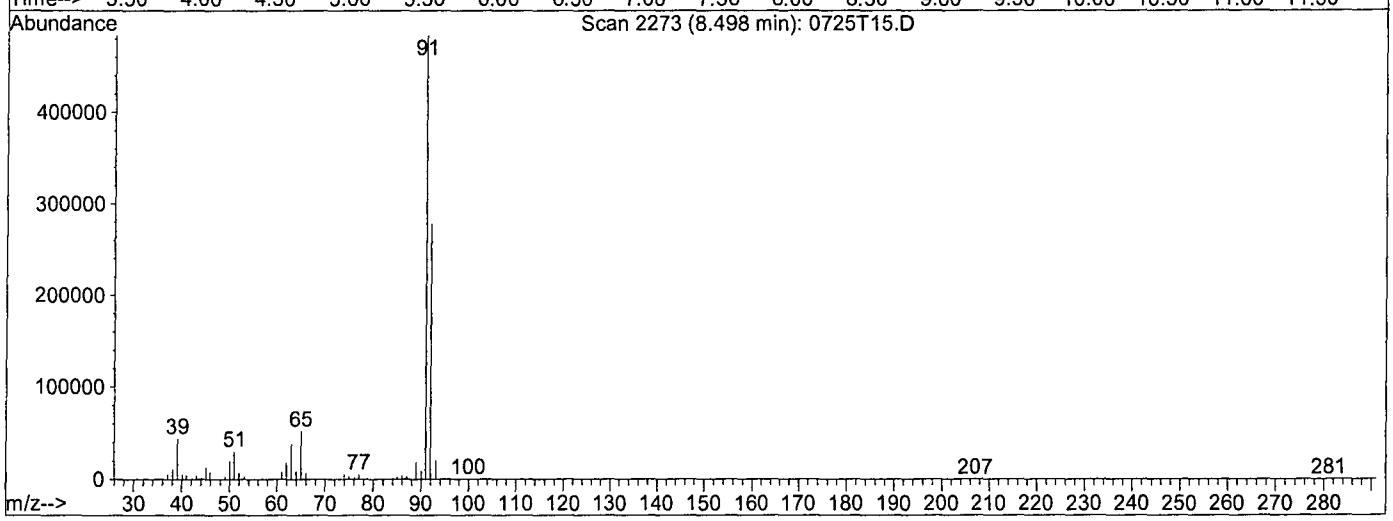
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.00 | 0.58# |
| 0.00 | 0.00 | 1.69# |
| 0.00 | 0.00 | 0.00 |

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 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |
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| 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

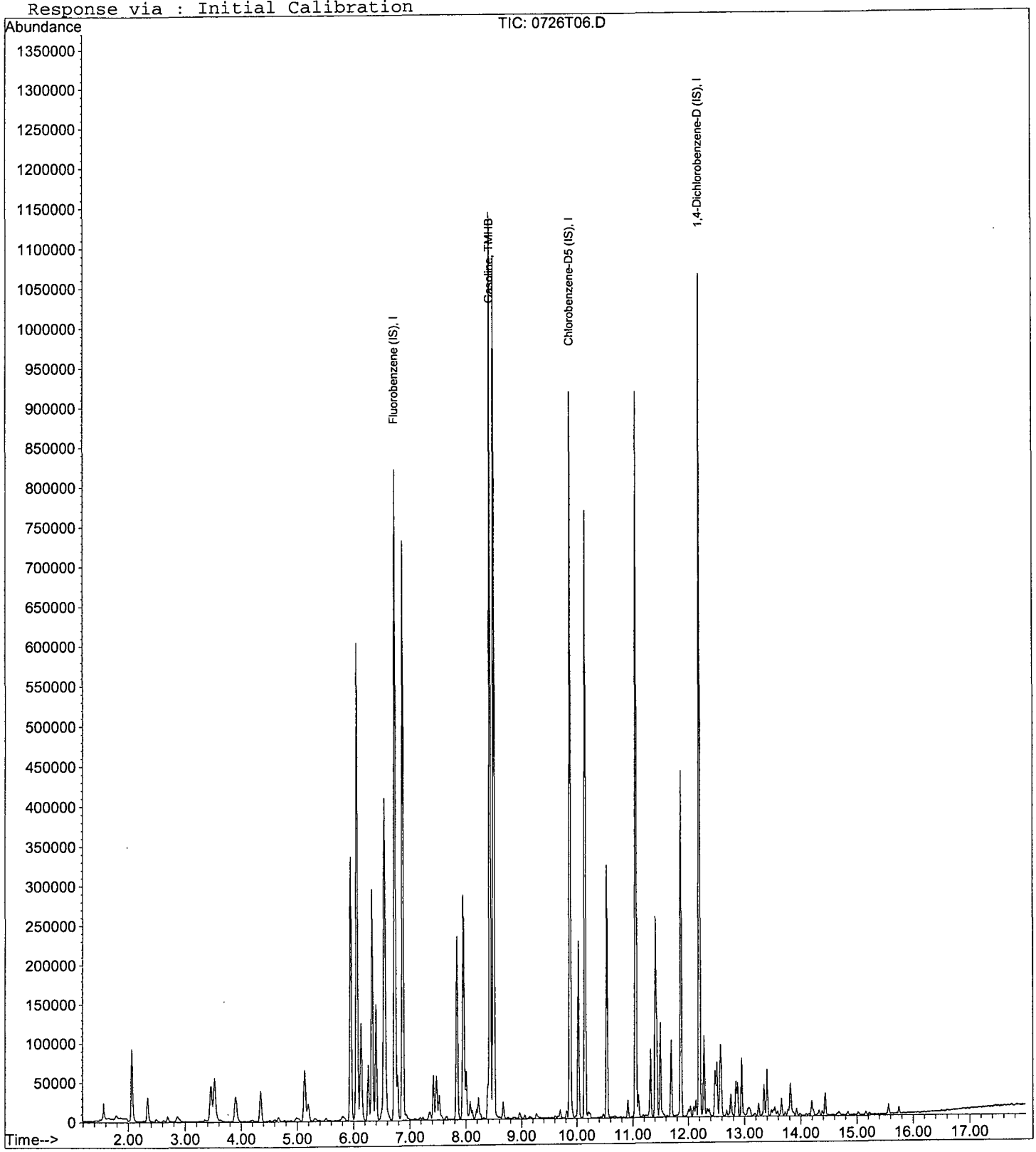
Quantitation Report

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

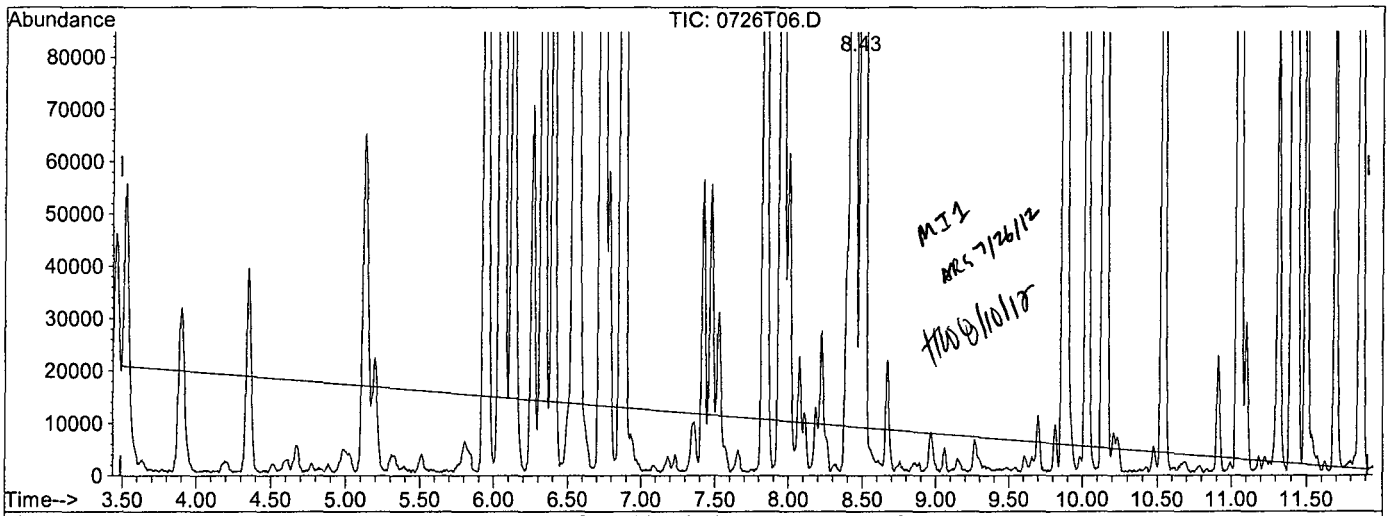
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

