Columbia Analytical Services™ 2655 Park Center Drive, Suite A | Simi Valley, CA 93065 | 805.526.7161 | 805.526.7270 fax | www.caslab.com

# LABORATORY REPORT

June 4, 2010

Brian Baker
Environmental Health & Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494

**RE: 17131**

Dear Brian:

Enclosed are the results of the samples submitted to our laboratory on May 11, 2010. For your reference, these analyses have been assigned our service request number P1001650.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 389 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; United States Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), Certificate No. L10-3; Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-09-TX; Minnesota Department of Health, Certificate No. 11495AA. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**Columbia Analytical Services, Inc.**

Kate Aguilera
Project Manager

100% Recycled Paper

Client: Environmental Health & Engineering, Inc. CAS Project No: P1001650
Project: 17131

## CASE NARRATIVE

The samples were received intact under chain of custody on May 11, 2010 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for selected volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.

*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.*

**Client:** Environmental Health & Engineering, Incorporated

**Folder:** P1001650

**Project:** 17131

## Detailed Sample Information

| CAS Sample ID | Client Sample ID | Container Type | Pi1 (Hg) | Pi1 (psig) | Pf1 | Pi2 (Hg) | Pi2 (psig) | Pf2 | Cont ID | Order # | FC ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| P1001650-001.01 | 110354 | 6.0 L-Summa Canister Ambient | -6.3 | -3.1 | 3.5 | | | | AC01537 | **17433** | |
| P1001650-002.01 | 110355 | 6.0 L-Summa Canister Ambient | -4.2 | -2.1 | 3.5 | | | | AC01209 | **17433** | |
| P1001650-003.01 | 110356 | 6.0 L-Summa Canister Ambient | -6.3 | -3.1 | 3.5 | | | | AC00796 | **17433** | |
| P1001650-004.01 | 110357 | 6.0 L-Summa Canister Ambient | -7.5 | -3.7 | 3.5 | | | | AC01309 | **17433** | |

Miscellaneous Items - received

AVG01260
FC00458
FC00501
AVG00861
AVG01250
AVG01333
FC00655
FC00818

**Environmental Health & Engineering, Inc.**

# CHAIN OF CUSTODY FORM

DATE: 5/9/10

P1001650

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: Columbia Analytical

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17131

The cost of this analysis will be covered by EH&E Purchase Order # 17131

For EH & E Data Coordinator - URGENT DATA ☐

| SAMPLE ID | SAMPLE TYPE | ANALYTICAL METHOD/NUMBER | OTHER:Time/Date/Vol. |
|---|---|---|---|
| 110354 | Summa | To-15 Low Level | 2 Hours |
| 110355 | | | |
| 110356 | | | |
| 110357 | | | |

**Special instructions:**

☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____

☐ Fax results 781-247-4305

☐ **RETURN SAMPLES** ☒ Electronic transfer - datacoordinator@eheinc.com

☒ Additional report recipient bbaker@eheinc.com

**Each signatory please return one copy of this form to the above address**

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 5/10/10

Received by: _____ of (company name) CAS Date: 05/11/10

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 1 of 1

WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY

# Columbia Analytical Services, Inc.
## Sample Acceptance Check Form

Client: Environmental Health & Engineering, Inc. Work order: P1001650

Project: 15900/CPSC – Source (March 2010)/Taeko Minegishi / 17131

Sample(s) received on: 5/11/2010 Date opened: 5/11/2010 by: SSTAPLES

*Note:* This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

| | | Yes | No | N/A |
|---|---|---|---|---|
| 1 | Were **sample containers** properly marked with client sample ID? | ☒ | ☐ | ☐ |
| 2 | Container(s) **supplied by CAS**? | ☒ | ☐ | ☐ |
| 3 | Did **sample containers** arrive in good condition? | ☒ | ☐ | ☐ |
| 4 | Was a **chain-of-custody** provided? | ☒ | ☐ | ☐ |
| 5 | Was the **chain-of-custody** properly completed? | ☐ | ☒ | ☐ |
| 6 | Did **sample container labels** and/or tags agree with custody papers? | ☒ | ☐ | ☐ |
| 7 | Was **sample volume** received adequate for analysis? | ☒ | ☐ | ☐ |
| 8 | Are samples within specified holding times? | ☒ | ☐ | ☐ |
| 9 | Was proper **temperature** (thermal preservation) of cooler at receipt adhered to? | ☐ | ☐ | ☒ |
| | Cooler Temperature _____ °C Blank Temperature _____ °C | | | |
| 10 | Was a **trip blank** received? | ☐ | ☐ | ☒ |
| | Trip blank supplied by CAS: _____ | | | |
| 11 | Were **custody seals** on outside of cooler/Box? | ☐ | ☒ | ☐ |
| | Location of seal(s)? _____ Sealing Lid? | ☐ | ☐ | ☒ |
| | Were signature and date included? | ☐ | ☐ | ☒ |
| | Were seals intact? | ☐ | ☐ | ☒ |
| | Were custody seals on outside of sample container? | ☐ | ☒ | ☐ |
| | Location of seal(s)? _____ Sealing Lid? | ☐ | ☐ | ☒ |
| | Were signature and date included? | ☐ | ☐ | ☒ |
| | Were seals intact? | ☐ | ☐ | ☒ |
| 12 | Do containers have appropriate **preservation**, according to method/SOP or Client specified information? | ☐ | ☐ | ☒ |
| | Is there a client indication that the submitted samples are **pH** preserved? | ☐ | ☐ | ☒ |
| | Were **VOA vials** checked for presence/absence of air bubbles? | ☐ | ☐ | ☒ |
| | Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it? | ☐ | ☐ | ☒ |
| 13 | **Tubes:** Are the tubes capped and intact? | ☐ | ☐ | ☒ |
| | Do they contain moisture? | ☐ | ☐ | ☒ |
| 14 | **Badges:** Are the badges properly capped and intact? | ☐ | ☐ | ☒ |
| | Are dual bed badges separated and individually capped and intact? | ☐ | ☐ | ☒ |

| Lab Sample ID | Container Description | Required pH * | Received pH | Adjusted pH | VOA Headspace (Presence/Absence) | Receipt / Preservation Comments |
|---|---|---|---|---|---|---|
| P1001650-001.01 | 6.0 L Ambient Can | | | | | |
| P1001650-002.01 | 6.0 L Ambient Can | | | | | |
| P1001650-003.01 | 6.0 L Ambient Can | | | | | |
| P1001650-004.01 | 6.0 L Ambient Can | | | | | |
| | | | | | | |

Explain any discrepancies: (include lab sample ID numbers):

Chain of Custody is missing date/time collected

*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12) RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

# RESULTS OF VOLATILE ORGANIC ANALYSIS

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110354** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P1001650-001

Test Code: EPA TO-15 Date Collected: 5/9/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 5/11/10
Analyst: Liliana Marghitoiu/Wida Ang Date Analyzed: 5/17 - 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01537

Initial Pressure (psig): -3.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.57

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | **Propene** | **49** | 0.79 | **29** | 0.46 | |
| 75-71-8 | **Dichlorodifluoromethane (CFC 12)** | **2.1** | 0.79 | **0.42** | 0.16 | |
| 74-87-3 | **Chloromethane** | **0.97** | 0.31 | **0.47** | 0.15 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.79 | ND | 0.11 | |
| 75-01-4 | Vinyl Chloride | ND | 0.16 | ND | 0.061 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.31 | ND | 0.14 | |
| 74-83-9 | Bromomethane | ND | 0.16 | ND | 0.040 | |
| 75-00-3 | Chloroethane | ND | 0.16 | ND | 0.060 | |
| 64-17-5 | **Ethanol** | **760** | 7.9 | **400** | 4.2 | |
| 75-05-8 | Acetonitrile | ND | 0.79 | ND | 0.47 | |
| 107-02-8 | **Acrolein** | **4.4** | 3.1 | **1.9** | 1.4 | |
| 67-64-1 | **Acetone** | **86** | 7.9 | **36** | 3.3 | |
| 75-69-4 | **Trichlorofluoromethane** | **1.1** | 0.16 | **0.20** | 0.028 | |
| 67-63-0 | **2-Propanol (Isopropyl Alcohol)** | **420** | 16 | **170** | 6.4 | **D** |
| 107-13-1 | Acrylonitrile | ND | 0.79 | ND | 0.36 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.16 | ND | 0.040 | |
| 75-09-2 | Methylene Chloride | ND | 0.79 | ND | 0.23 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.16 | ND | 0.050 | |
| 76-13-1 | **Trichlorotrifluoroethane** | **0.45** | 0.16 | **0.058** | 0.020 | |
| 75-15-0 | Carbon Disulfide | ND | 7.9 | ND | 2.5 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.16 | ND | 0.040 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.16 | ND | 0.039 | |
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 0.16 | ND | 0.044 | |
| 108-05-4 | Vinyl Acetate | ND | 7.9 | ND | 2.2 | |
| 78-93-3 | 2-Butanone (MEK) | ND | 7.9 | ND | 2.7 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

Verified By: Rs Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110354** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P1001650-001

Test Code: EPA TO-15 Date Collected: 5/9/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 5/11/10
Analyst: Liliana Marghitoiu/Wida Ang Date Analyzed: 5/17 - 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01537

Initial Pressure (psig): -3.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.57

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.16 | ND | 0.040 | |
| 141-78-6 | **Ethyl Acetate** | **13** | 0.79 | **3.7** | 0.22 | |
| 110-54-3 | **n-Hexane** | **18** | 0.79 | **5.1** | 0.22 | |
| 67-66-3 | **Chloroform** | **3.1** | 0.16 | **0.64** | 0.032 | |
| 109-99-9 | Tetrahydrofuran (THF) | ND | 0.79 | ND | 0.27 | |
| 107-06-2 | **1,2-Dichloroethane** | **1.2** | 0.16 | **0.29** | 0.039 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.16 | ND | 0.029 | |
| 71-43-2 | **Benzene** | **9.9** | 0.16 | **3.1** | 0.049 | |
| 56-23-5 | **Carbon Tetrachloride** | **0.73** | 0.16 | **0.12** | 0.025 | |
| 110-82-7 | **Cyclohexane** | **3.2** | 0.79 | **0.92** | 0.23 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.16 | ND | 0.034 | |
| 75-27-4 | **Bromodichloromethane** | **1.6** | 0.16 | **0.24** | 0.023 | |
| 79-01-6 | Trichloroethene | ND | 0.16 | ND | 0.029 | |
| 123-91-1 | 1,4-Dioxane | ND | 0.79 | ND | 0.22 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.79 | ND | 0.19 | |
| 142-82-5 | **n-Heptane** | **7.6** | 0.79 | **1.8** | 0.19 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.79 | ND | 0.17 | |
| 108-10-1 | **4-Methyl-2-pentanone** | **1.1** | 0.79 | **0.28** | 0.19 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.79 | ND | 0.17 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.16 | ND | 0.029 | |
| 108-88-3 | **Toluene** | **41** | 0.79 | **11** | 0.21 | |
| 591-78-6 | 2-Hexanone | ND | 0.79 | ND | 0.19 | |
| 124-48-1 | **Dibromochloromethane** | **0.59** | 0.16 | **0.070** | 0.018 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.16 | ND | 0.020 | |
| 123-86-4 | **n-Butyl Acetate** | **3.3** | 0.79 | **0.69** | 0.17 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Rcs Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110354**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P1001650-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu/Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01537

Date Collected: 5/9/10
Date Received: 5/11/10
Date Analyzed: 5/17 - 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.57

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | **n-Octane** | **3.0** | 0.79 | **0.65** | 0.17 | |
| 127-18-4 | **Tetrachloroethene** | **0.19** | 0.16 | **0.027** | 0.023 | |
| 108-90-7 | Chlorobenzene | ND | 0.16 | ND | 0.034 | |
| 100-41-4 | **Ethylbenzene** | **9.4** | 0.79 | **2.2** | 0.18 | |
| 179601-23-1 | **m,p-Xylenes** | **33** | 0.79 | **7.6** | 0.18 | |
| 75-25-2 | Bromoform | ND | 0.79 | ND | 0.076 | |
| 100-42-5 | **Styrene** | **1.8** | 0.79 | **0.41** | 0.18 | |
| 95-47-6 | **o-Xylene** | **11** | 0.79 | **2.6** | 0.18 | |
| 111-84-2 | **n-Nonane** | **3.1** | 0.79 | **0.60** | 0.15 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.16 | ND | 0.023 | |
| 98-82-8 | Cumene | ND | 0.79 | ND | 0.16 | |
| 80-56-8 | **alpha-Pinene** | **17** | 0.79 | **3.0** | 0.14 | |
| 103-65-1 | **n-Propylbenzene** | **2.0** | 0.79 | **0.41** | 0.16 | |
| 622-96-8 | **4-Ethyltoluene** | **3.6** | 0.79 | **0.74** | 0.16 | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **3.0** | 0.79 | **0.60** | 0.16 | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **11** | 0.79 | **2.2** | 0.16 | |
| 100-44-7 | Benzyl Chloride | ND | 0.79 | ND | 0.15 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.16 | ND | 0.026 | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.16 | ND | 0.026 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.16 | ND | 0.026 | |
| 5989-27-5 | **d-Limonene** | **39** | 0.79 | **7.0** | 0.14 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.79 | ND | 0.081 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.79 | ND | 0.11 | |
| 91-20-3 | **Naphthalene** | **0.86** | 0.79 | **0.16** | 0.15 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.79 | ND | 0.074 | |

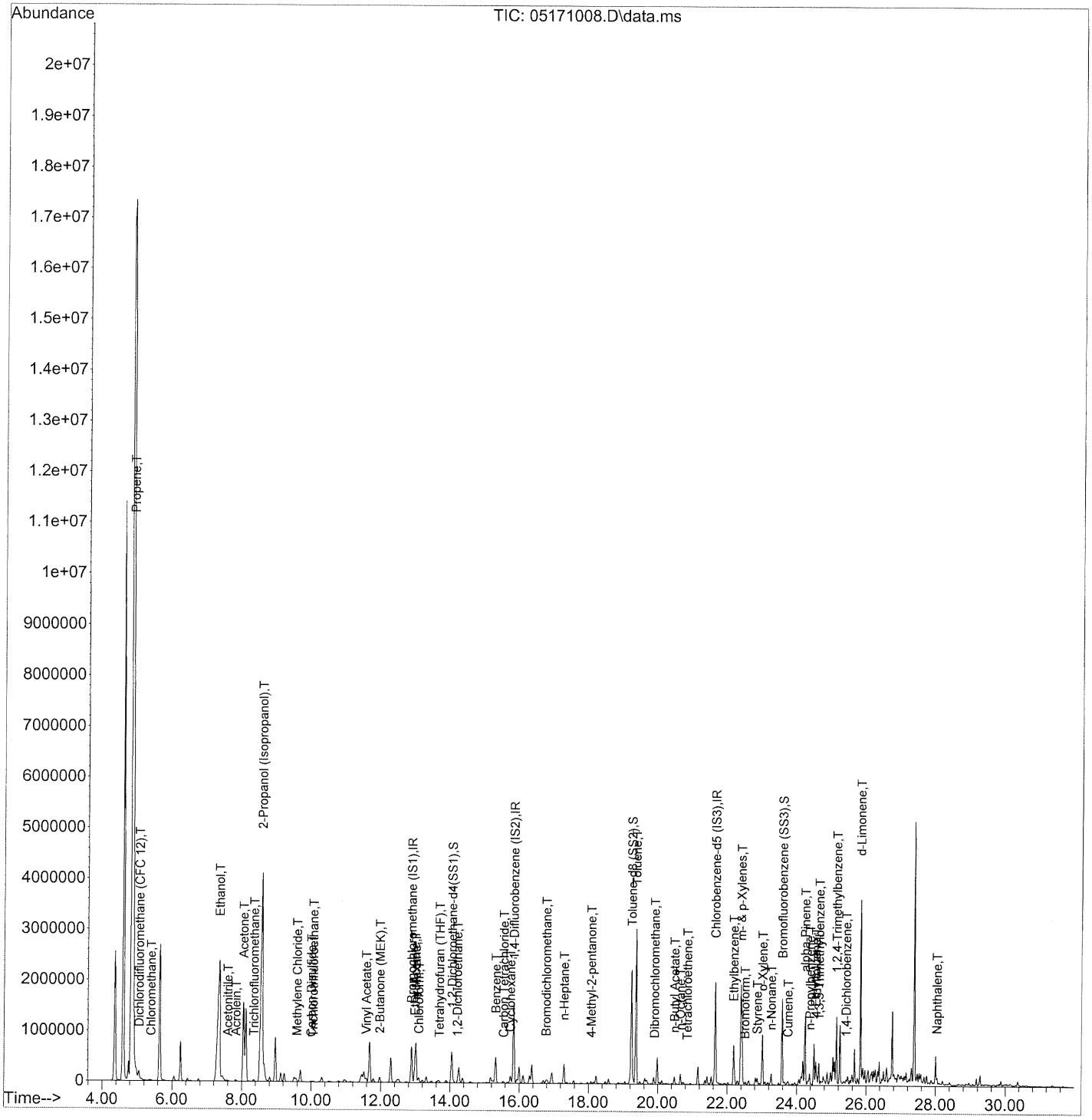
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Ker Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 10:00:24 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 10:00:24 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 404982 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1930943 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 804552 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 601494 | 24.609 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.44% | | ✓ |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 2013105 | 24.808 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 99.24% | | ✓ |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 675342 | 23.760 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 95.04% | | ✓ |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 722844 | 31.506 | ng | | 95 |
| 3) Dichlorodifluoromethan... | 5.05 | 85 | 71167 | 1.319 | ng | | 99 |
| 4) Chloromethane | 5.40 | 50 | 20122 | 0.615 | ng | | 99 |
| 10) Ethanol | 7.36 | 45 | 6734810 | 481.926 | ng | | 99 |
| 11) Acetonitrile | 7.60 | 41 | 14932 | 0.441 | ng | | 94 |
| 12) Acrolein | 7.83 | 56 | 38832 | 2.818 | ng | | 100 |
| 13) Acetone | 8.05 | 58 | 981881m | 54.984 | ng | | |
| 14) Trichlorofluoromethane | 8.35 | 101 | 35261 | 0.718 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.58 | 45 | 10646923 | 204.633 | ng | see dil | 99 |
| 19) Methylene Chloride | 9.59 | 84 | 5192 | 0.193 | ng | # | 75 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 7000 | 0.284 | ng | # | 78 |
| 22) Carbon Disulfide | 10.00 | 76 | 27319 | 0.315 | ng | | 98 |
| 26) Vinyl Acetate | 11.58 | 86 | 26998 | 4.344 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 49405 | 3.012 | ng | # | 72 |
| 30) Ethyl Acetate | 12.98 | 61 | 73291 | 8.413 | ng | | 86 |
| 31) n-Hexane | 13.01 | 57 | 476029 | 11.465 | ng | # | 96 |
| 32) Chloroform | 13.10 | 83 | 87912 | 1.992 | ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.69 | 72 | 2927 | 0.184 | ng | # | 1 |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 25018 | 0.755 | ng | | 100 |
| 41) Benzene | 15.32 | 78 | 692218 | 6.297 | ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 15730 | 0.466 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 82239 | 2.009 | ng | # | 82 |
| 46) Bromodichloromethane | 16.78 | 83 | 34502 | 1.045 | ng | | 79 |
| 51) n-Heptane | 17.30 | 71 | 126216 | 4.826 | ng | | 89 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 15234 | 0.732 | ng | | 97 |
| 58) Toluene | 19.37 | 91 | 2981301 | 26.050 | ng | | 98 |
| 60) Dibromochloromethane | 19.91 | 129 | 10323 | 0.377 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 115646 | 2.091 | ng | | 88 |
| 63) n-Octane | 20.65 | 57 | 39449 | 1.921 | ng | # | 83 |
| 64) Tetrachloroethene | 20.84 | 166 | 4213 | 0.118 | ng | | 97 |

Quantitation Report (QT Reviewed)

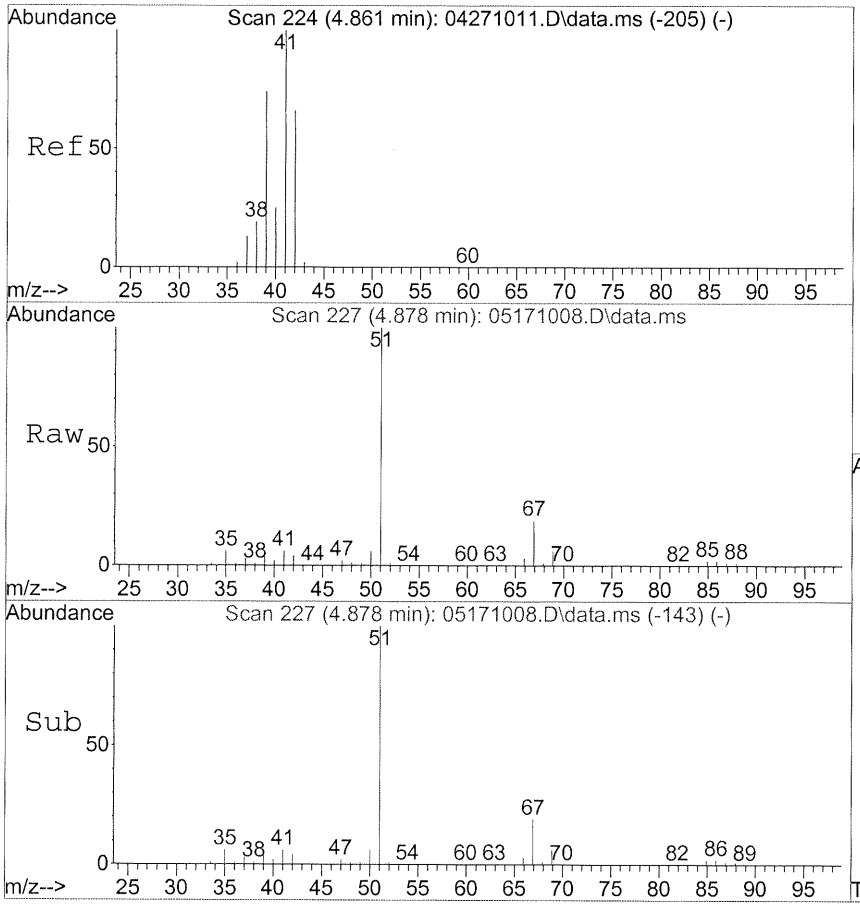
Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 10:00:24 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 66) Ethylbenzene | 22.19 | 91 | 749104 | 5.972 | ng | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 2079711 | 20.984 | ng | 93 |
| 68) Bromoform | 22.51 | 173 | 2691 | 0.105 | ng | 89 |
| 69) Styrene | 22.87 | 104 | 86989 | 1.116 | ng | 94 |
| 70) o-Xylene | 23.01 | 91 | 721000 | 7.135 | ng | 93 |
| 71) n-Nonane | 23.27 | 43 | 87740 | 1.991 | ng | 90 |
| 74) Cumene | 23.75 | 105 | 43388 | 0.314 | ng | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 681536 | 10.638 | ng | 92 |
| 76) n-Propylbenzene | 24.38 | 91 | 206857 | 1.291 | ng | 94 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 293766 | 2.306 | ng | 97 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 196225 | 1.887 | ng | 93 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 735669 | 6.842 | ng | 97 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 6470 | 0.095 | ng | 100 |
| 91) d-Limonene | 25.84 | 68 | 930675 | 24.928 | ng | 81 |
| 95) Naphthalene | 28.05 | 128 | 74379 | 0.545 | ng | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

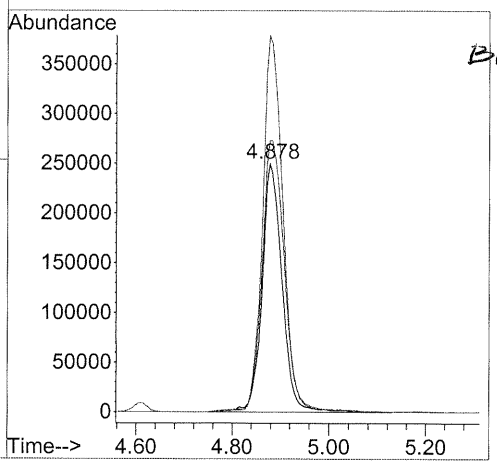
JSA 5/19/10



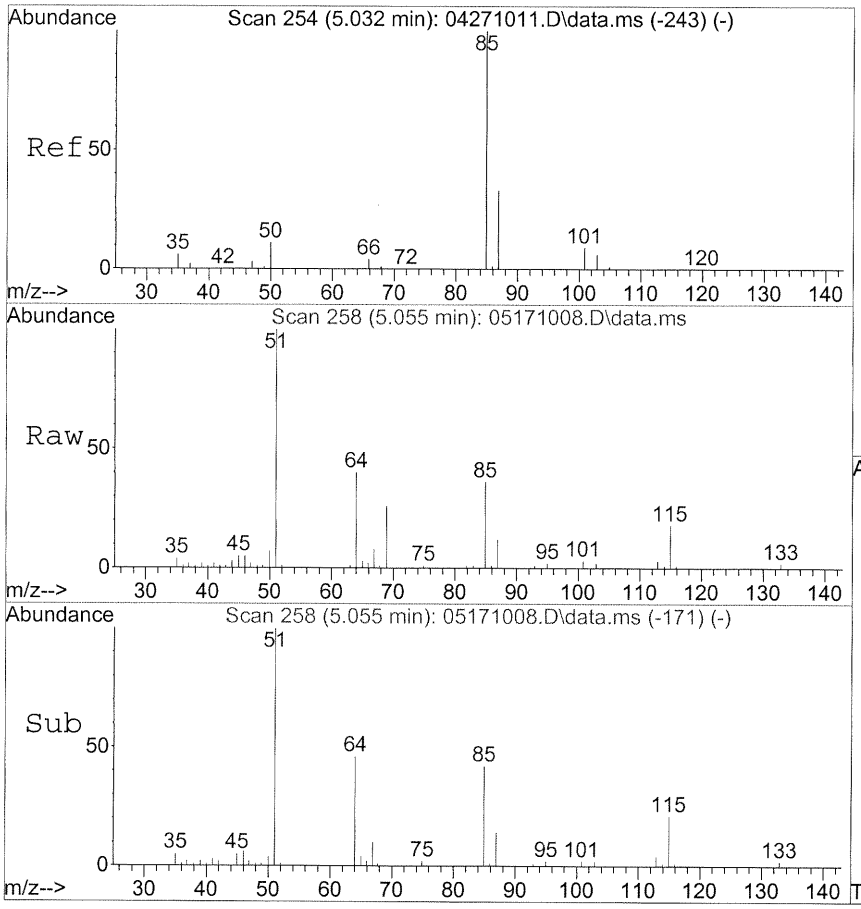

#2
Propene
Concen: 31.51 ng
RT: 4.88 min Scan# 227
Delta R.T. -0.023 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 42 Resp: 722844

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 39 | 123.0 | 92.2 | 132.2 |
| 41 | 156.0 | 133.9 | 173.9 |



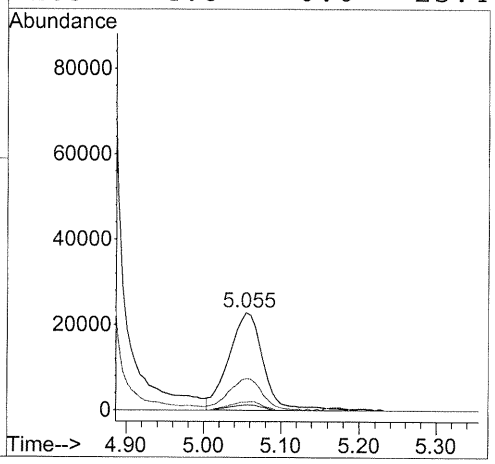

BBS




#3
Dichlorodifluoromethane (CFC
Concen: 1.32 ng
RT: 5.05 min Scan# 258
Delta R.T. -0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 85 Resp: 71167

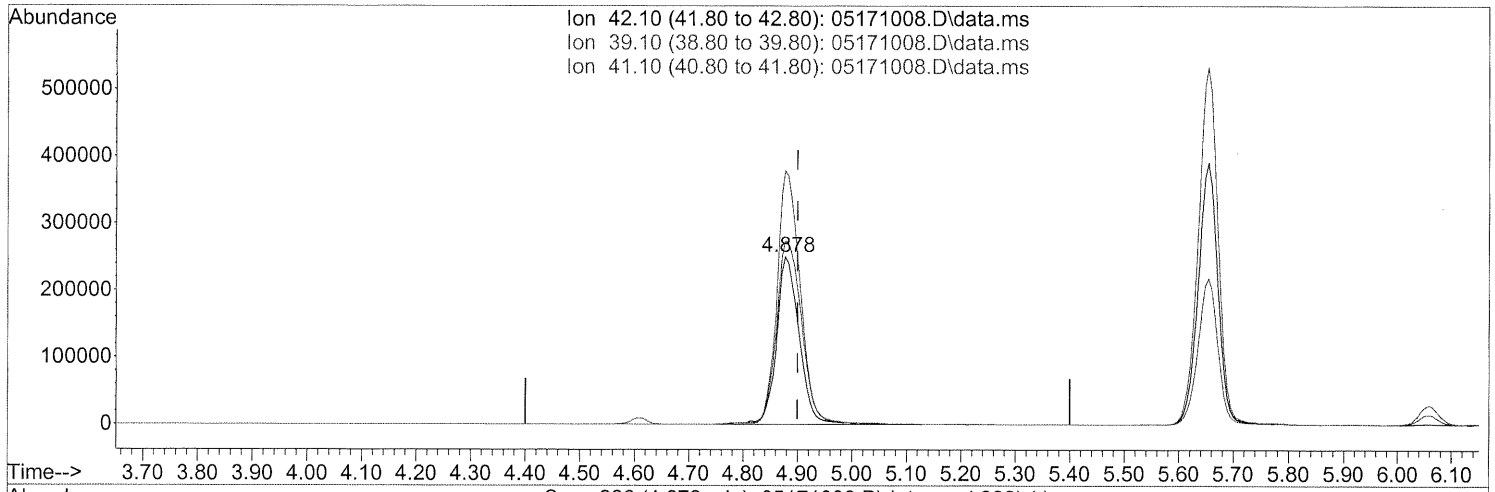
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.9 | 12.0 | 52.0 |
| 101 | 8.0 | 0.0 | 28.5 |
| 103 | 4.8 | 0.0 | 25.4 |