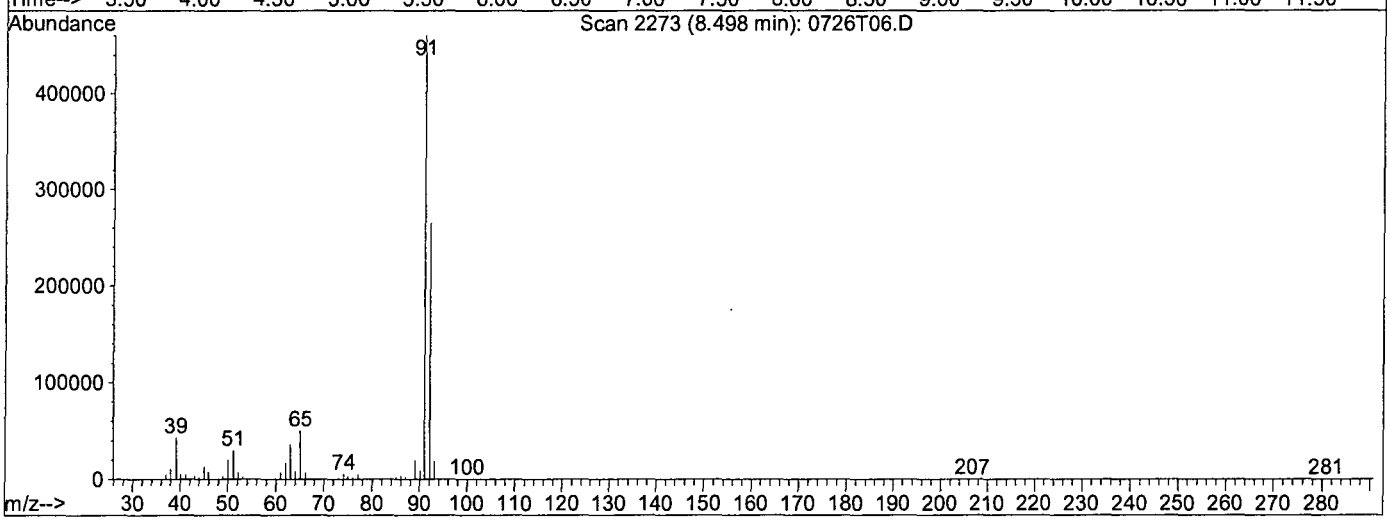


Quantitation Report

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

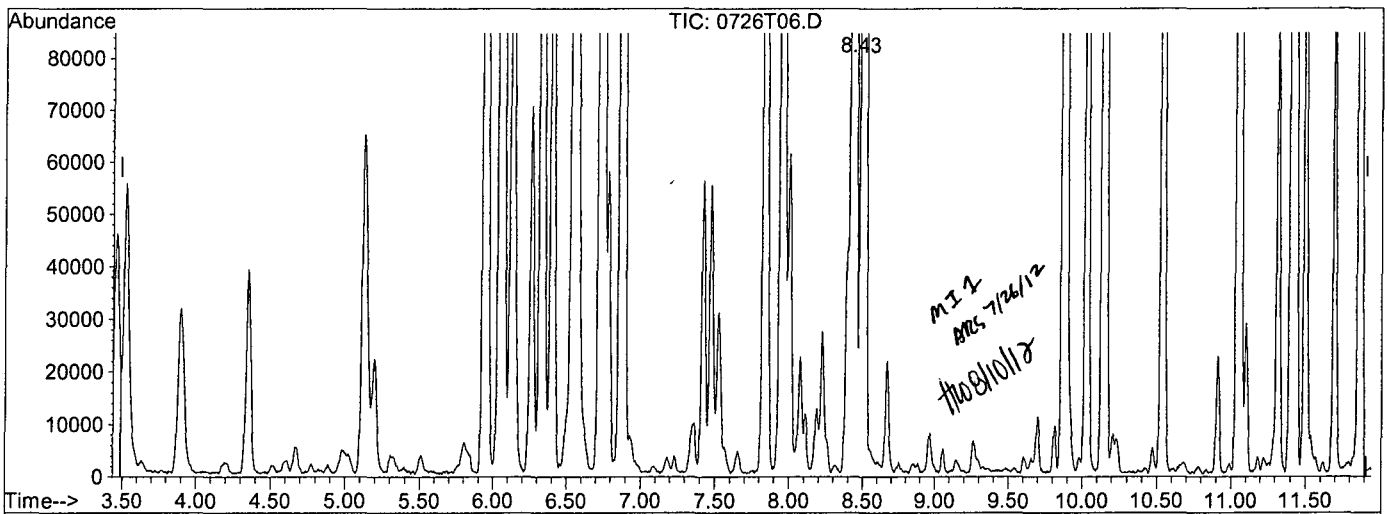
response 17507801

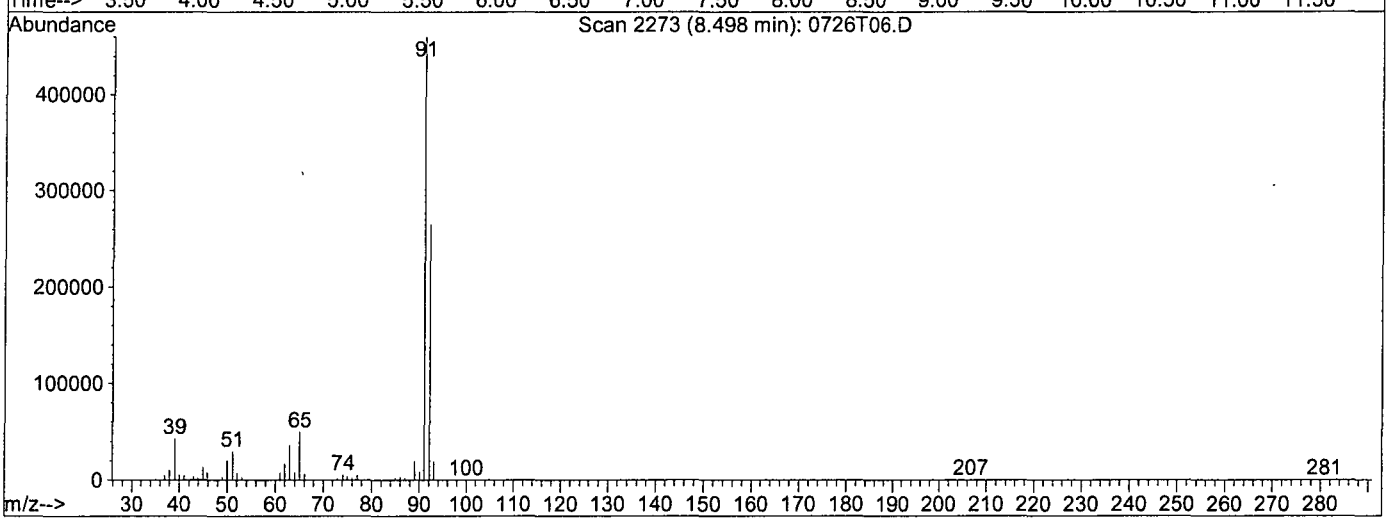
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.00 | 0.58# |
| 0.00 | 0.00 | 1.72# |
| 0.00 | 0.00 | 0.00 |

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

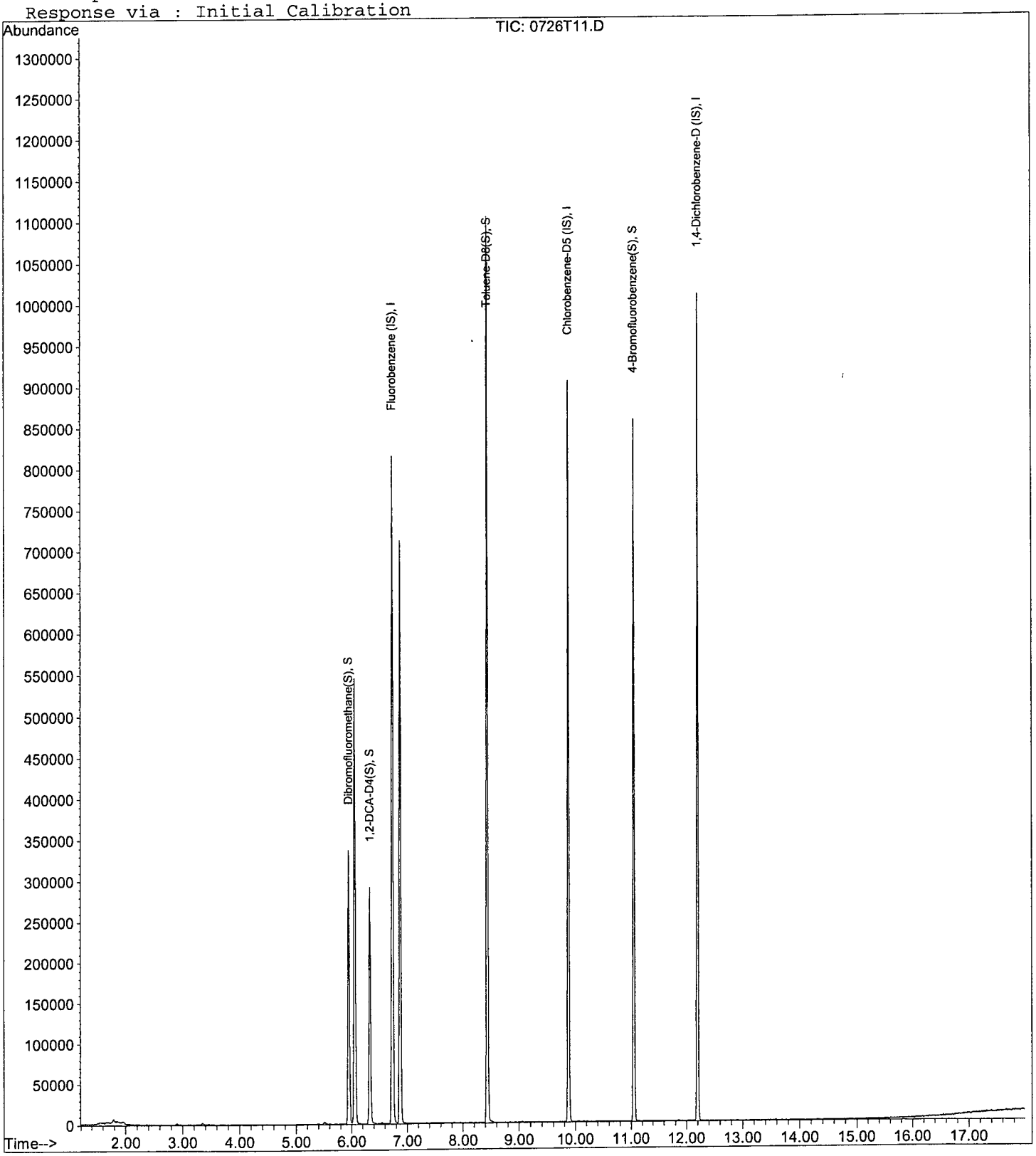
Quantitation Report

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

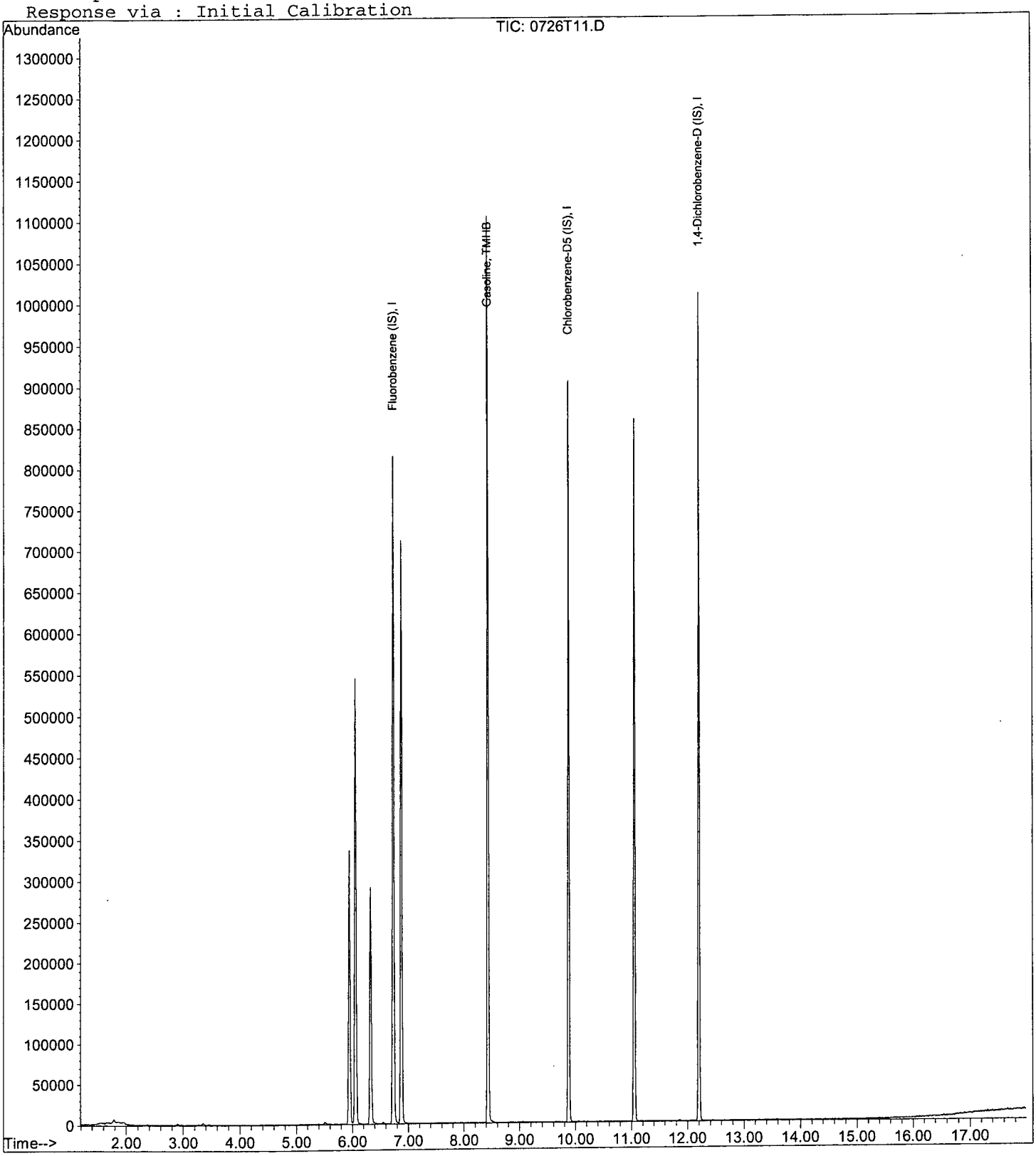
Quantitation Report

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

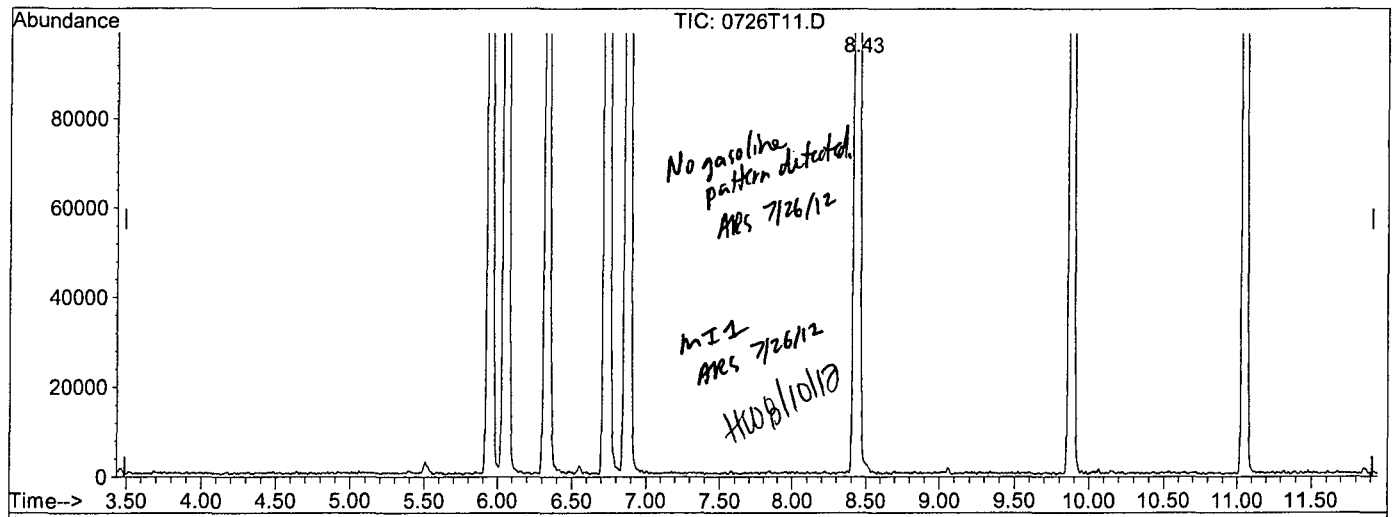
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