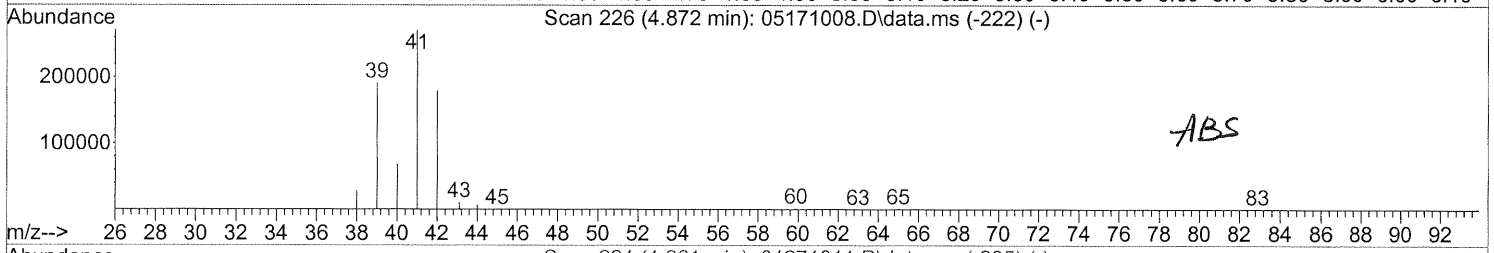


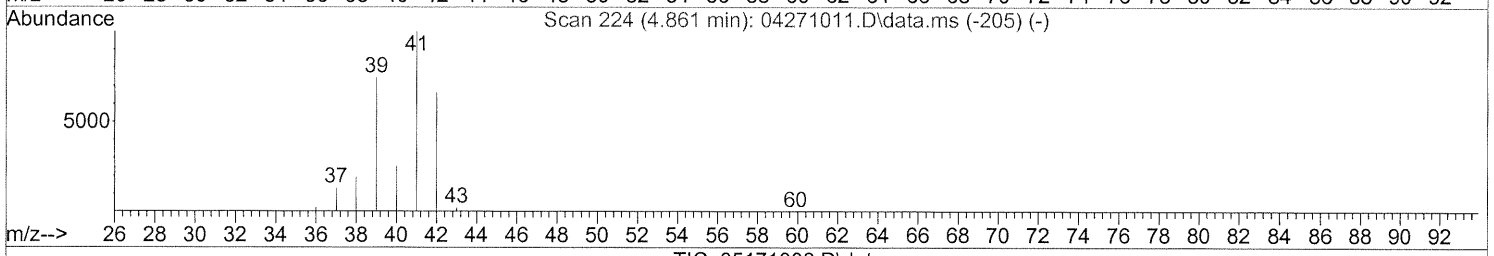
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



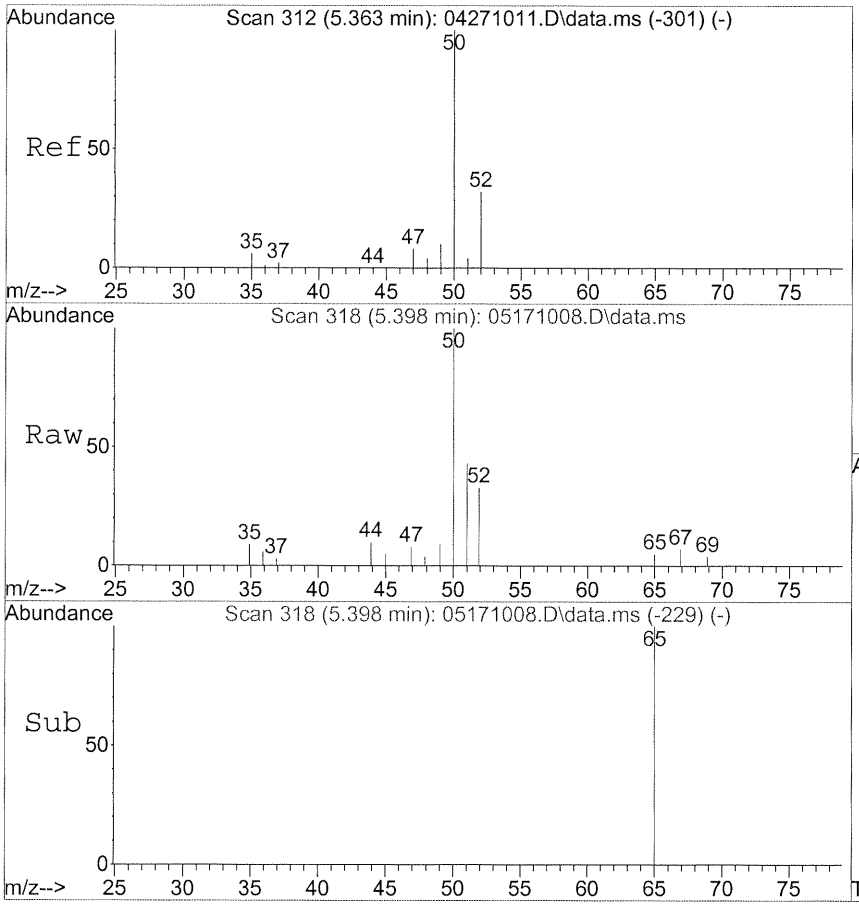

TIC: 05171008.D\data.ms

(2) Propene (T)

4.878min (-0.023) 31.51ng

response 722844

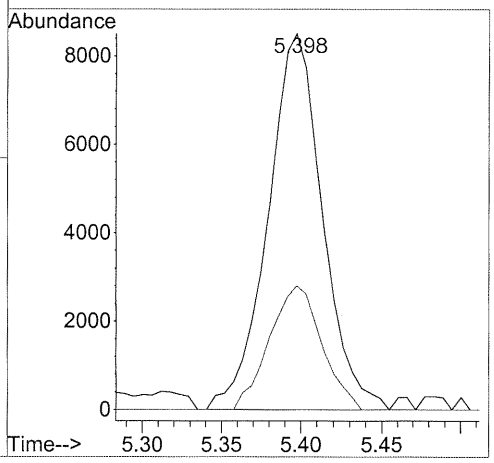
| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 112.20 | 123.05 |
| 41.10 | 153.90 | 155.99 |
| 0.00 | 0.00 | 0.00 |

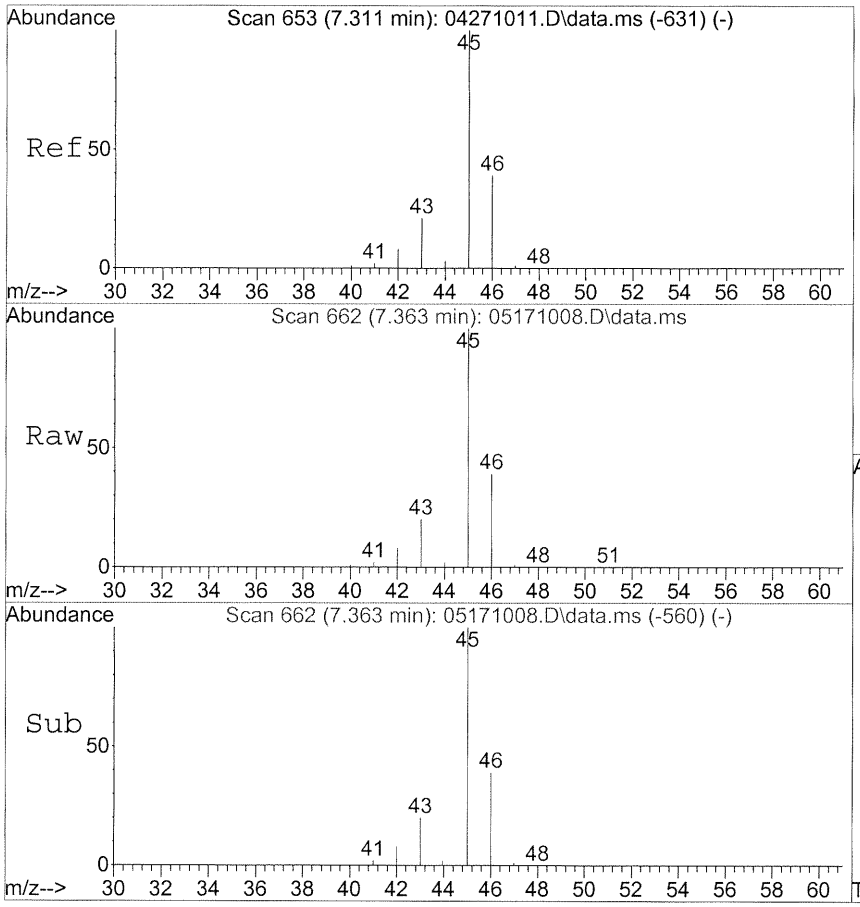



#4
Chloromethane
Concen: 0.62 ng
RT: 5.40 min Scan# 318
Delta R.T. 0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 50 Resp: 20122

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.5 | 12.1 | 52.1 |

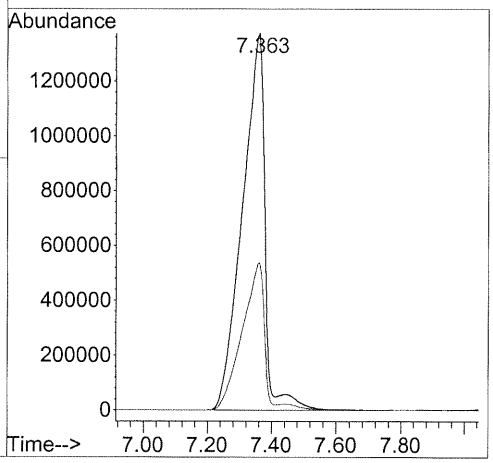


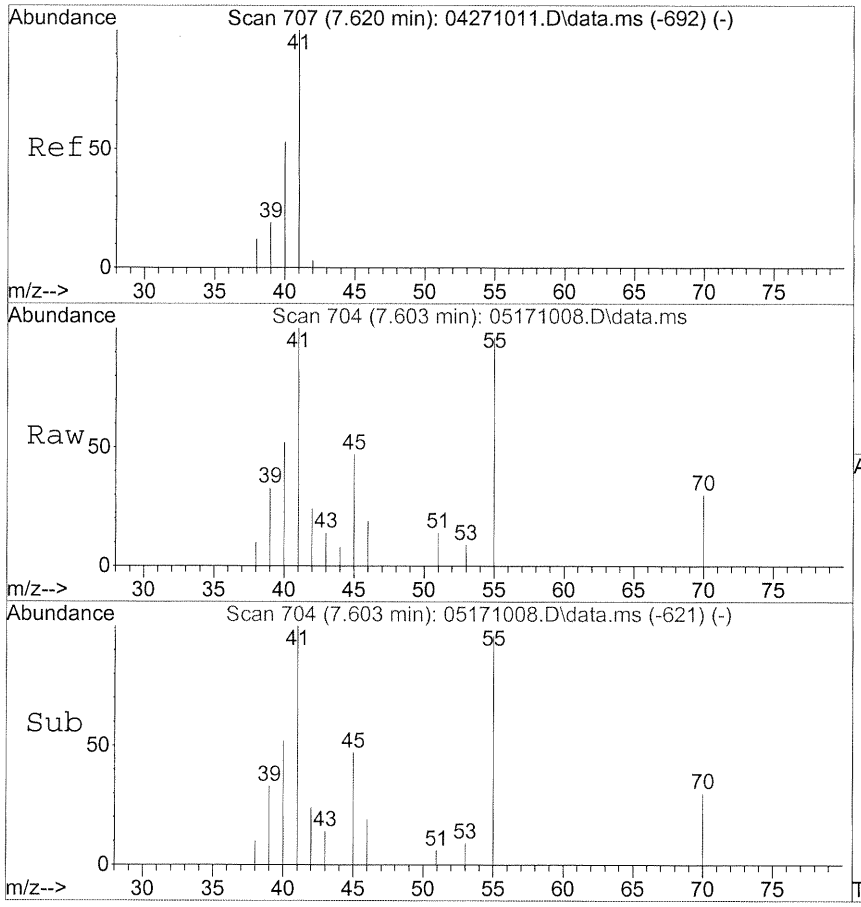




#10
Ethanol
Concen: 481.93 ng
RT: 7.36 min Scan# 662
Delta R.T. 0.080 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 45 Resp: 6734810

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 39.0 | 18.4 | 58.4 |

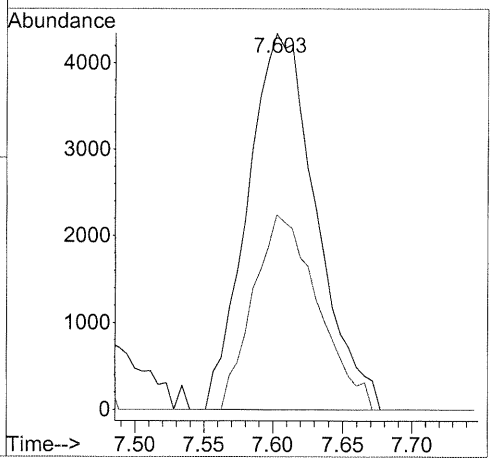


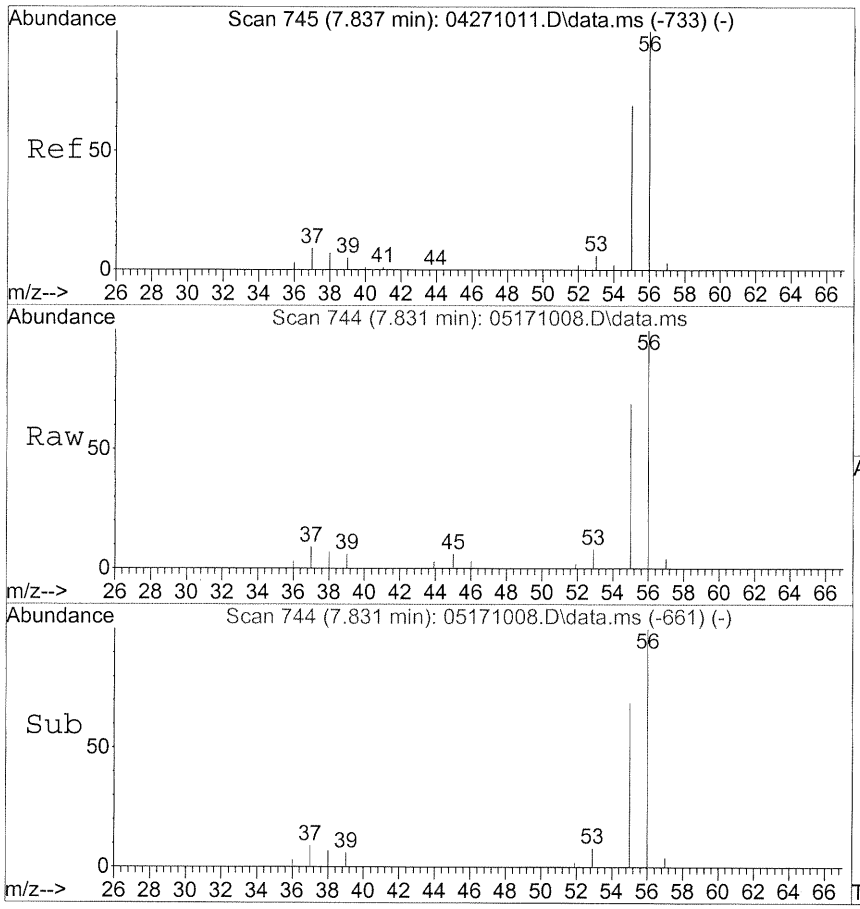



#11
Acetonitrile
Concen: 0.44 ng
RT: 7.60 min Scan# 704
Delta R.T. -0.028 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 41 Resp: 14932

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 40 | 48.7 | 32.7 | 72.7 |

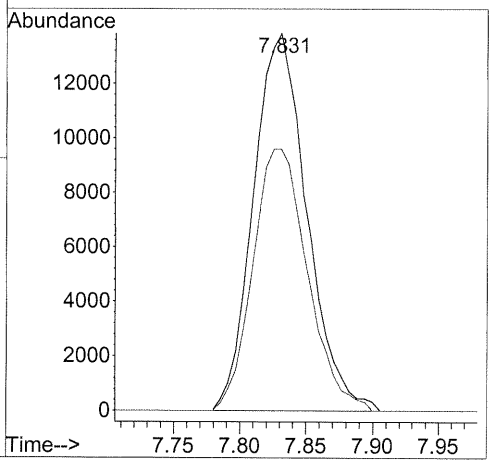


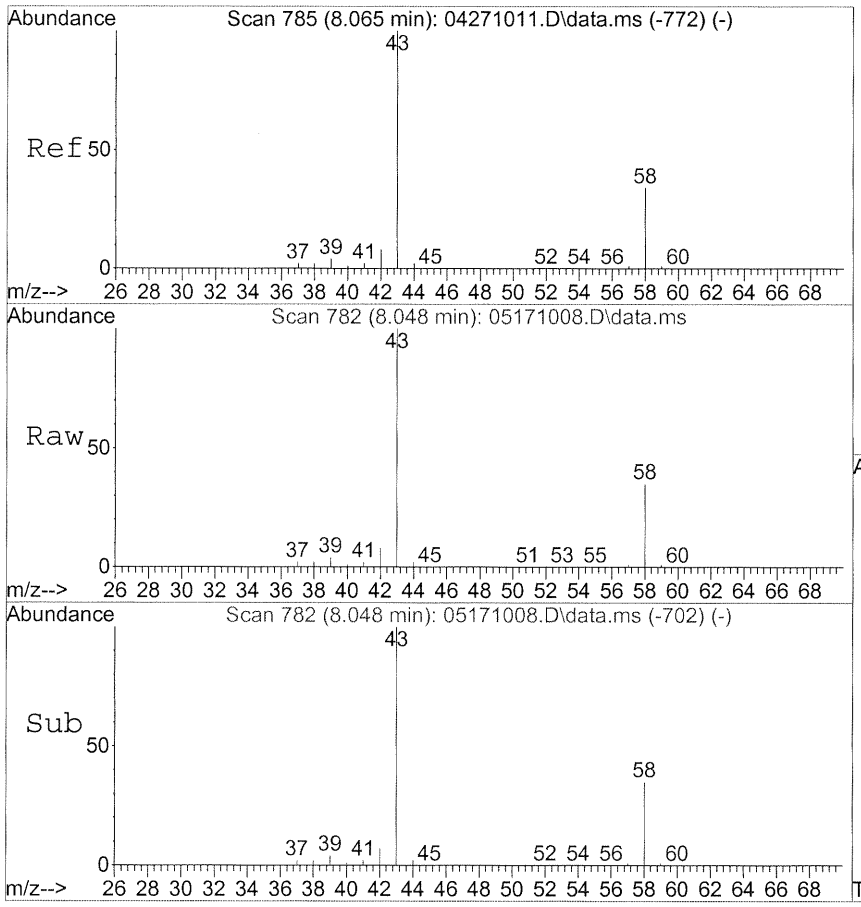




#12
Acrolein
Concen: 2.82 ng
RT: 7.83 min Scan# 744
Delta R.T. -0.028 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 56 Resp: 38832

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 55 | 70.8 | 50.5 | 90.5 |

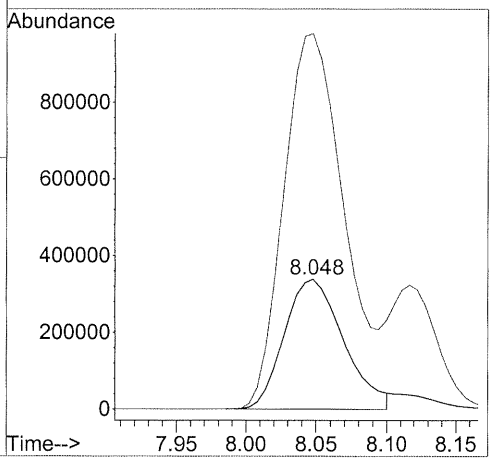


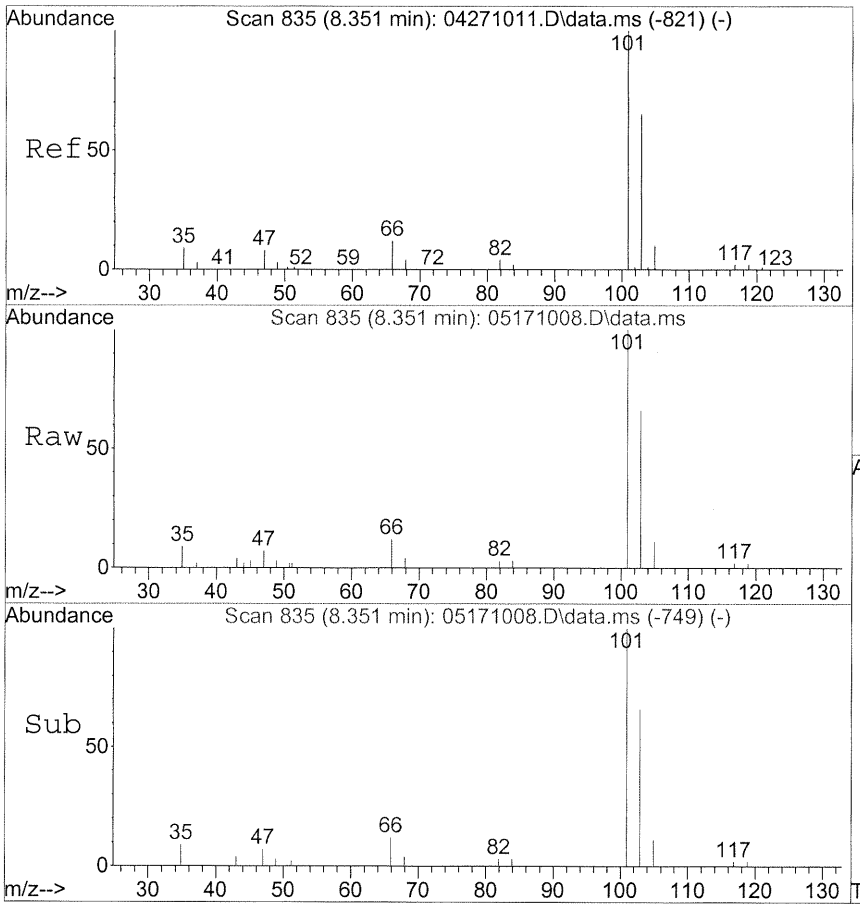



#13
Acetone
Concen: 54.98 ng m
RT: 8.05 min Scan# 782
Delta R.T. -0.046 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 58 Resp: 981881

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 294.1 | 295.0 | 355.0# |

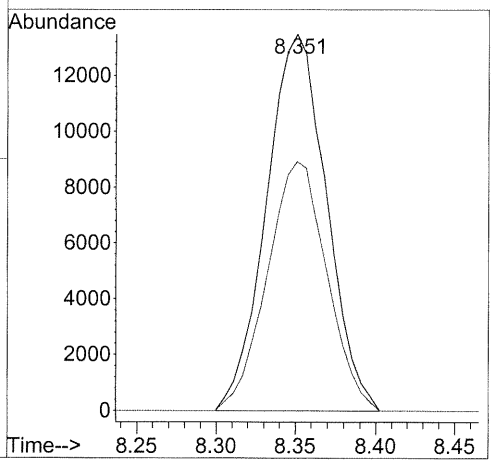


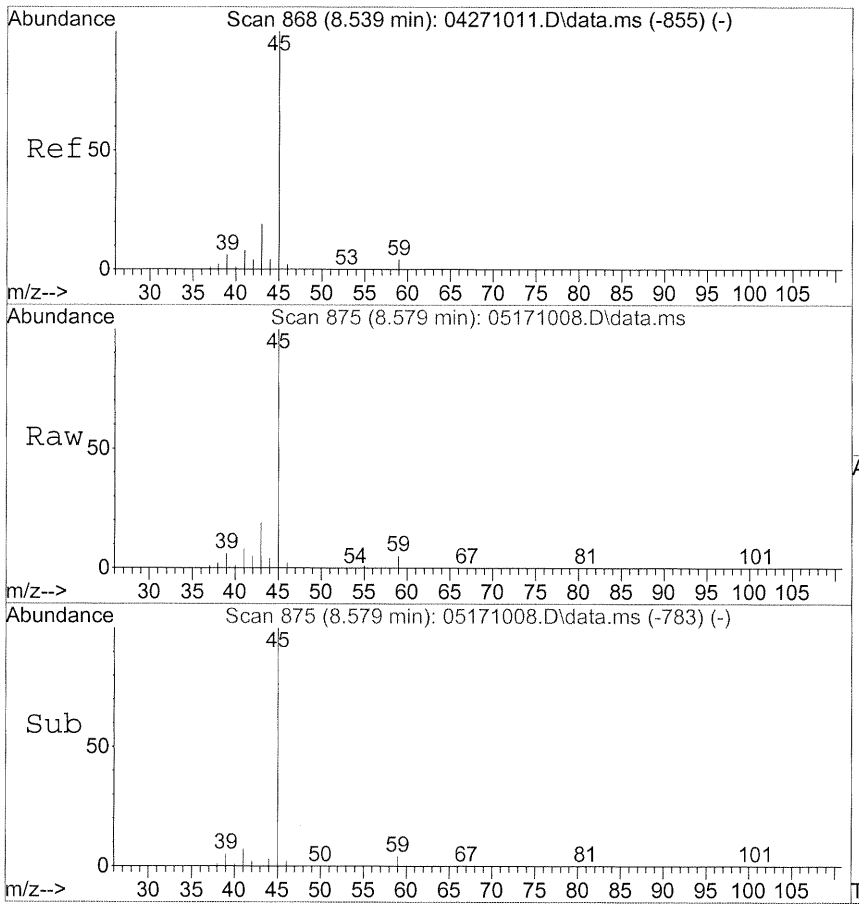




#14
Trichlorofluoromethane
Concen: 0.72 ng
RT: 8.35 min Scan# 835
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:101 Resp: 35261

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 65.6 | 43.8 | 83.8 |

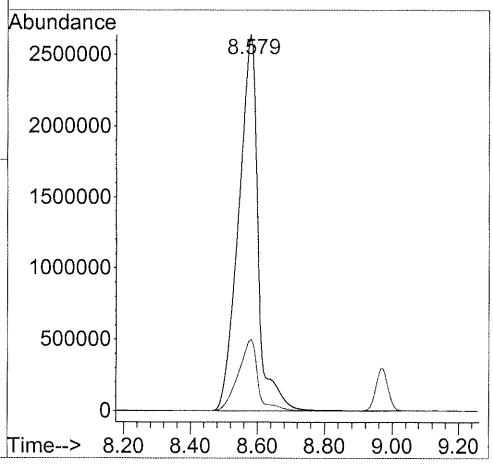


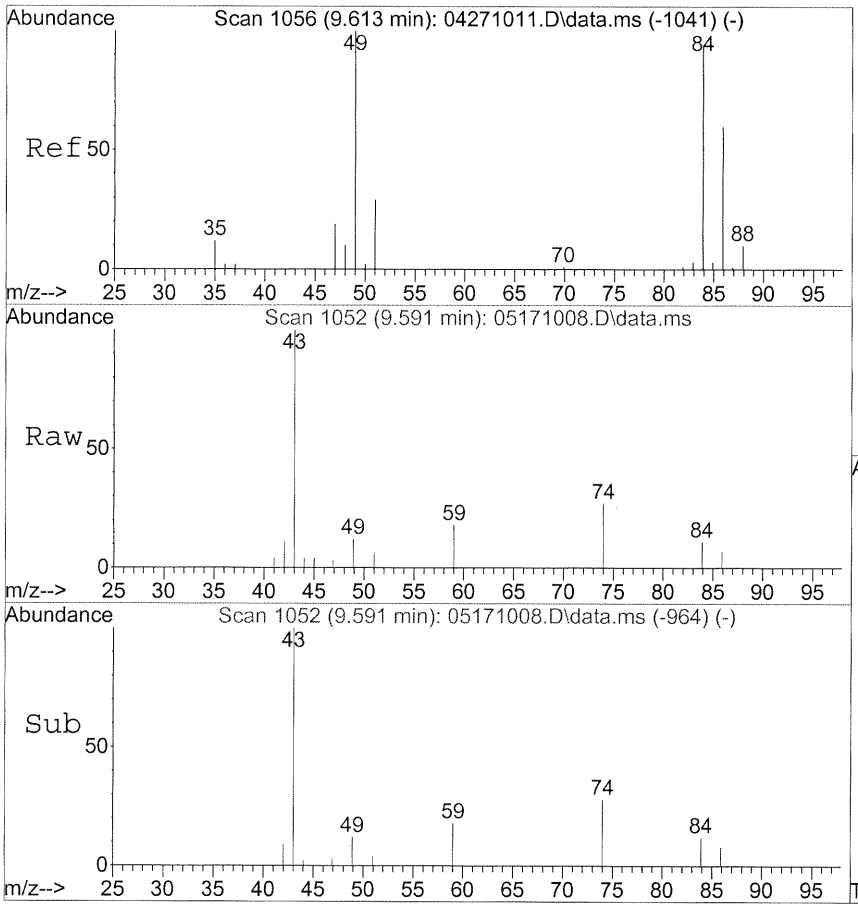



#15
2-Propanol (Isopropanol)
Concen: 204.63 ng
RT: 8.58 min Scan# 875
Delta R.T. 0.023 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 45 Resp:10646923