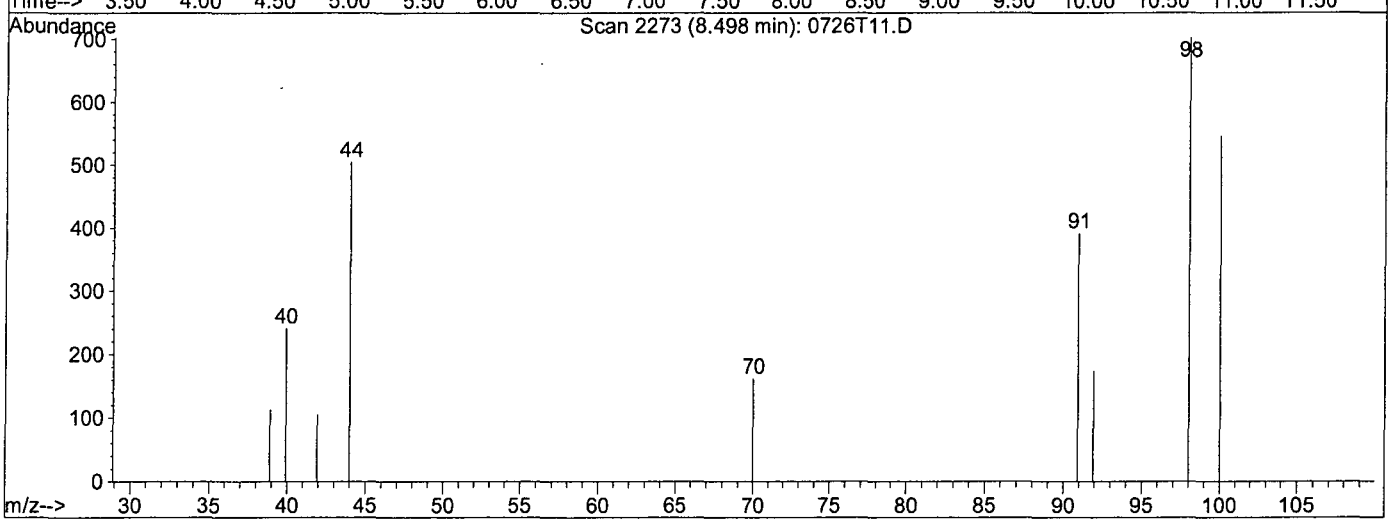


Quantitation Report

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

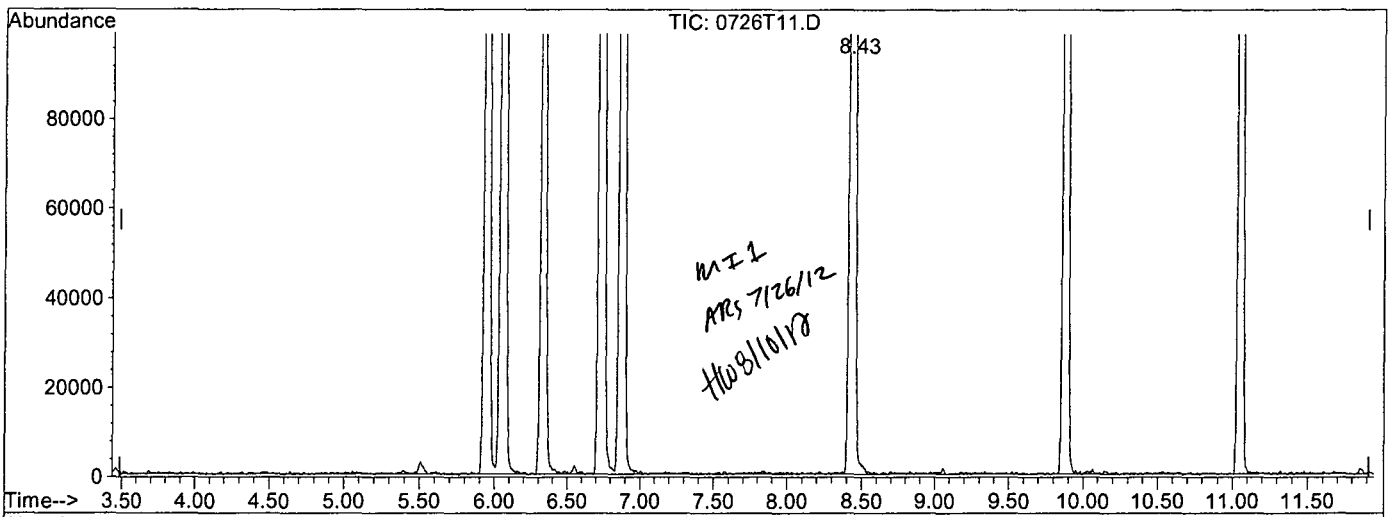
response 9968031

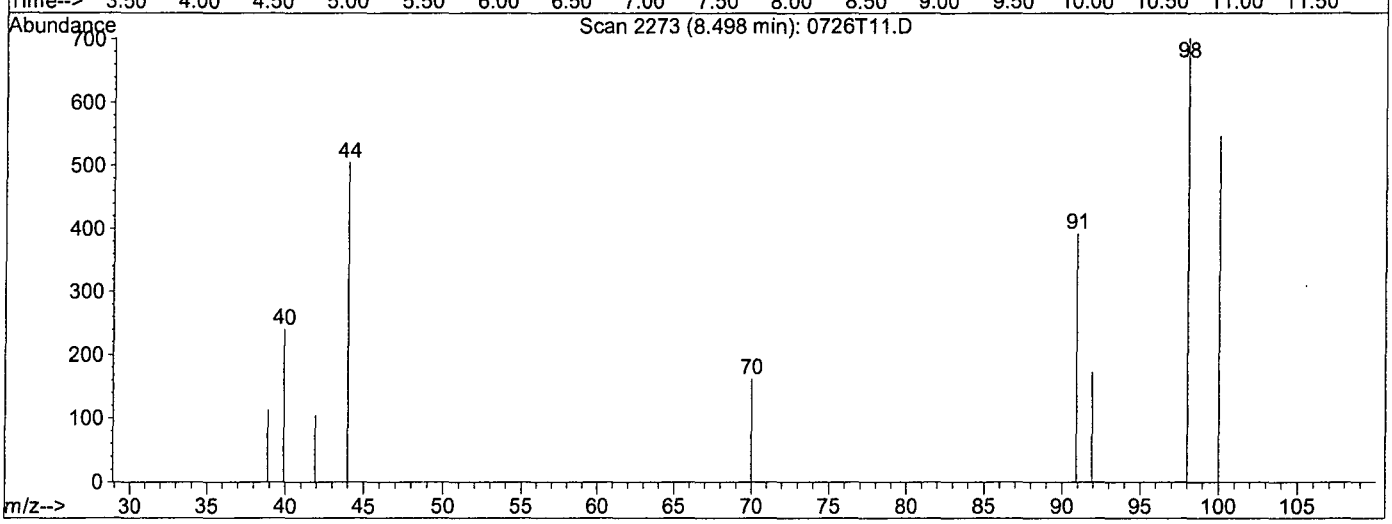
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.00 | 0.99# |
| 0.00 | 0.00 | 2.83# |
| 0.00 | 0.00 | 0.00 |

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

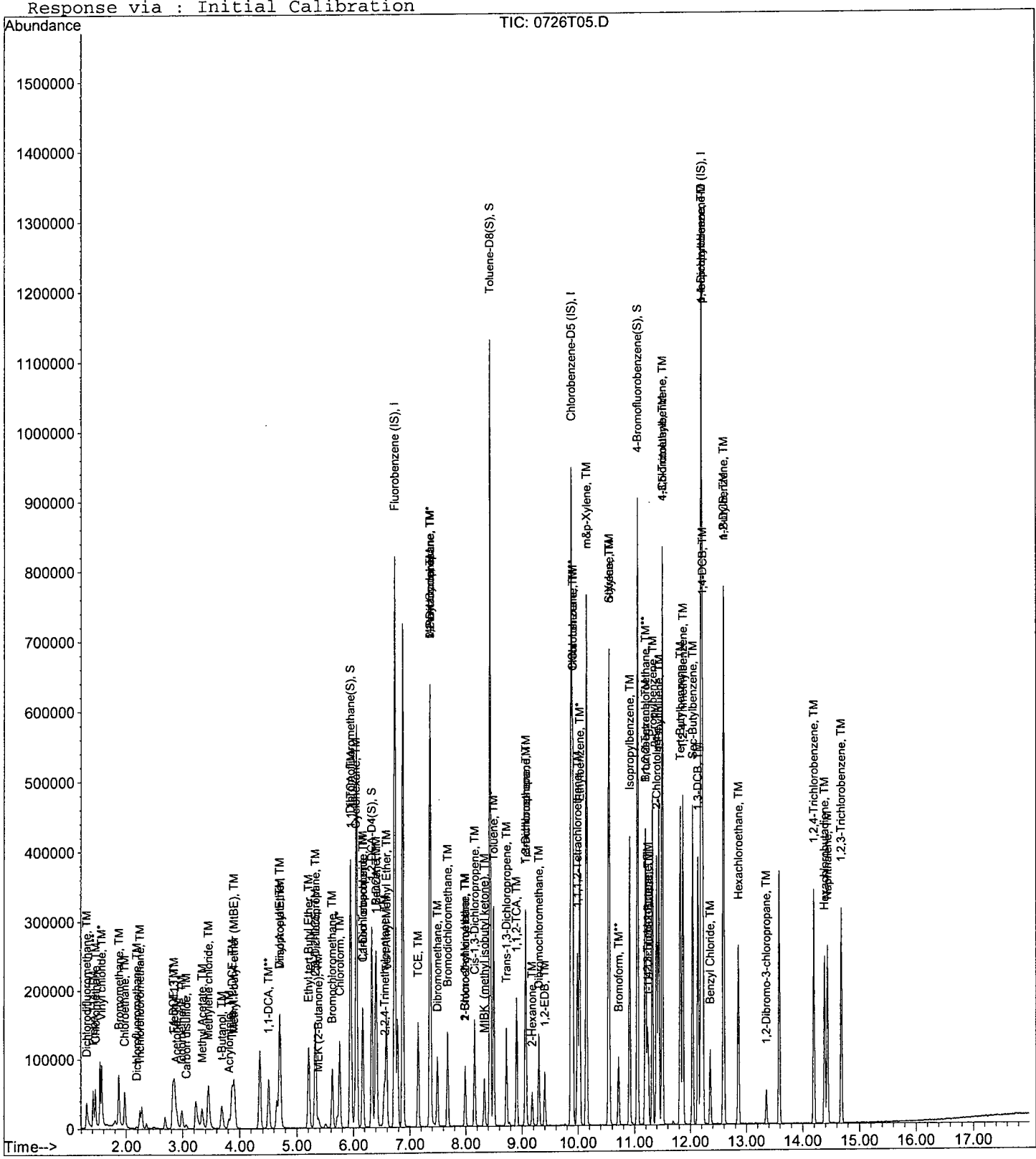
(#) = qualifier out of range (m) = manual integration

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

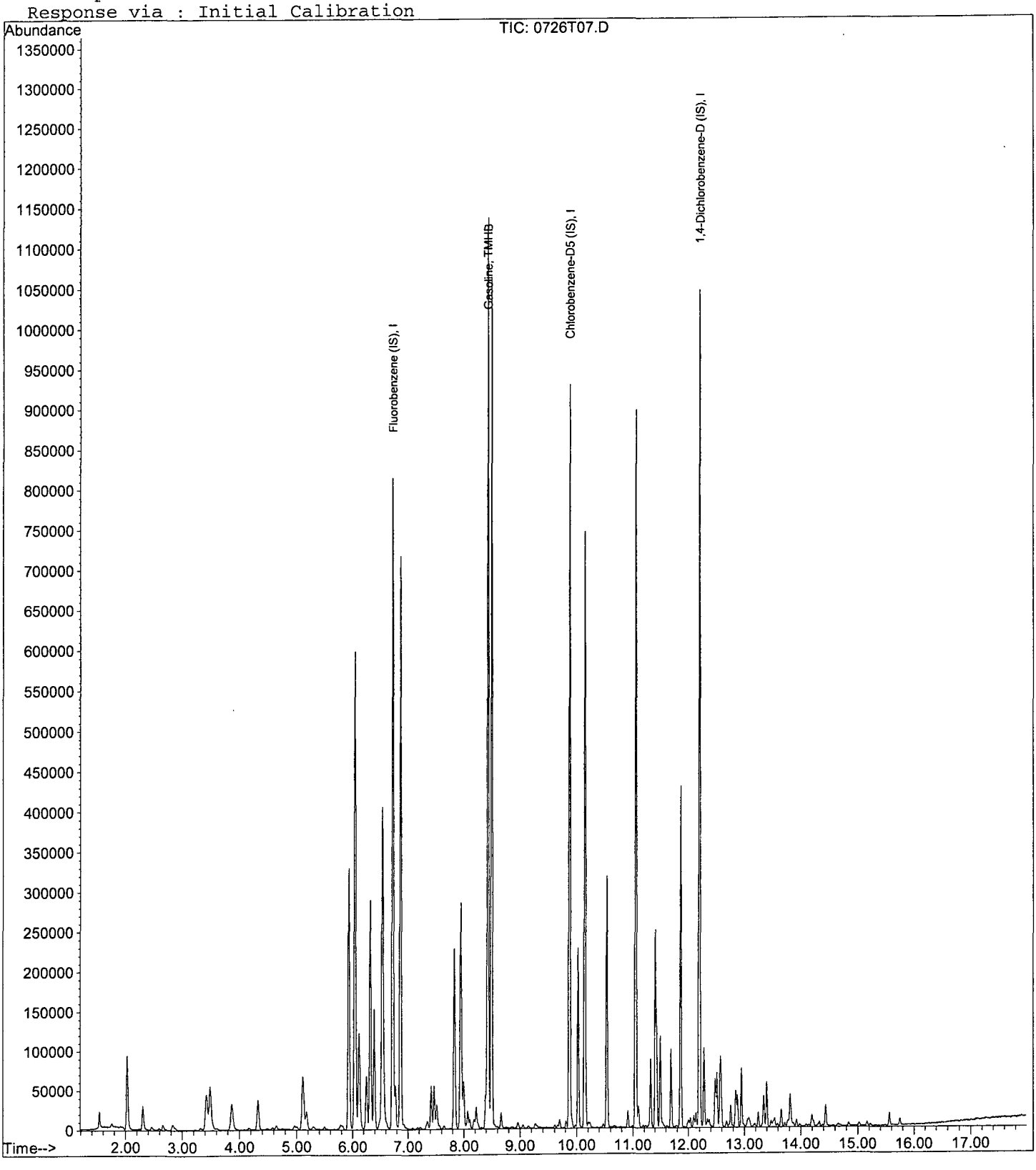
Quantitation Report

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

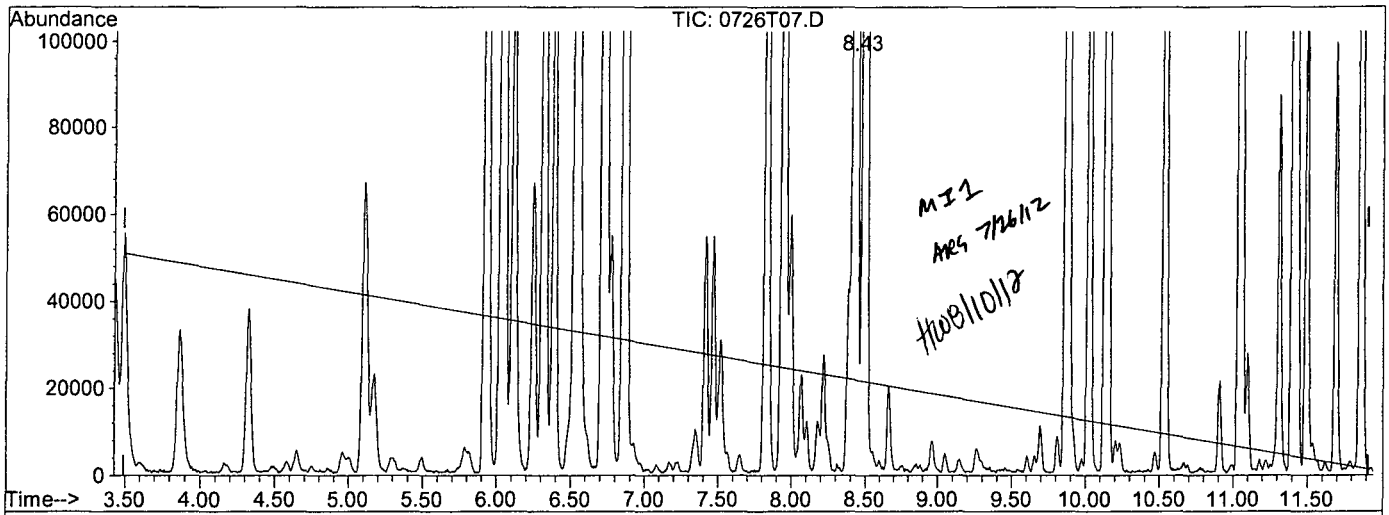
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