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 18.8 | 0.0 | 39.2 |

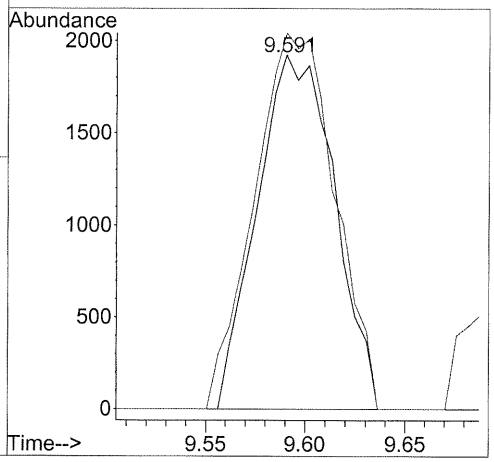


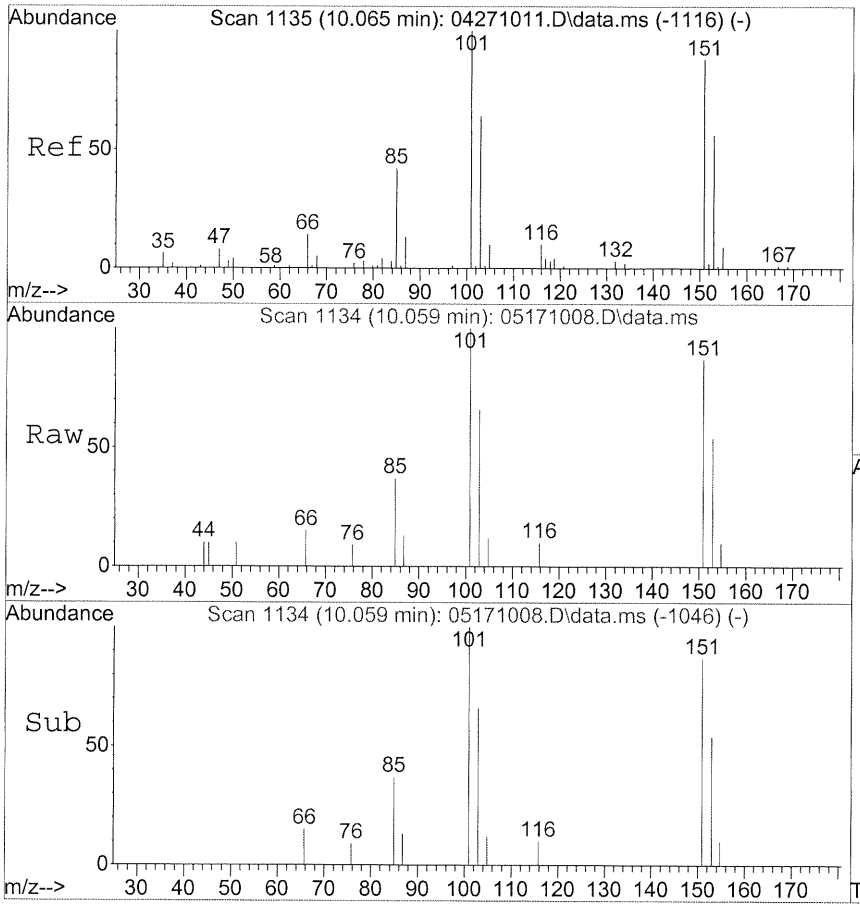




#19
Methylene Chloride
Concen: 0.19 ng
RT: 9.59 min Scan# 1052
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 84 Resp: 5192

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 110.7 | 116.6 | 166.6# |

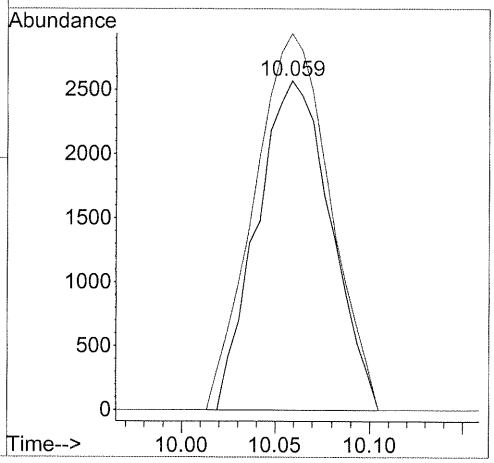


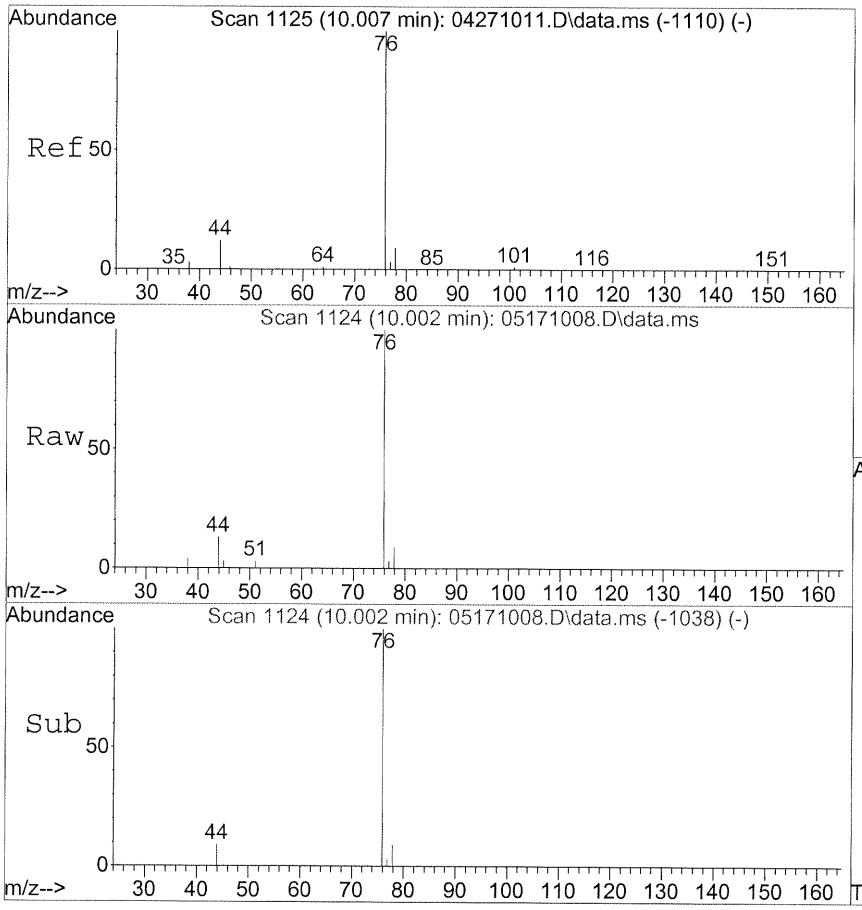



#21
Trichlorotrifluoroethane
Concen: 0.28 ng
RT: 10.06 min Scan# 1134
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:151 Resp: 7000

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 151 | 100 | | |
| 101 | 117.9 | 125.6 | 165.6# |

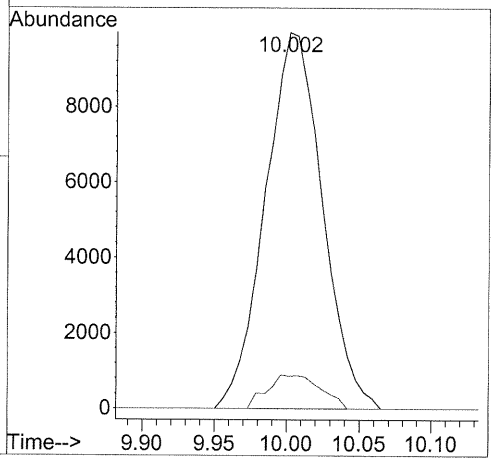


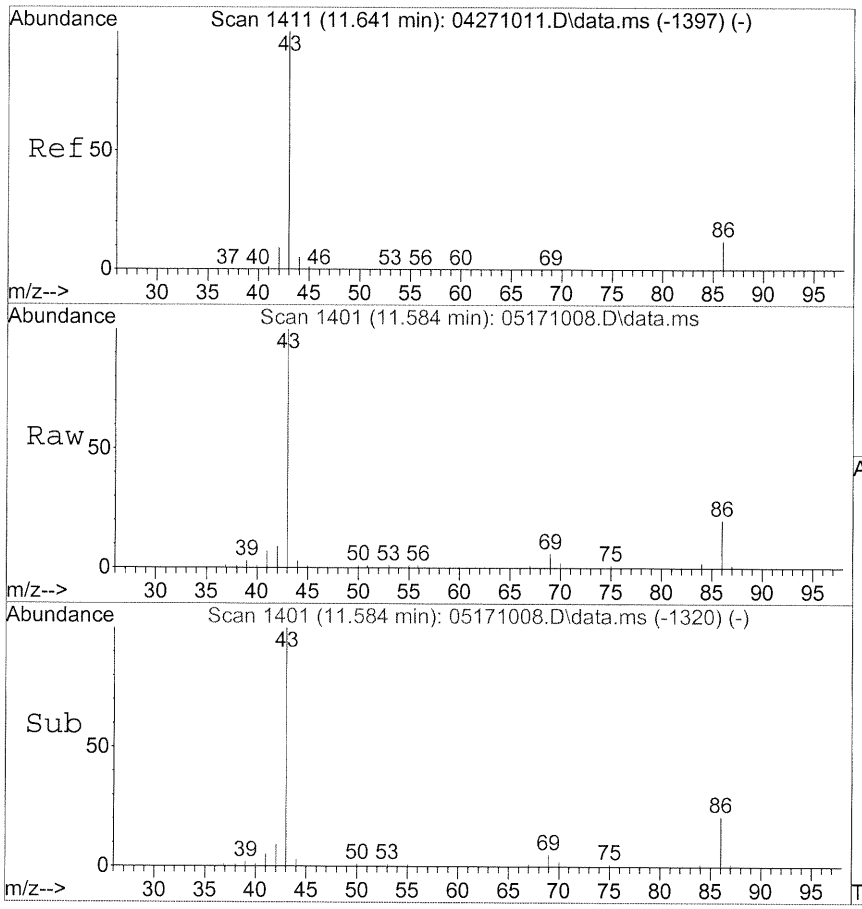




#22
Carbon Disulfide
Concen: 0.31 ng
RT: 10.00 min Scan# 1124
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 76 Resp: 27319

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 8.3 | 0.0 | 29.1 |

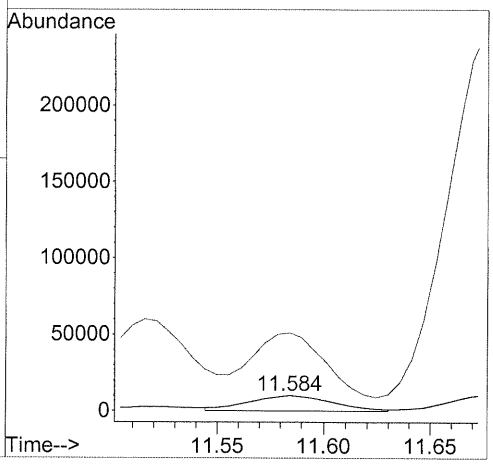


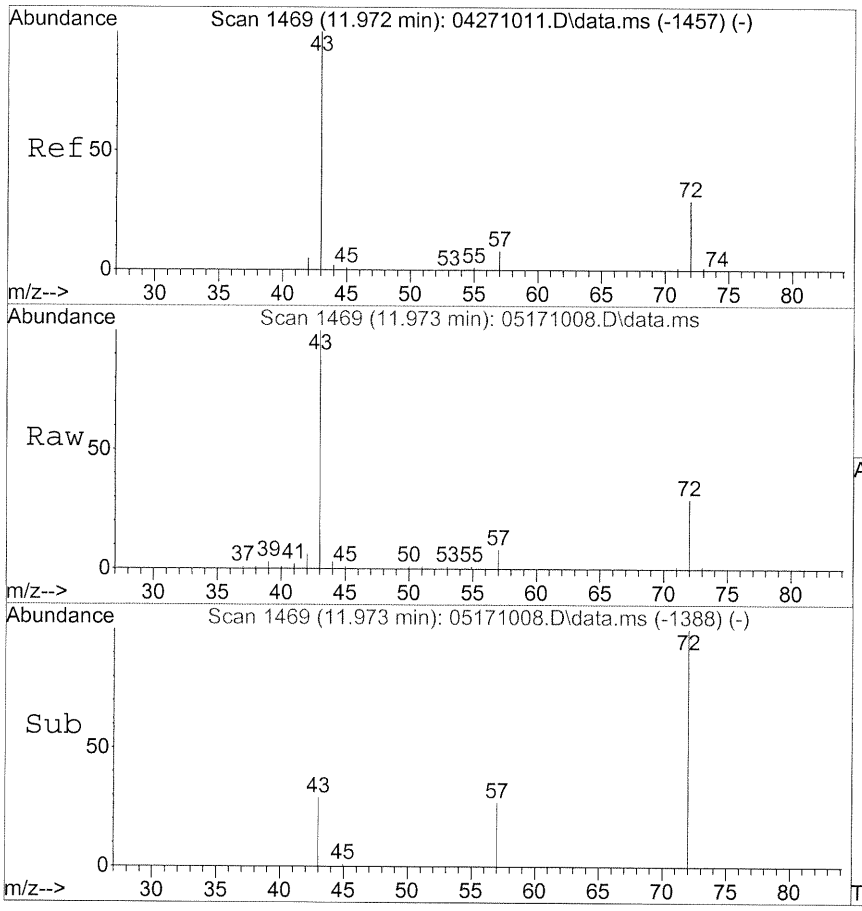



#26
Vinyl Acetate
Concen: 4.34 ng
RT: 11.58 min Scan# 1401
Delta R.T. -0.040 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 86 Resp: 26998

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 86 | 100 | | |
| 43 | 486.6 | 1285.5 | 1325.5# |