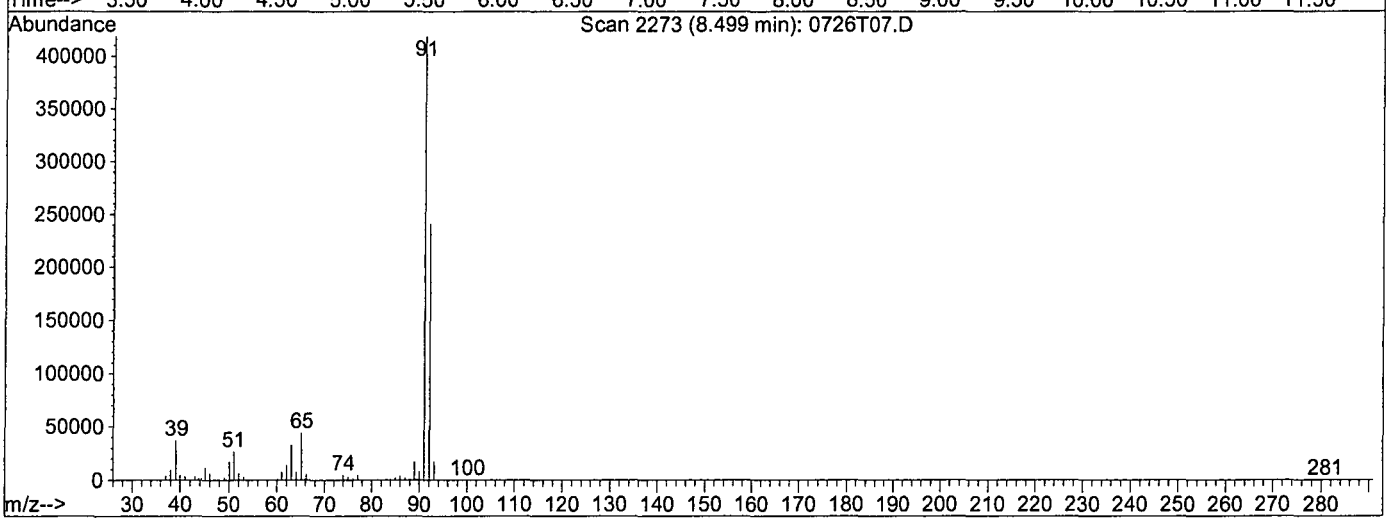


Quantitation Report

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

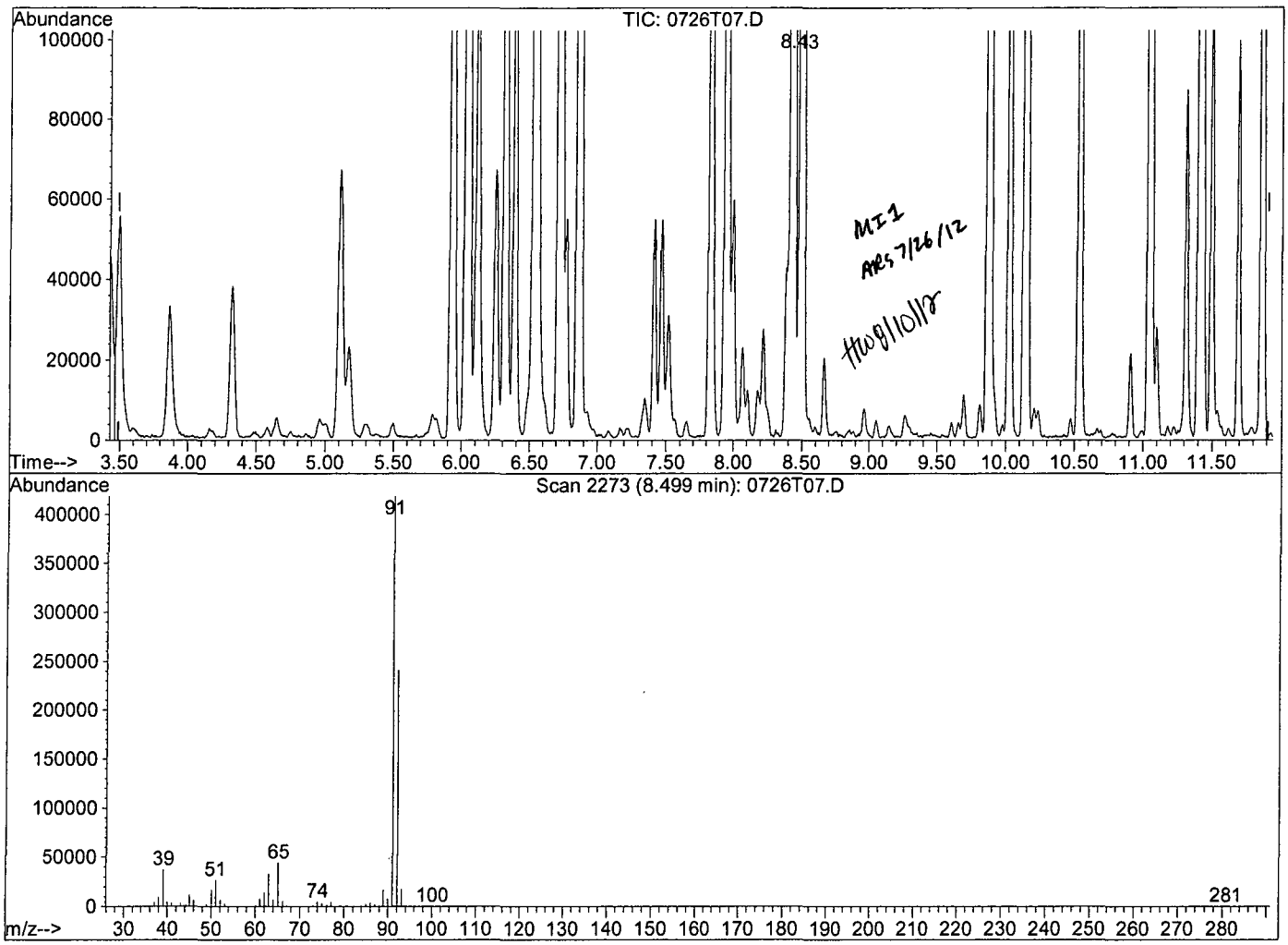
response 17313500

| 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

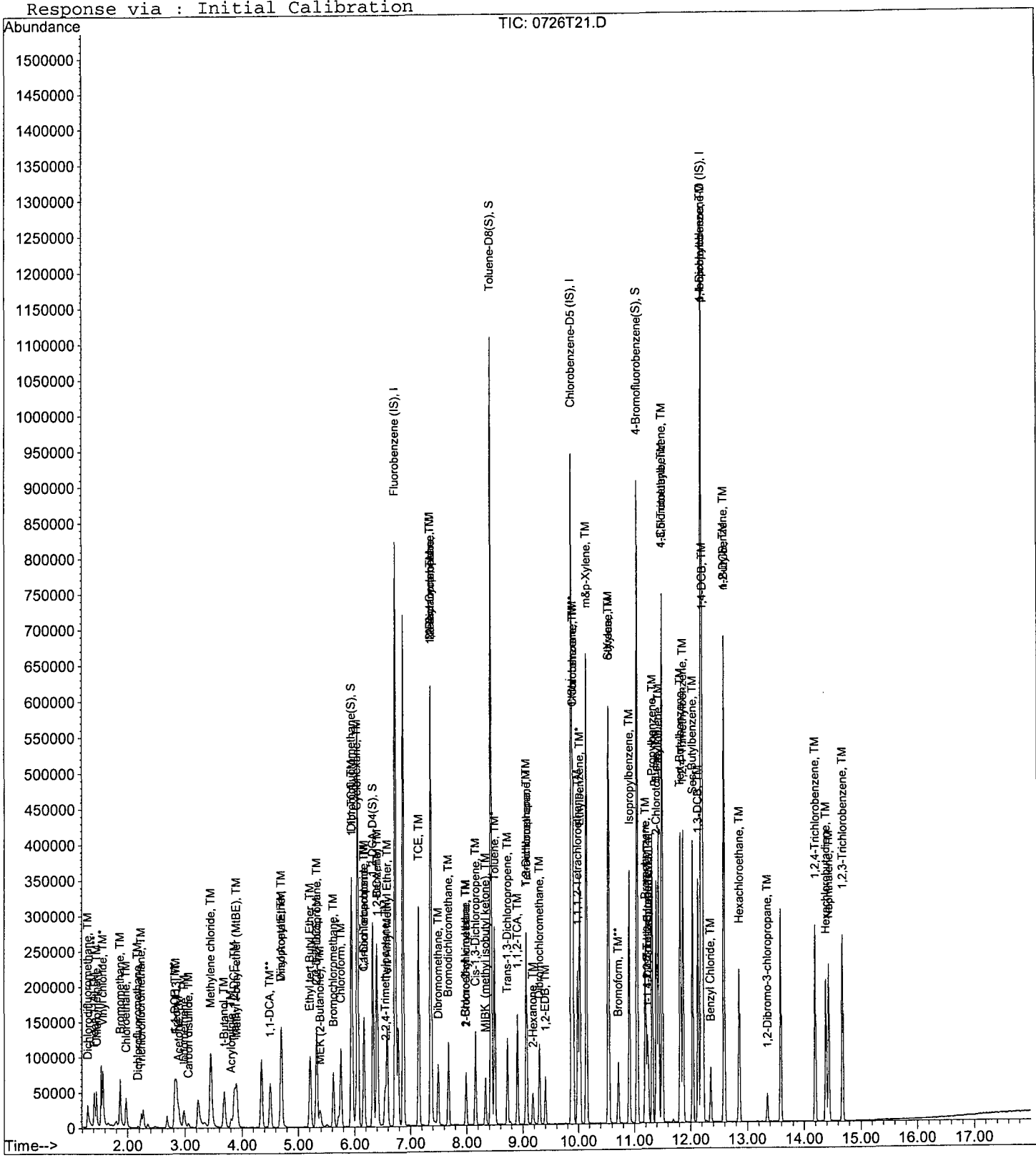
Quantitation Report

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

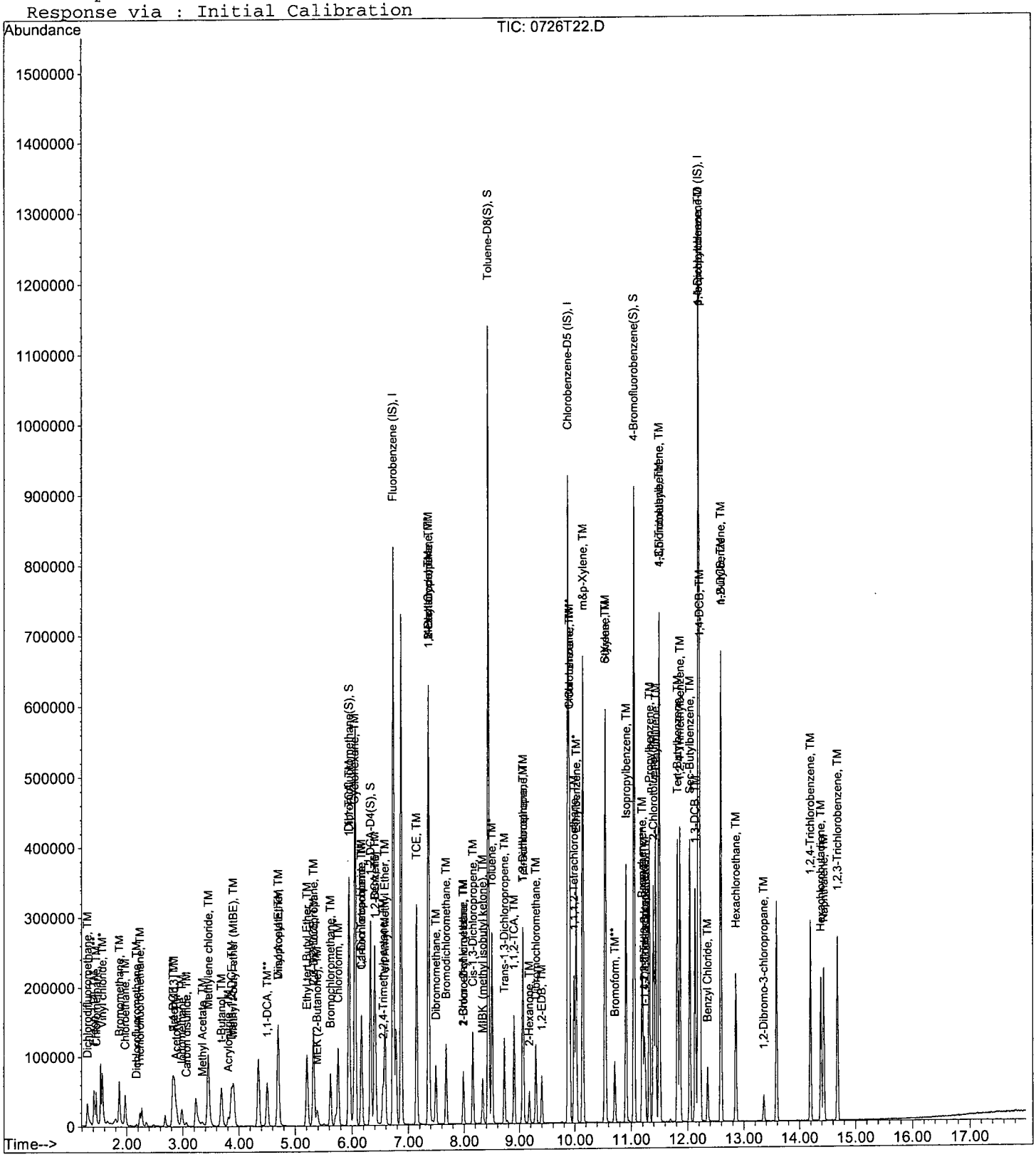
Quantitation Report

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

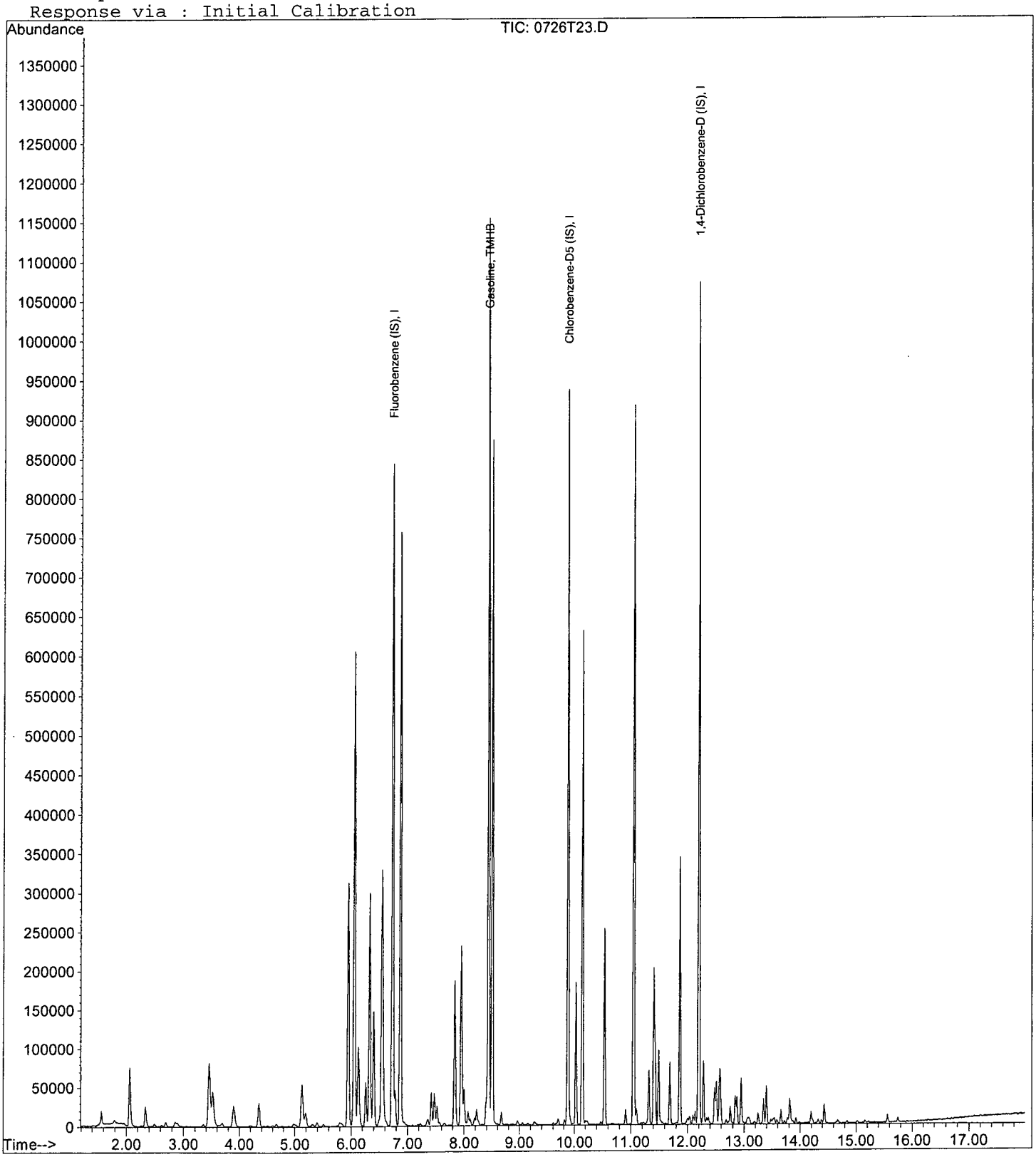
Quantitation Report

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

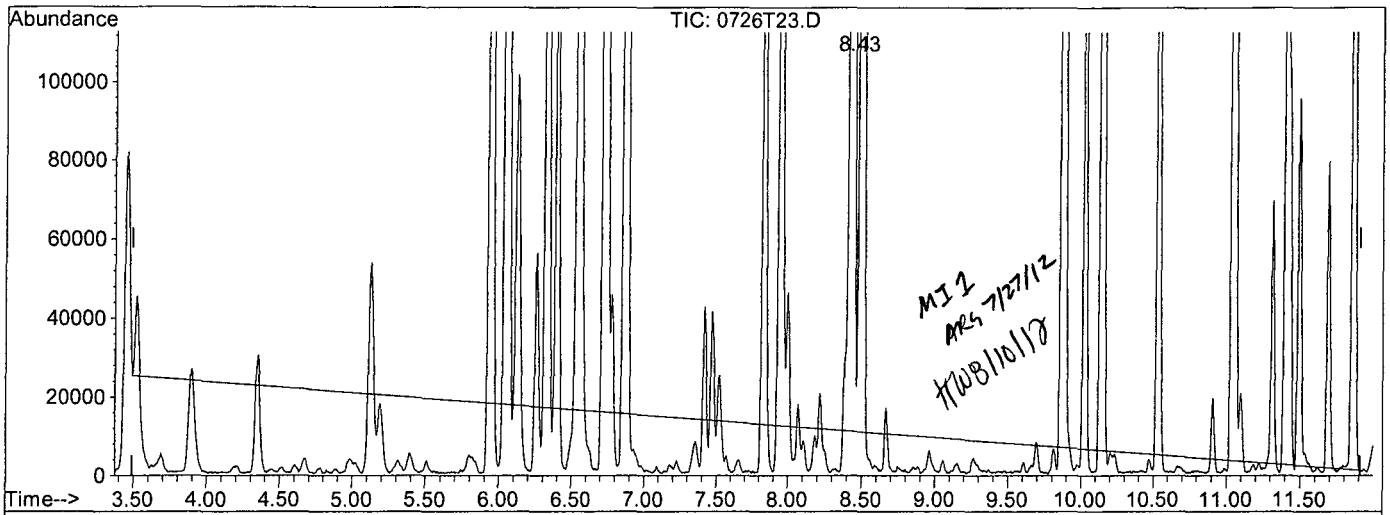
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

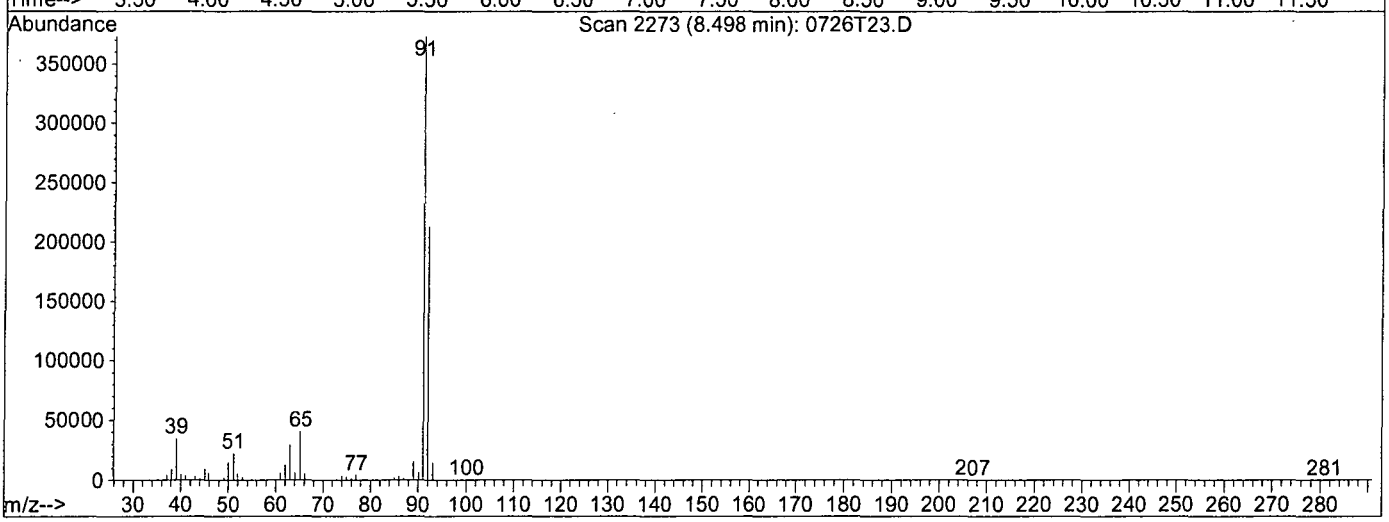


Quantitation Report

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

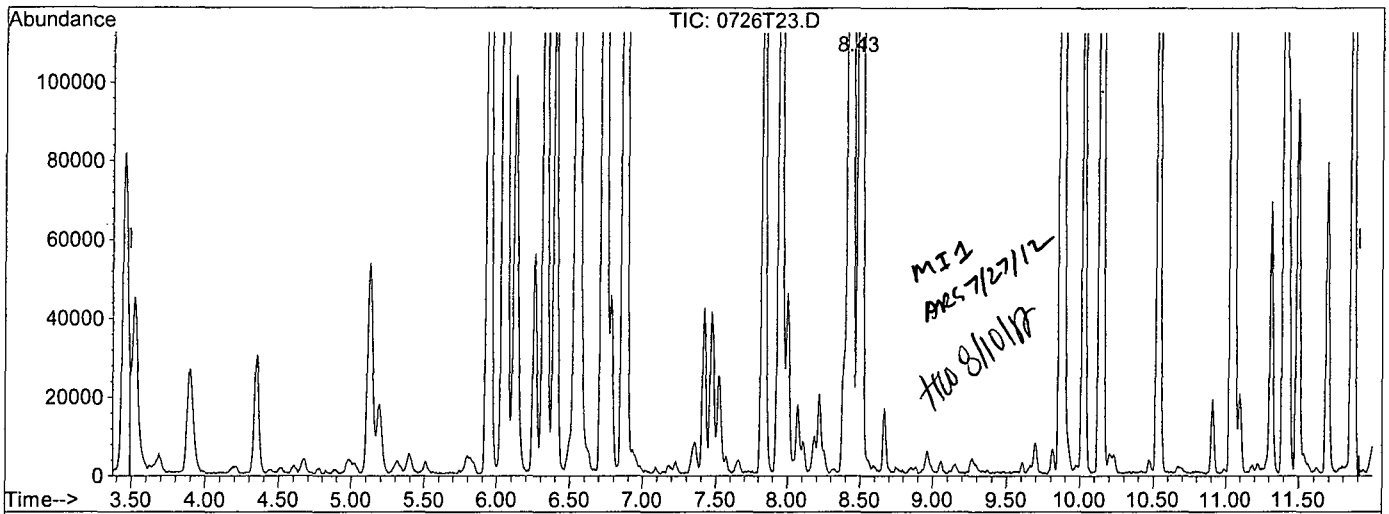
response 15481648

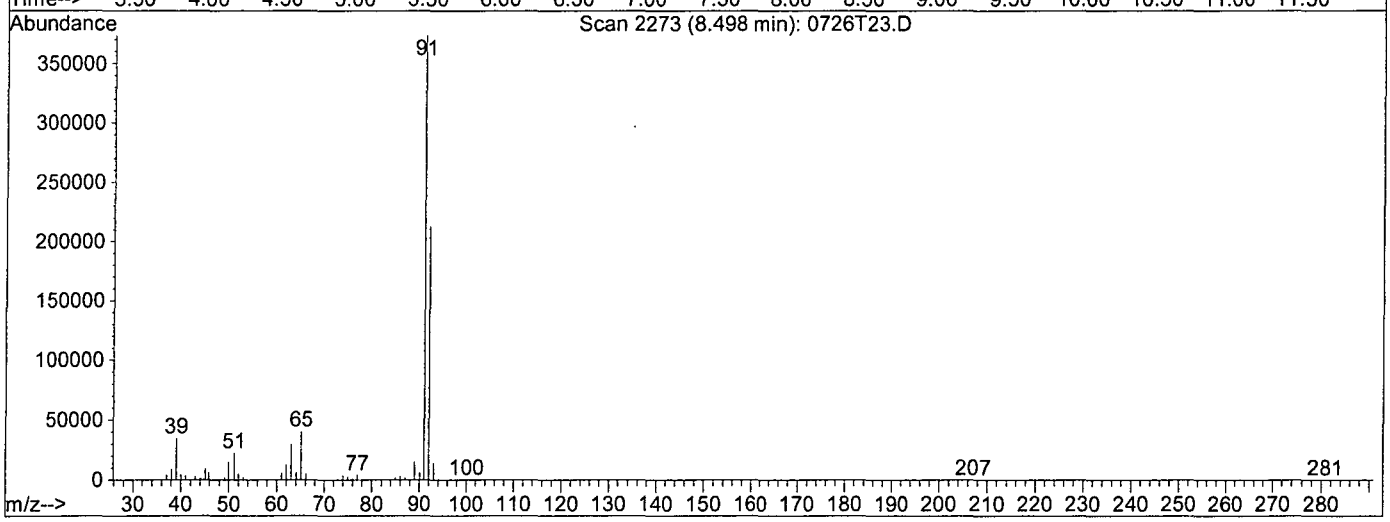
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.00 | 0.68# |
| 0.00 | 0.00 | 1.93# |
| 0.00 | 0.00 | 0.00 |

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 |

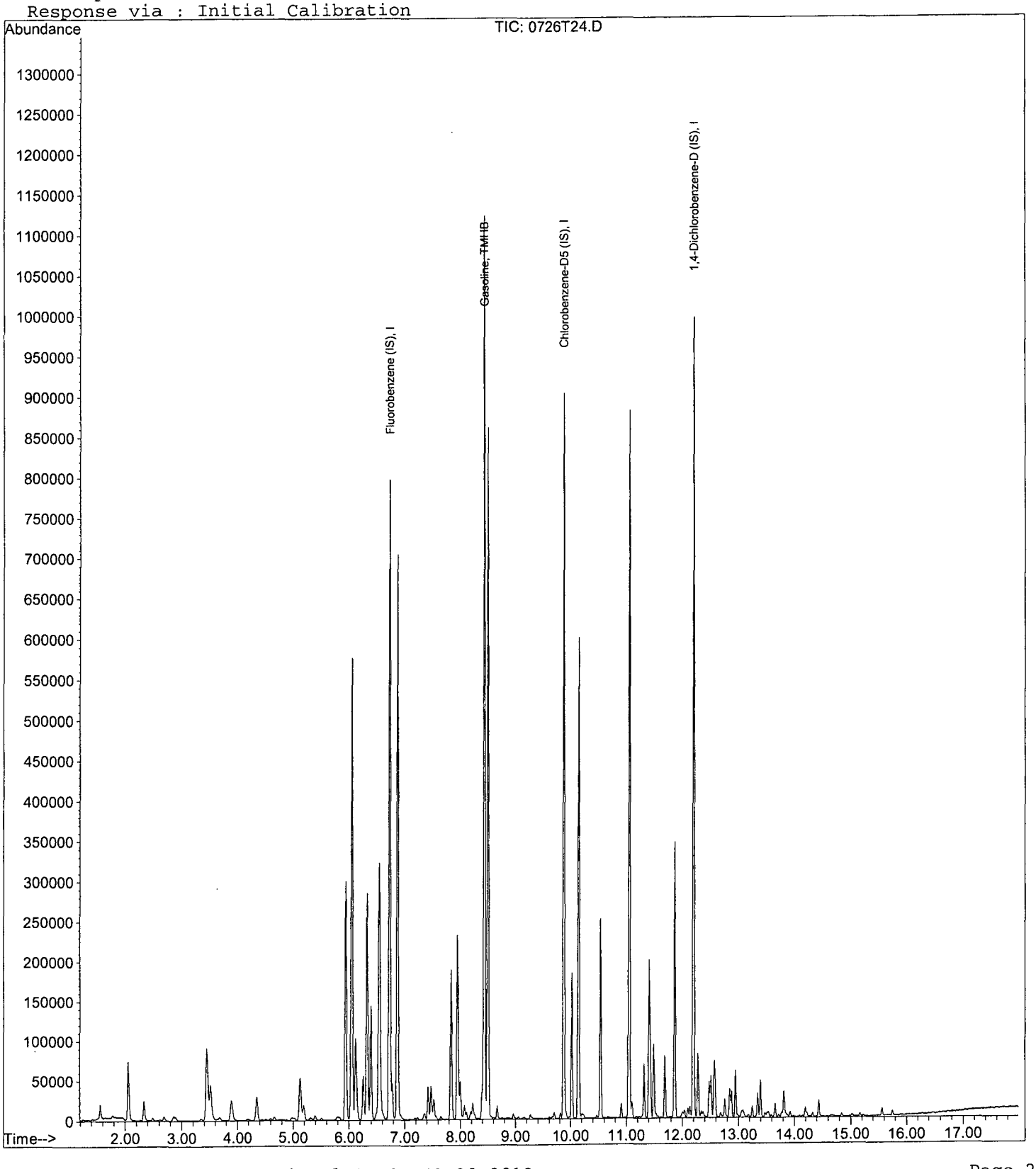
(#) = qualifier out of range (m) = manual integration

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

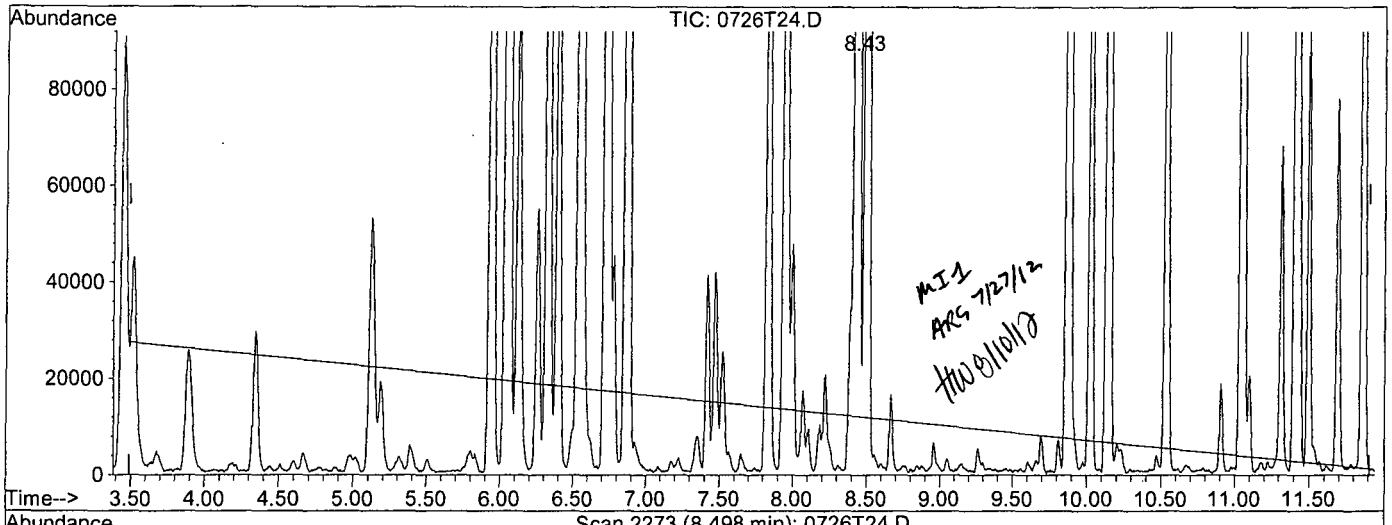
Method : M:\THOR\DATA\T120725\TGAS.M (RTE Integrator)
Title : METHOD 8260B
Last Update : Wed Jul 25 16:07:29 2012
Response via : Initial Calibration