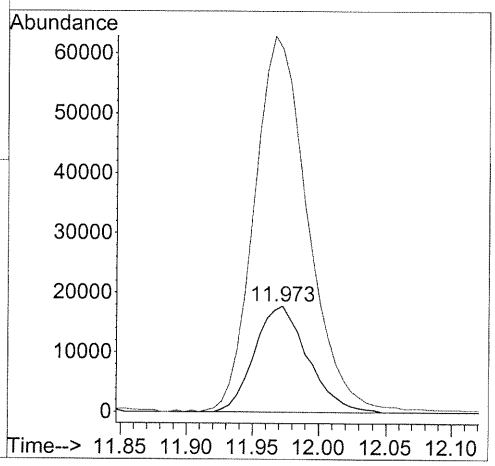


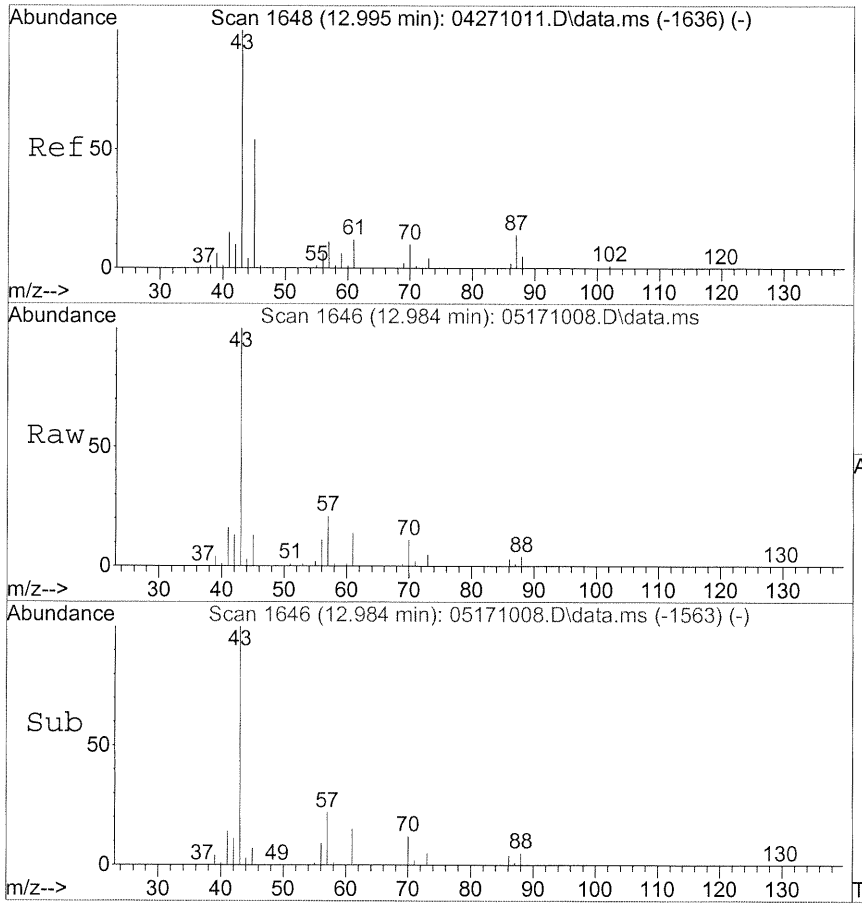




#27
2-Butanone (MEK)
Concen: 3.01 ng
RT: 11.97 min Scan# 1469
Delta R.T. -0.040 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 72 Resp: 49405

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 361.9 | 412.3 | 452.3# |

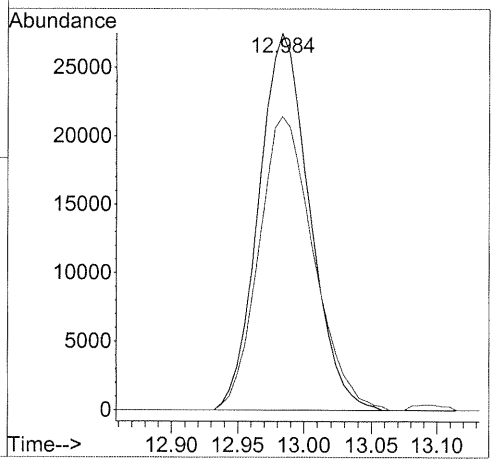


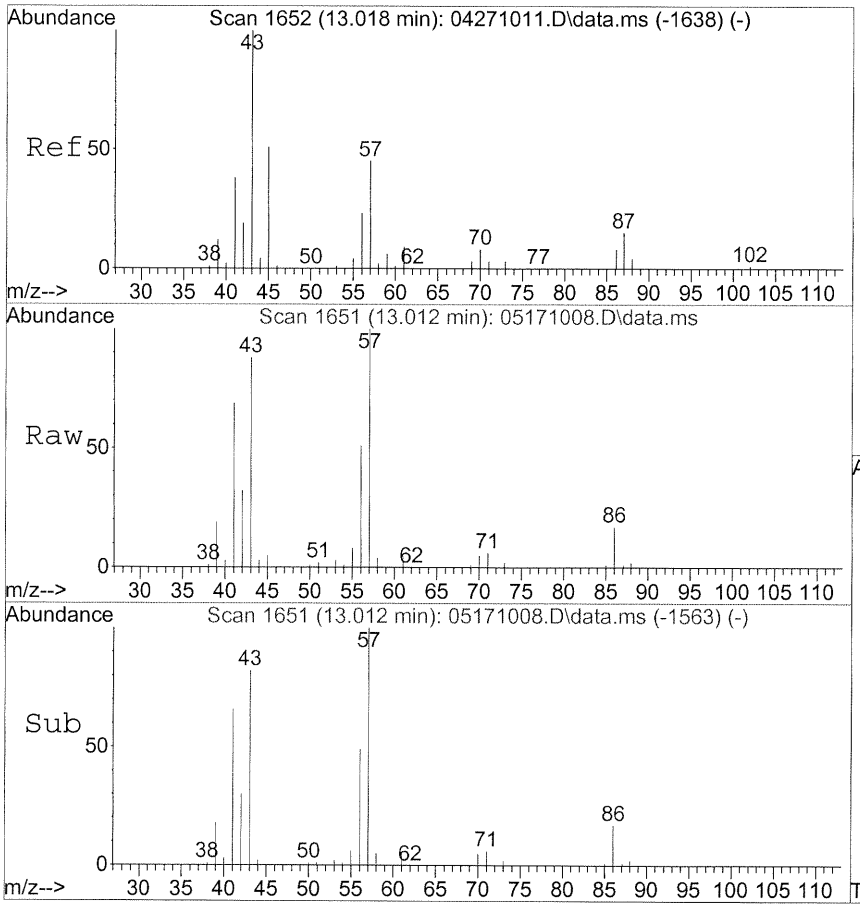



#30
Ethyl Acetate
Concen: 8.41 ng
RT: 12.98 min Scan# 1646
Delta R.T. -0.028 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 61 Resp: 73291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 70 | 83.6 | 52.2 | 92.2 |

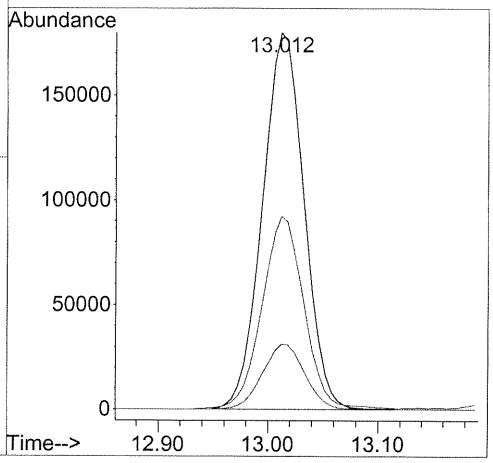


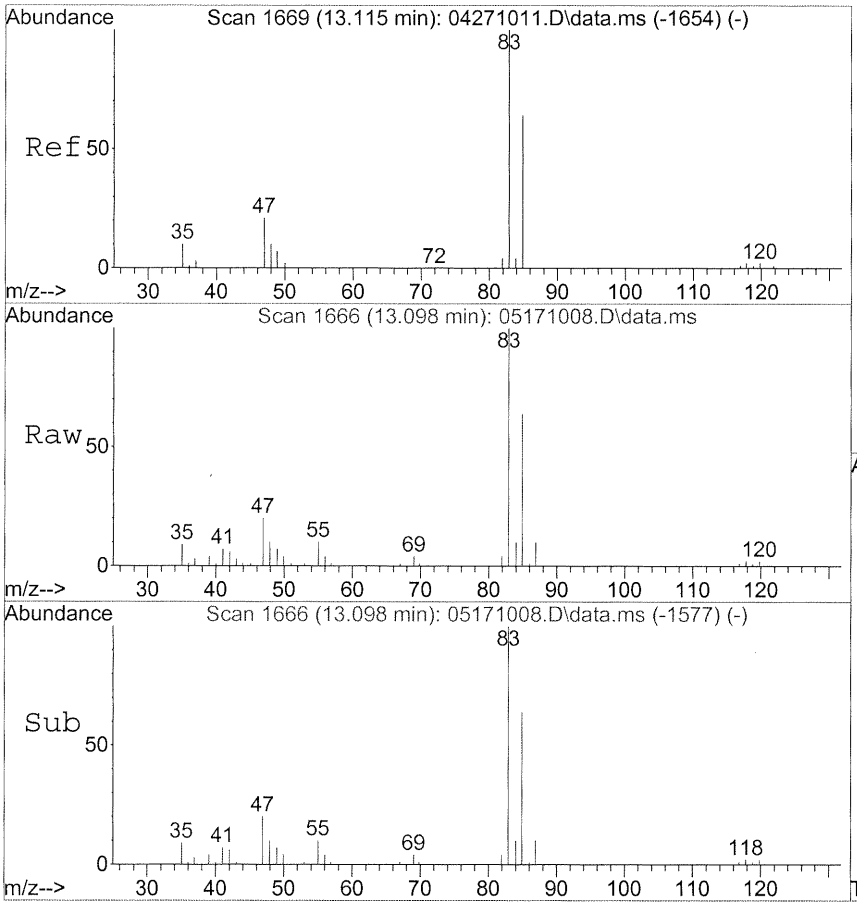




#31
n-Hexane
Concen: 11.47 ng
RT: 13.01 min Scan# 1651
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 57 Resp: 476029

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 52.0 | 40.0 | 60.0 |
| 86 | 17.7 | 11.5 | 17.3# |

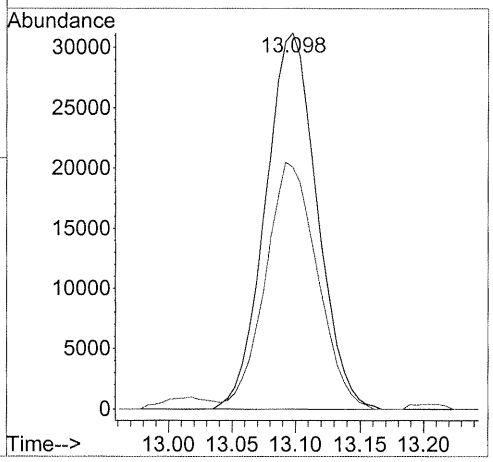


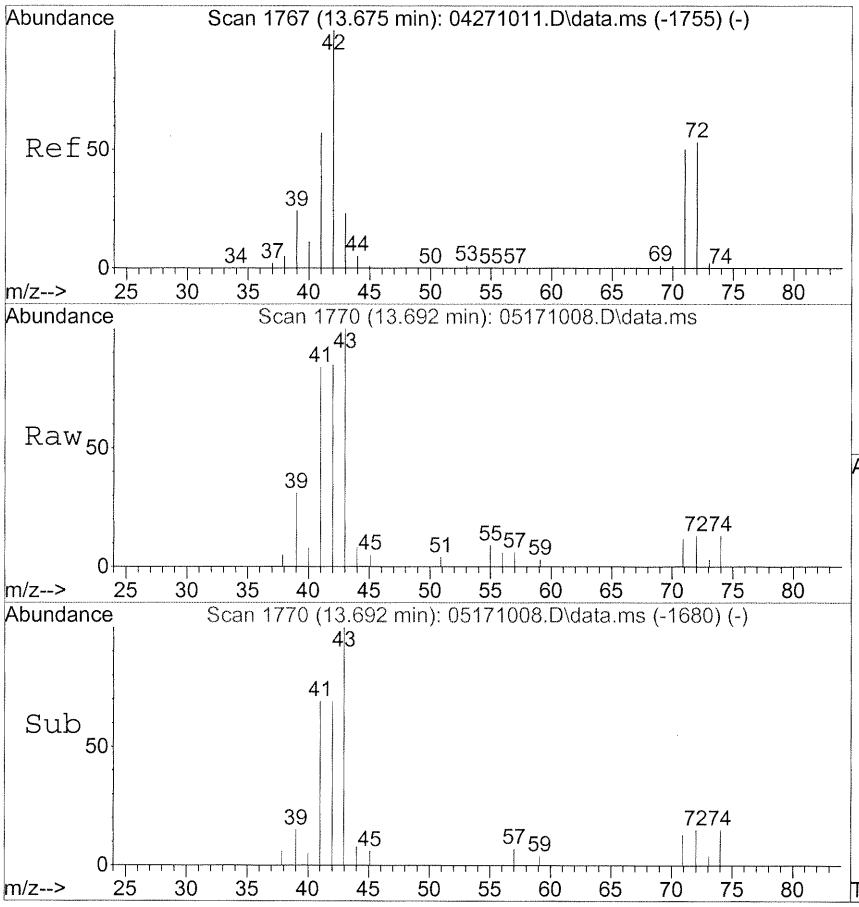



#32
Chloroform
Concen: 1.99 ng
RT: 13.10 min Scan# 1666
Delta R.T. 0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 83 Resp: 87912