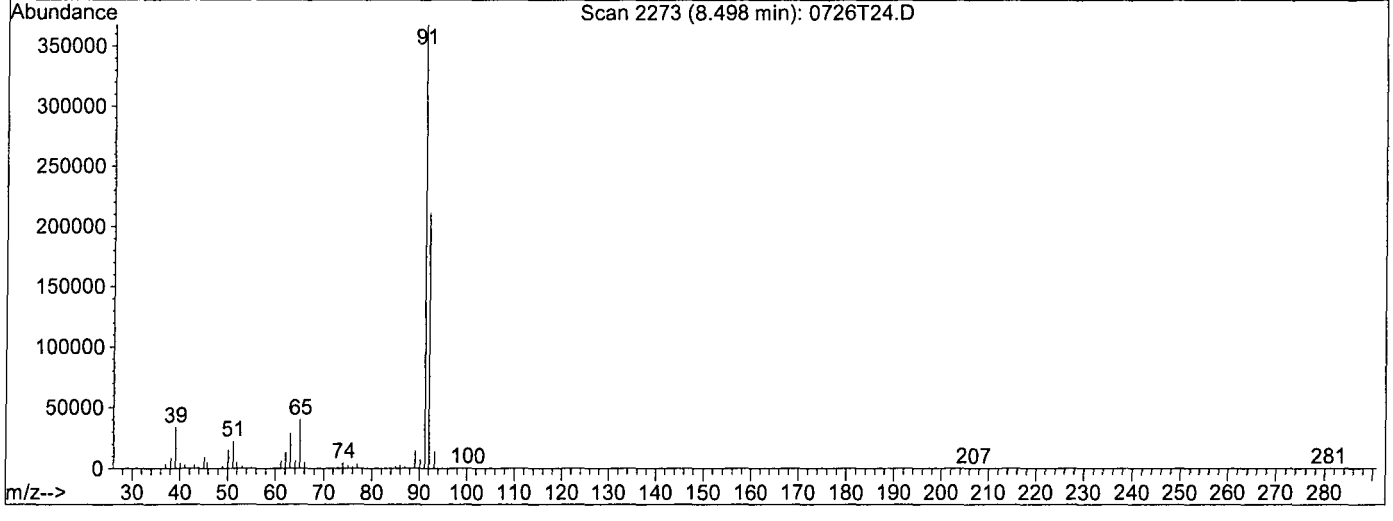


Quantitation Report

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

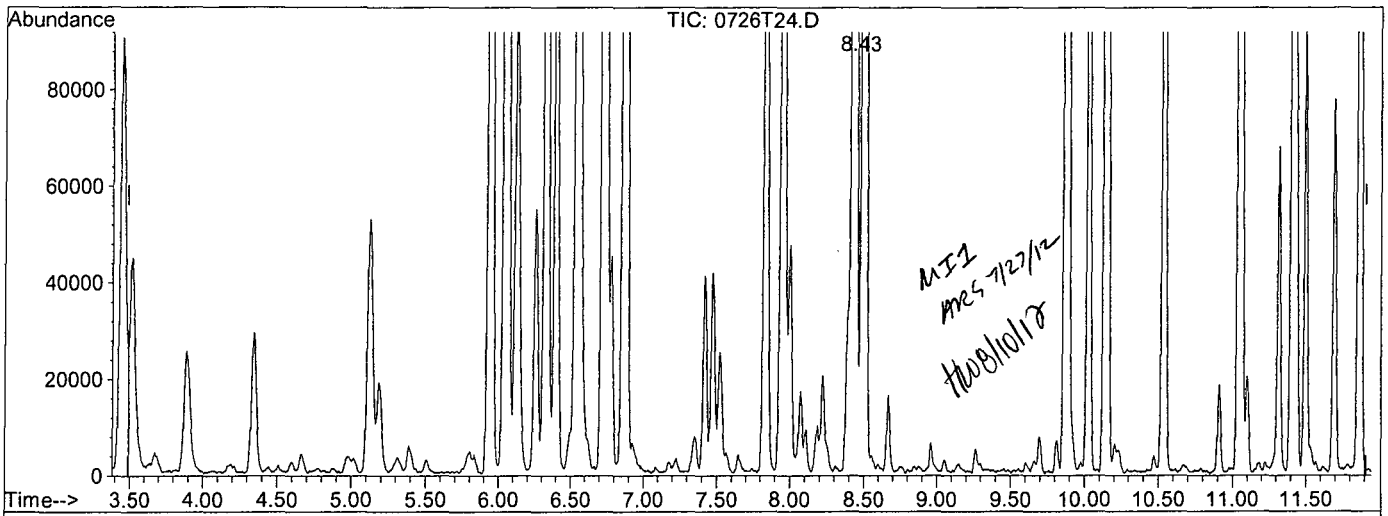
response 15133682

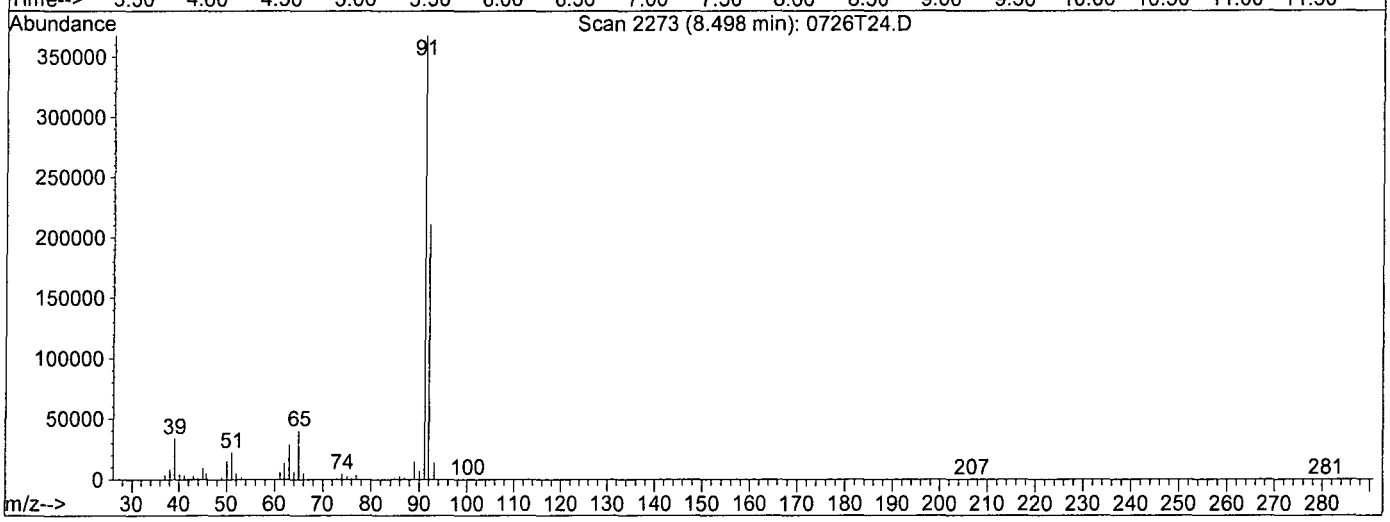
| Ion | Exp% | Act% |
|---|---|---|
| TIC | 100 | 100 |
| 0.00 | 0.00 | 0.63# |
| 0.00 | 0.00 | 1.86# |
| 0.00 | 0.00 | 0.00 |

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

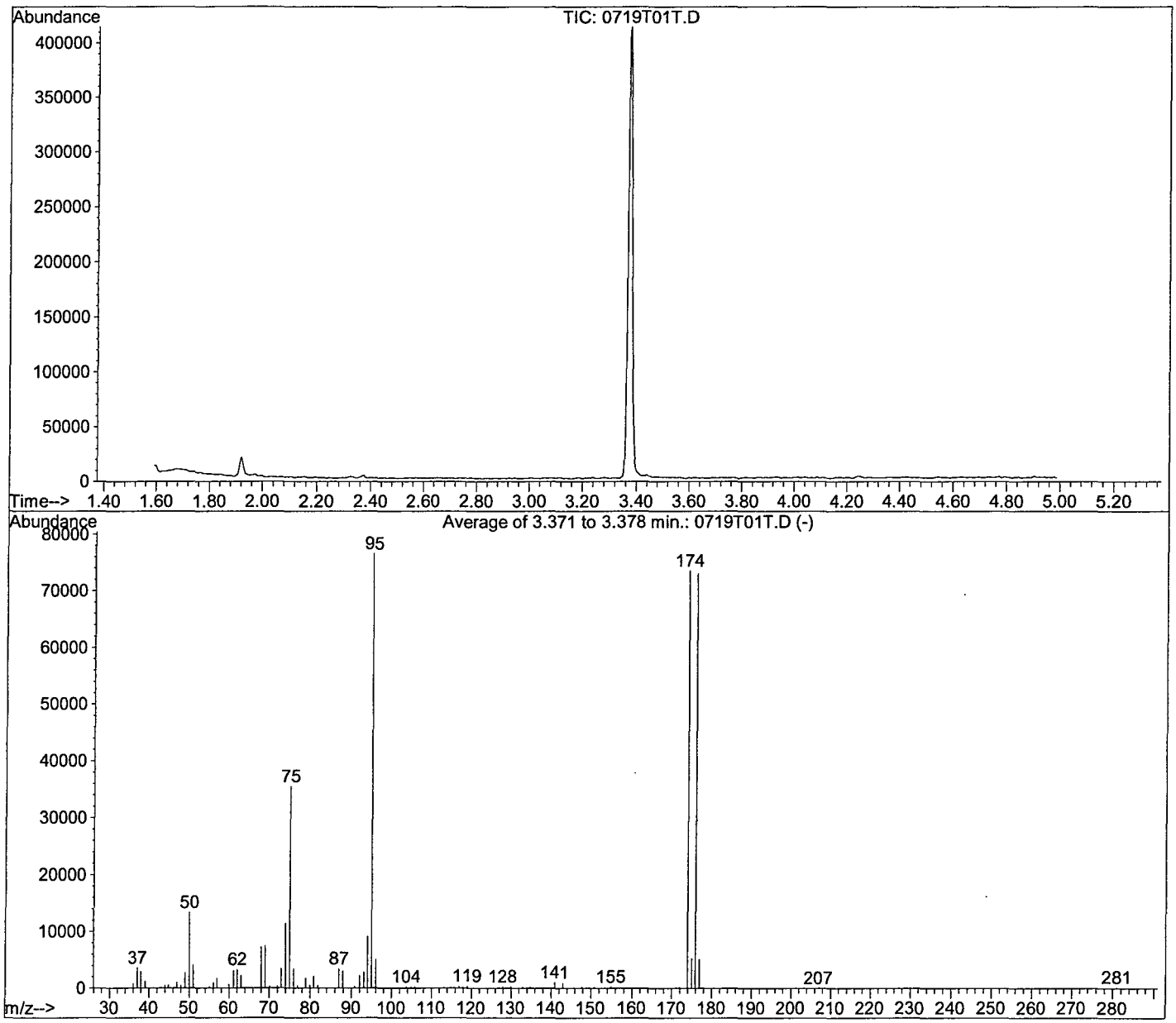
response 17667021

| 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



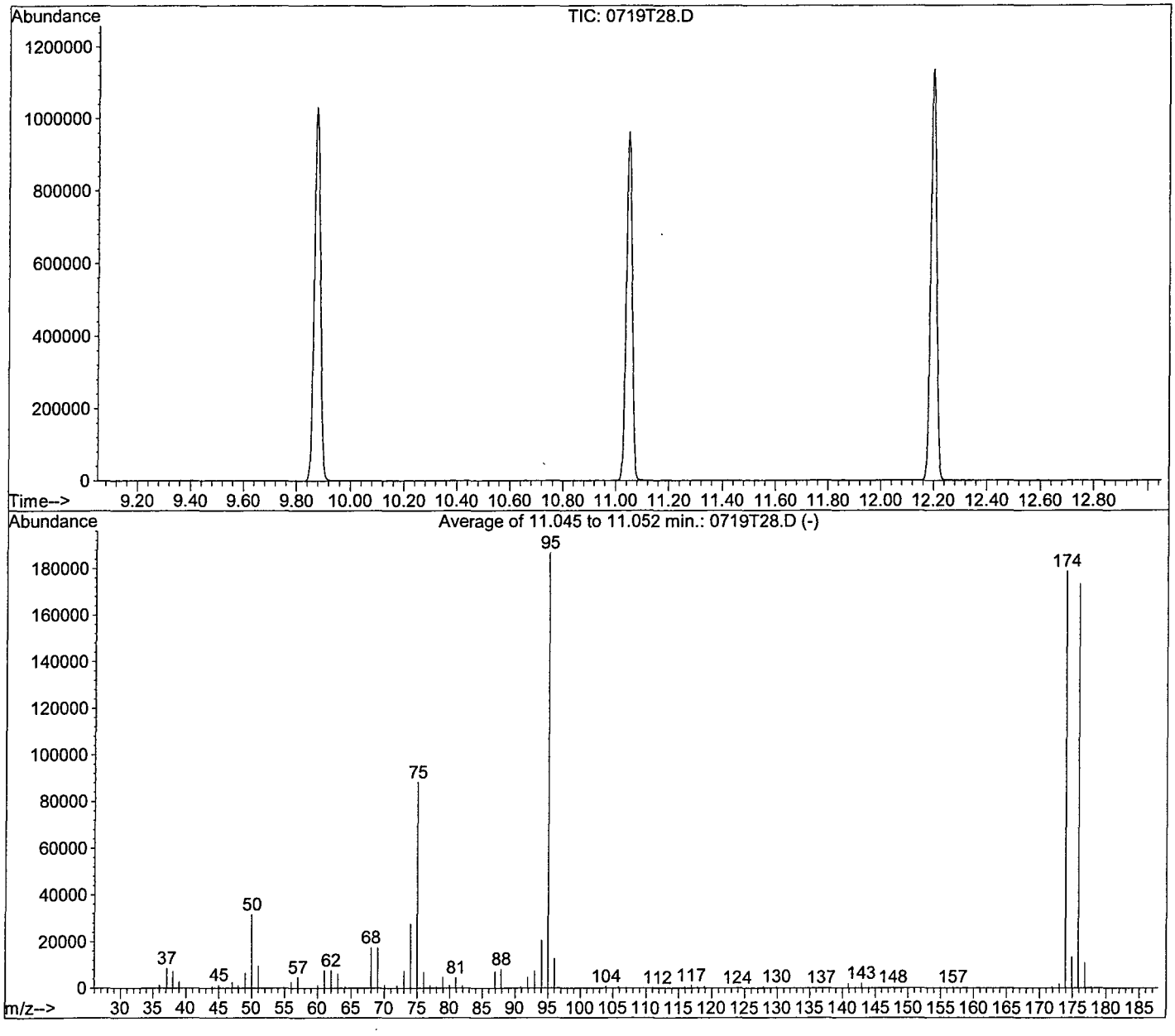

AutoFind: Scans 554, 555, 556; Background Corrected with Scan 544

| 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



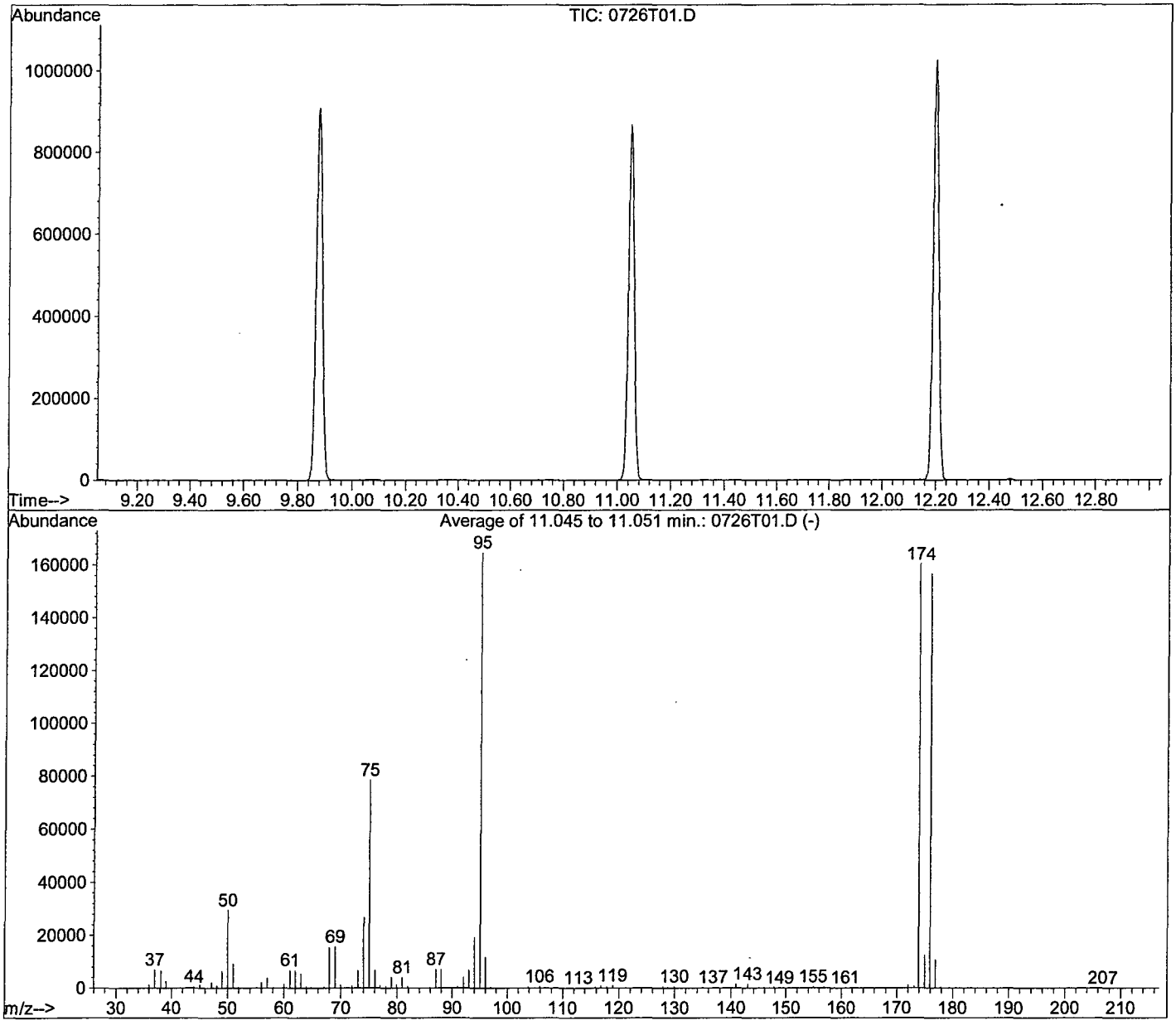

AutoFind: Scans 3065, 3066, 3067; Background Corrected with Scan 3051

| 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



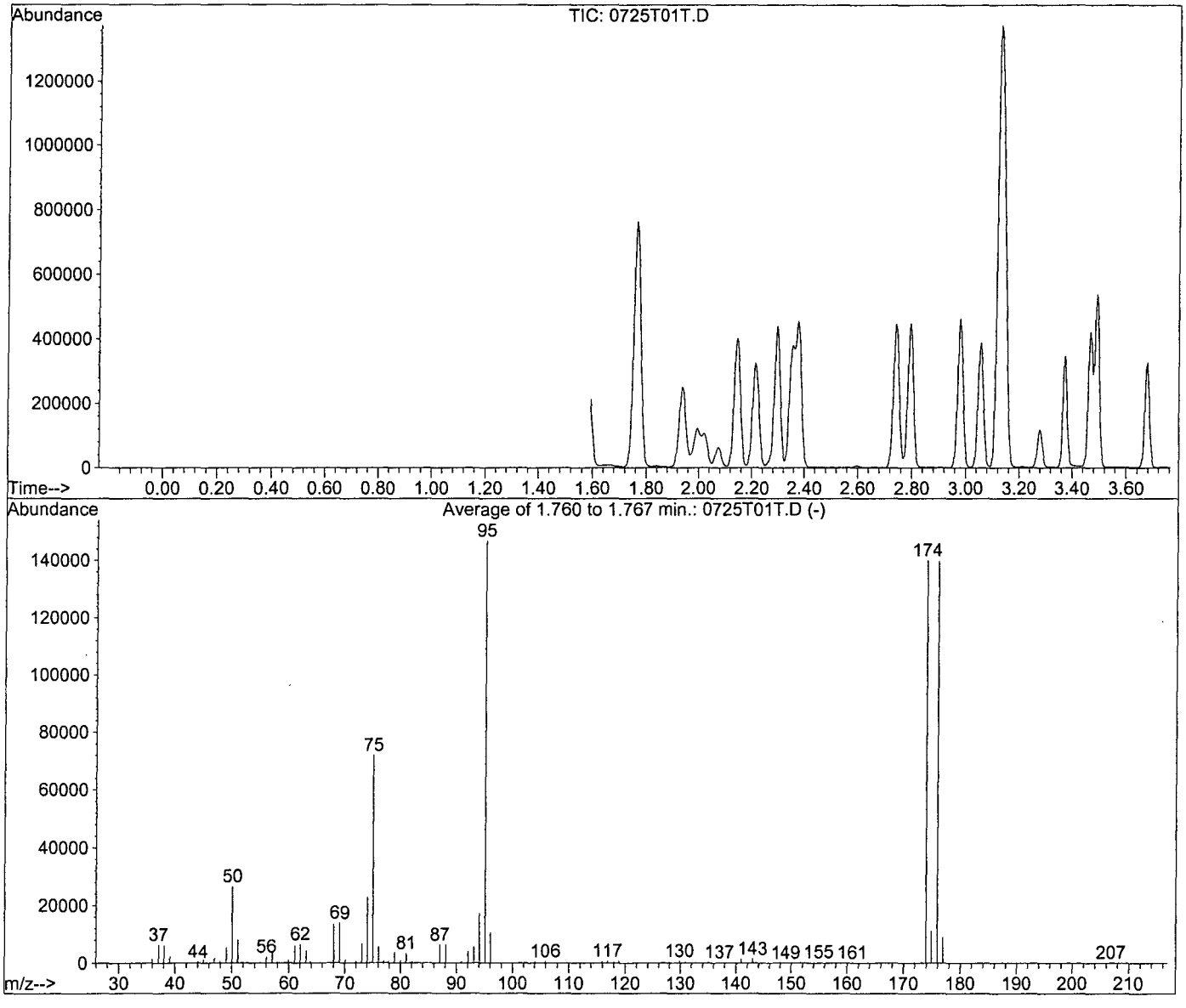

AutoFind: Scans 3065, 3066, 3067; Background Corrected with Scan 3051

| 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



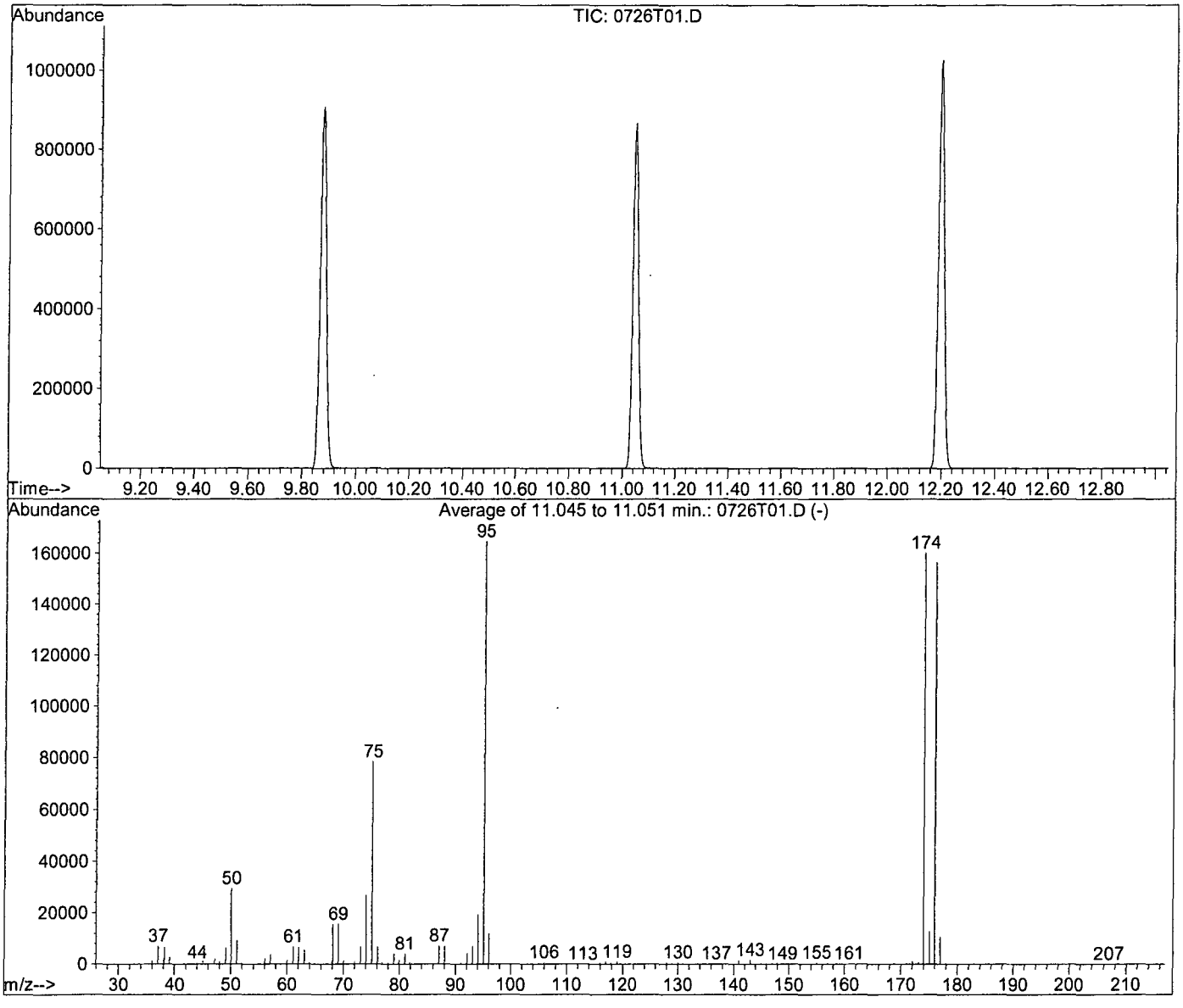

Spectrum Information: Average of 1.760 to 1.767 min.

| 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 |

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 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 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

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
Made in the USA. R&D only, not human consumption.
Supelco Solutions

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

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 |

6/12/12 RS

| 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

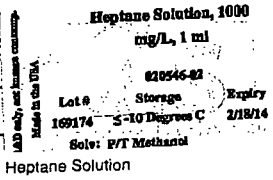
n-Hexane Solution

Lot #: 176773 - 31024

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

RS

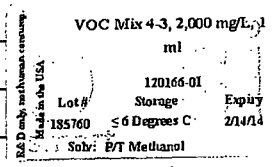
E-




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

6/19/12 RS

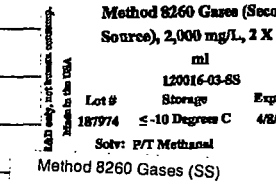
F-




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

6/19/12 RS

G-




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

6/19/12 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 |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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 |

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| 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 |

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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 |

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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 | |

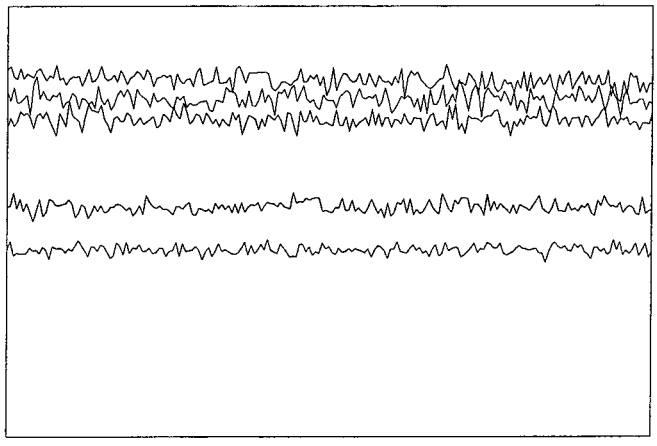
ISTD Ref File : C:\ICPCHEM\1\DATA\12G23k00.B\004CALB.D\004CALB.D#

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**

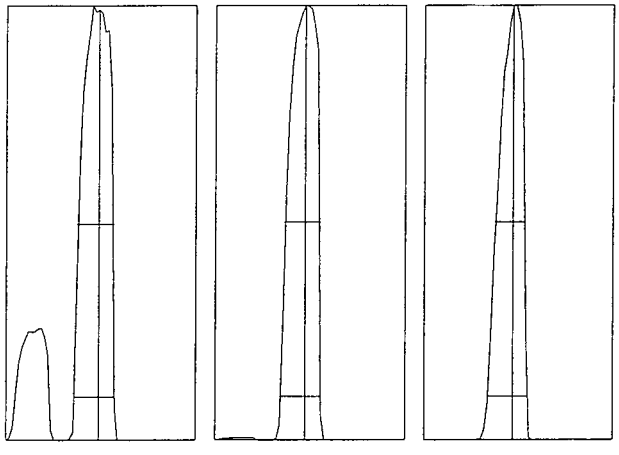
# Tune Report

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 | : | --- % |



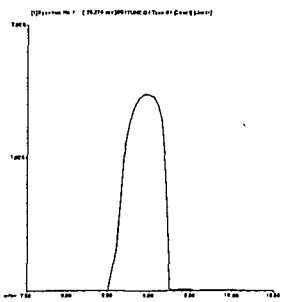
Generated : Jul 23, 2012 10:45:06
Printed : Jul 23, 2012 10:45:10

# 200.8 QC Tune Report

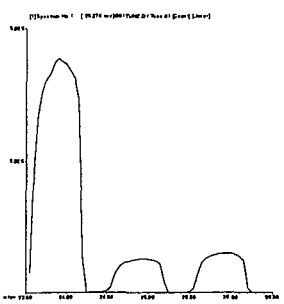
**Data File:** C:\ICPCHEM\1\DATA\12G23k00.B\001TUNE.D
**Date Acquired:** Jul 23 2012 10:53 am
**Acq. Method:** TN200_8.M
**Operator:** NBS
**Sample Name:** 100ppb Tune sol
**Misc Info:**
**Vial Number:** 1303
**Current Method:** C:\ICPCHEM\1\METHODS\TN200_8.M

**RSD (%)**

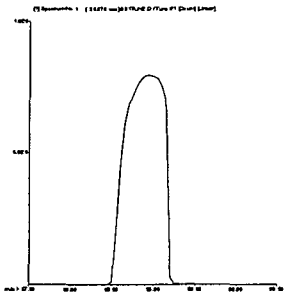
| Element | CPS Mean | Rep1 | Rep2 | Rep3 | Rep4 | Rep5 | %RSD | Required | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 9 Be | 789604 | 786311 | 783280 | 790871 | 795505 | 792052 | **0.90** | 5.00 | |
| 24 Mg | 2414013 | 2388869 | 2415273 | 2402944 | 2433304 | 2429676 | **1.48** | 5.00 | |
| 59 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:



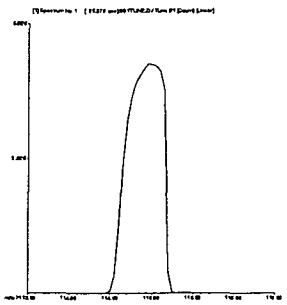
**59 Co**

**Mass Calib.**

| | | | |
|---|---|---|---|
| Actual: | 58.95 | | |
| Required: | 58.90 | - | 59.10 |
| Flag: | | | |

**Peak Width**

| | | | |
|---|---|---|---|
| Actual: | 0.60 | | |
| Required: | 0.90 | | |
| Flag: | | | |



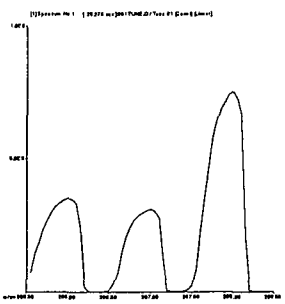
**115 In**

**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. |