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.8 | 44.0 | 84.0 |

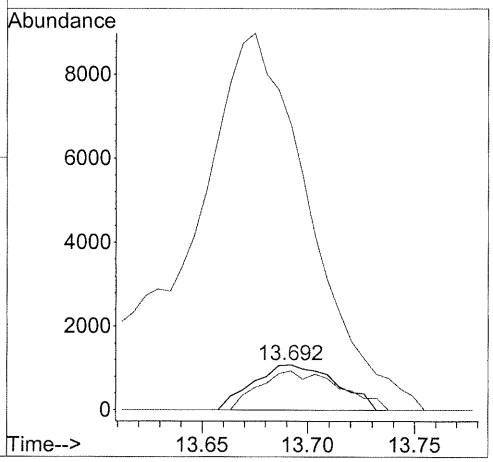


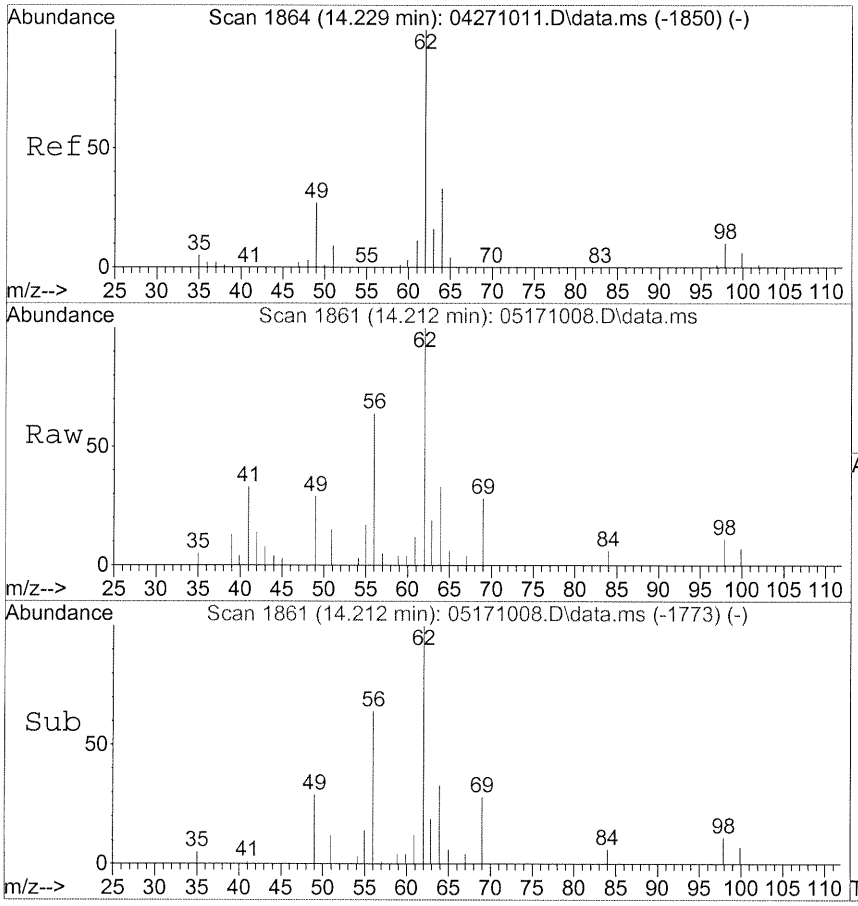




#34
Tetrahydrofuran (THF)
Concen: 0.18 ng
RT: 13.69 min Scan# 1770
Delta R.T. 0.012 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 72 Resp: 2927

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 71 | 84.2 | 76.0 | 116.0 |
| 42 | 1233.4 | 231.9 | 271.9# |

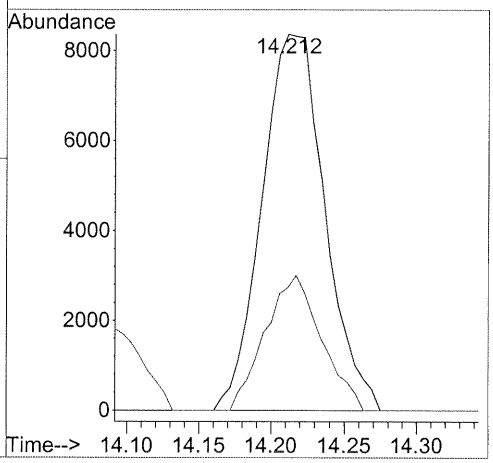


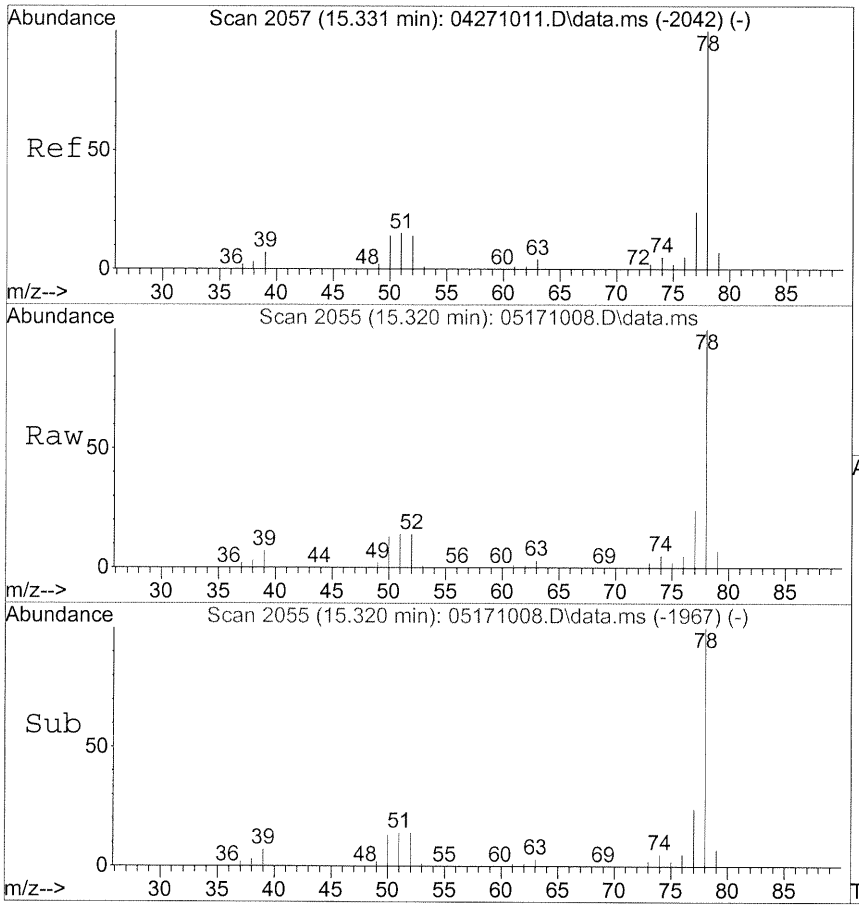



#36
1,2-Dichloroethane
Concen: 0.76 ng
RT: 14.21 min Scan# 1861
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 62 Resp: 25018

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.2 | 12.0 | 52.0 |

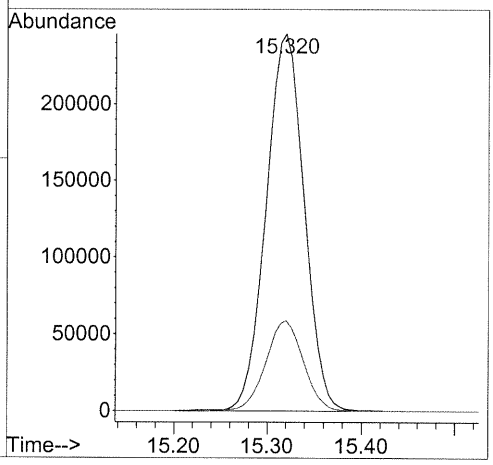


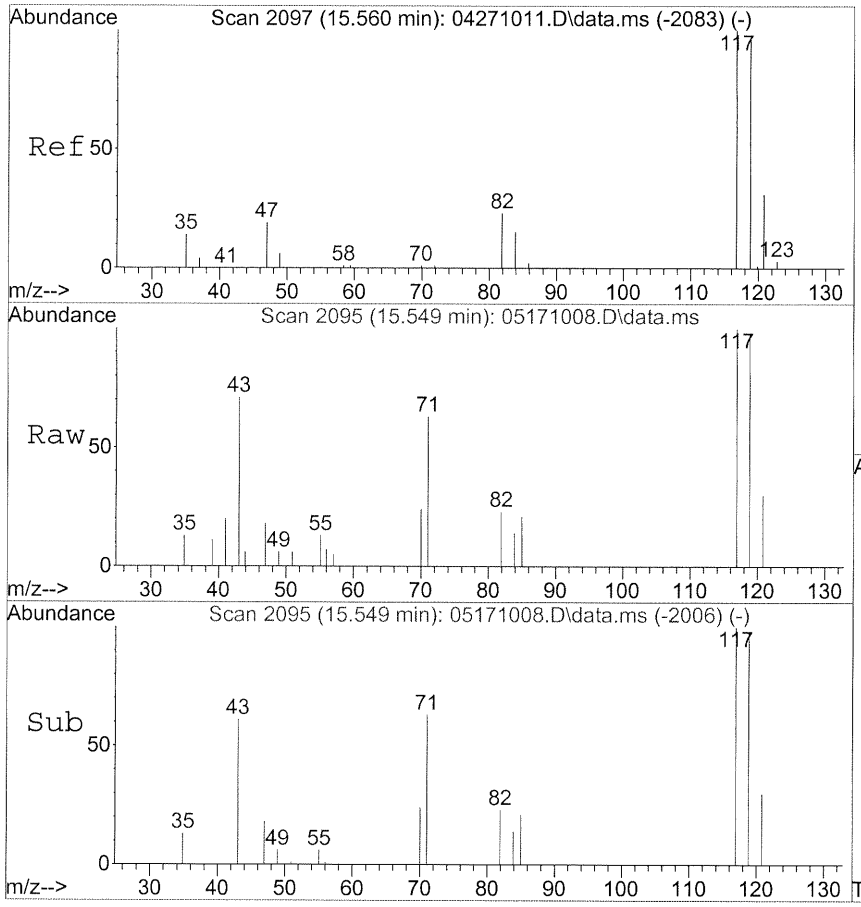




#41
Benzene
Concen: 6.30 ng
RT: 15.32 min Scan# 2055
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 78 Resp: 692218

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.5 | 4.4 | 44.4 |

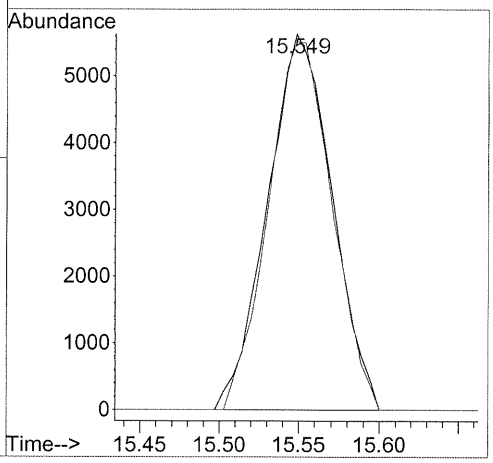


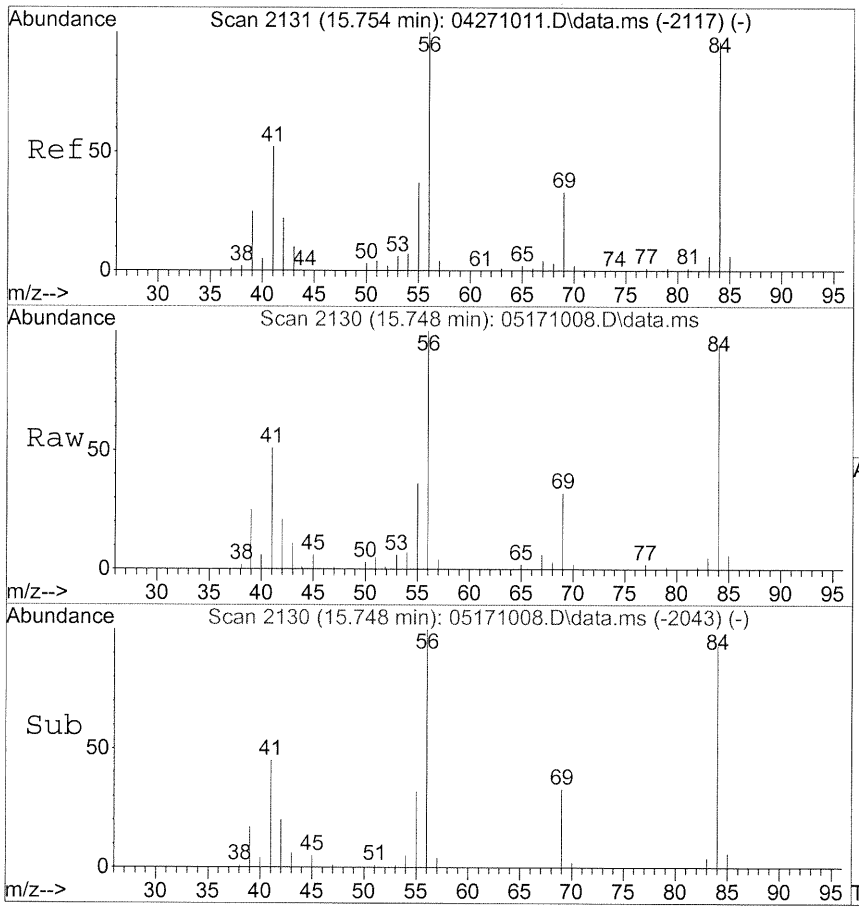



#42
Carbon Tetrachloride
Concen: 0.47 ng
RT: 15.55 min Scan# 2095
Delta R.T. 0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:117 Resp: 15730

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 96.9 | 75.8 | 115.8 |

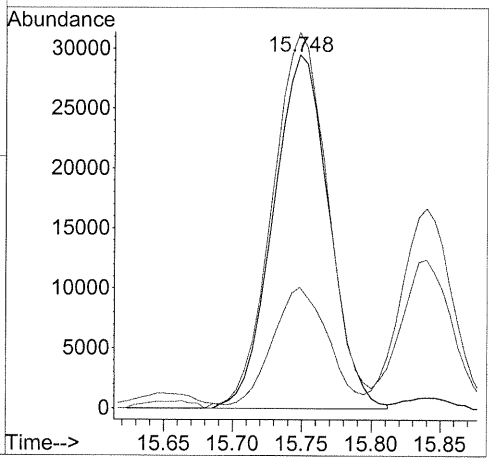


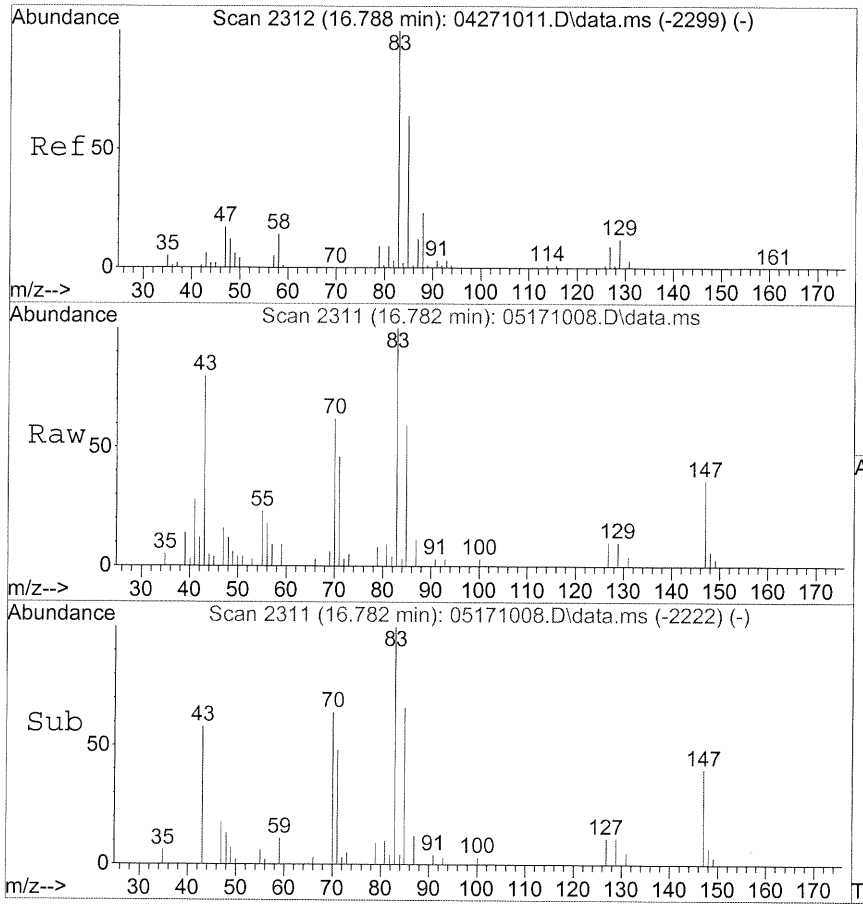




#43
Cyclohexane
Concen: 2.01 ng
RT: 15.75 min Scan# 2130
Delta R.T. -0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 84 Resp: 82239

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 69 | 34.6 | 18.4 | 58.4 |
| 56 | 106.9 | 112.6 | 152.6# |

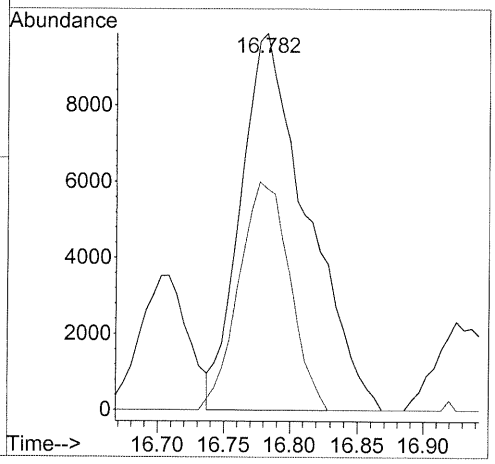


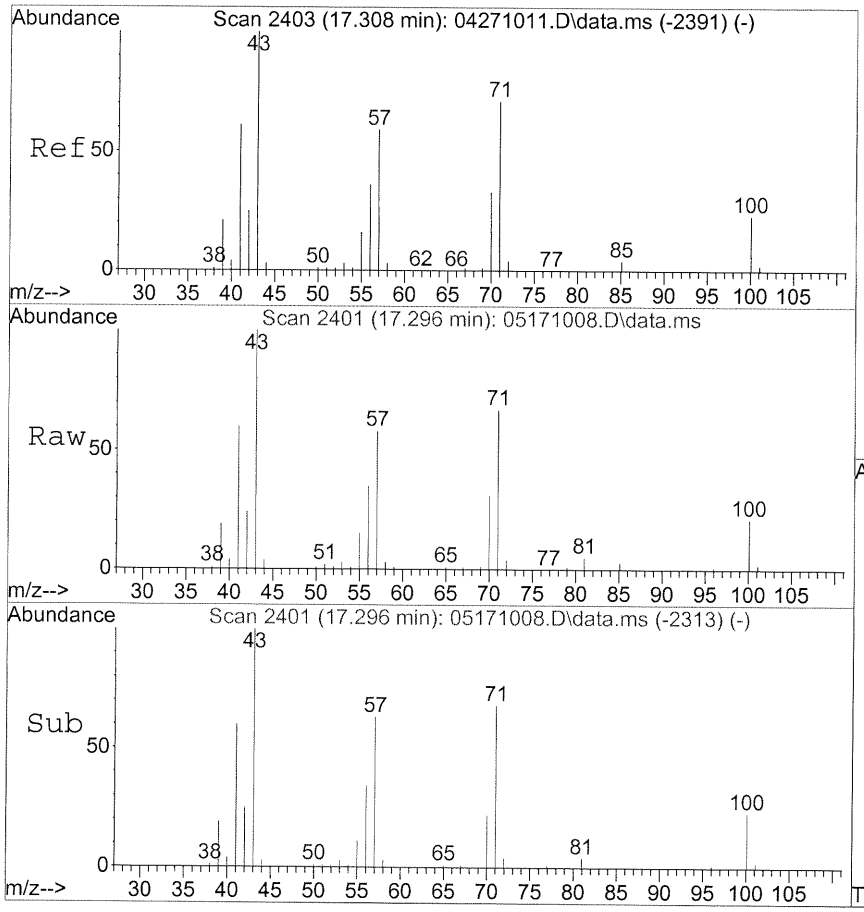



#46
Bromodichloromethane
Concen: 1.05 ng
RT: 16.78 min Scan# 2311
Delta R.T. 0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 83 Resp: 34502

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 46.6 | 42.8 | 82.8 |

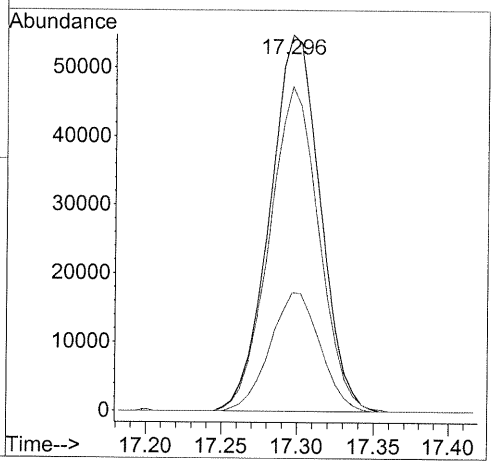


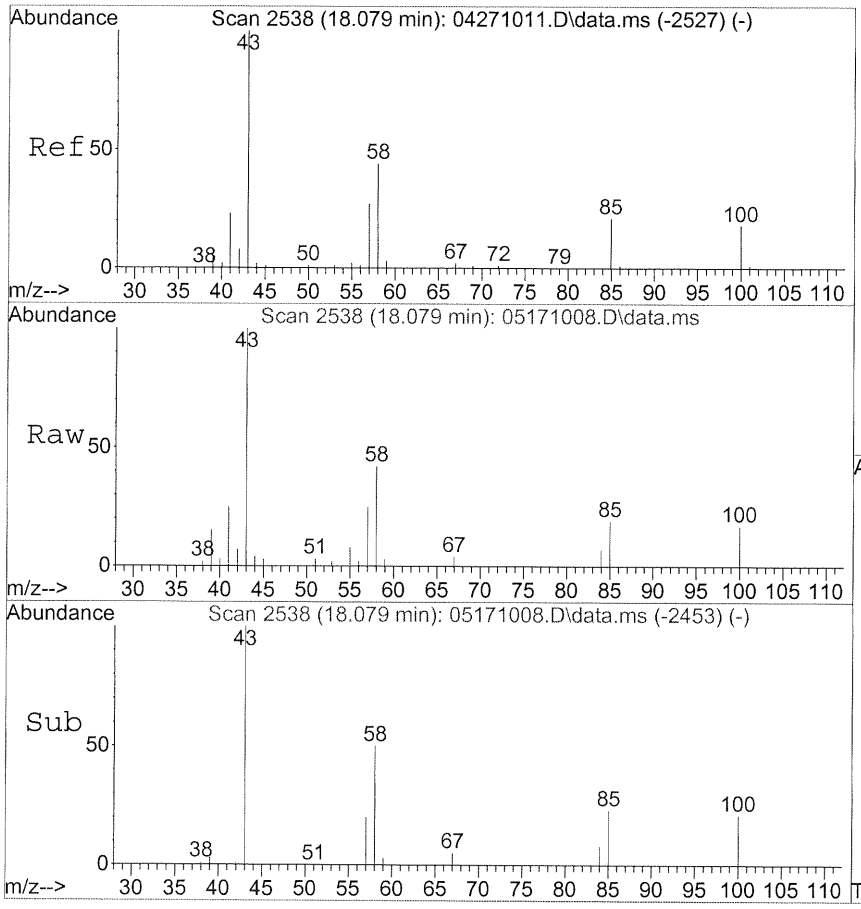




#51
n-Heptane
Concen: 4.83 ng
RT: 17.30 min Scan# 2401
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 71 Resp: 126216

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 71 | 100 | | |
| 57 | 84.9 | 74.9 | 114.9 |
| 100 | 31.2 | 5.0 | 45.0 |

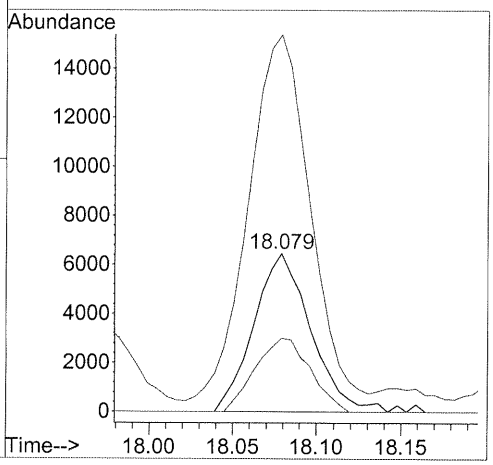


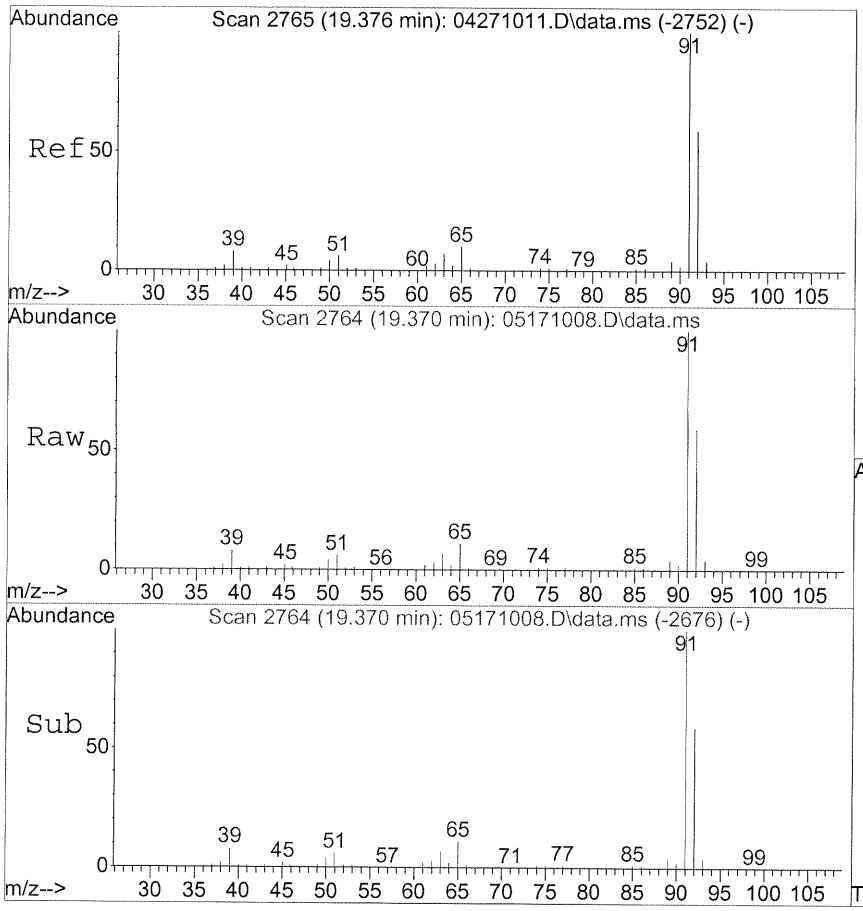



#53
4-Methyl-2-pentanone
Concen: 0.73 ng
RT: 18.08 min Scan# 2538
Delta R.T. -0.017 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 58 Resp: 15234

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 255.4 | 207.1 | 310.7 |
| 85 | 44.7 | 31.4 | 47.2 |

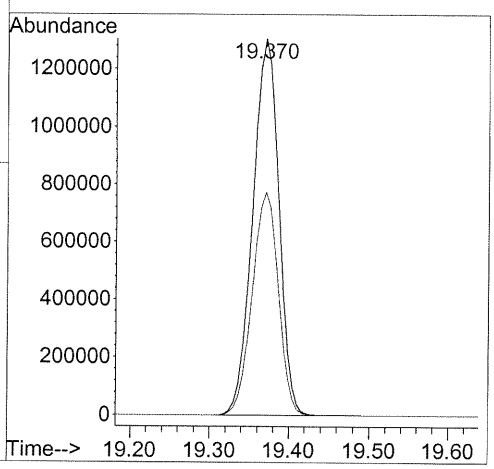


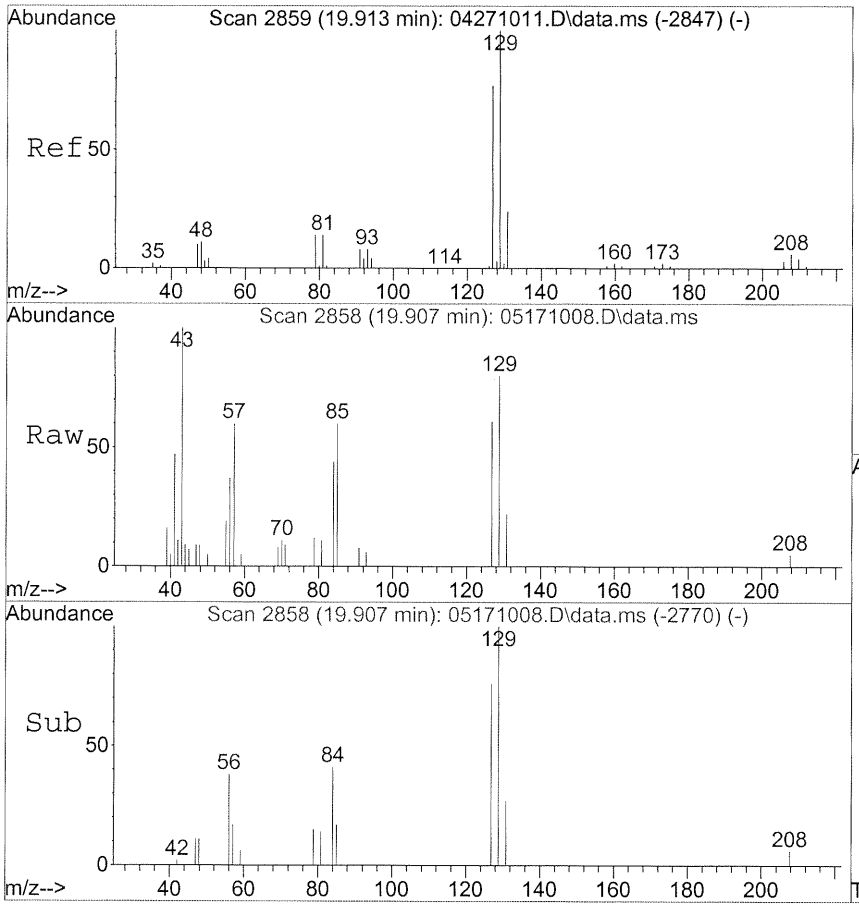




#58
Toluene
Concen: 26.05 ng
RT: 19.37 min Scan# 2764
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 91 Resp: 2981301

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.3 | 37.6 | 77.6 |

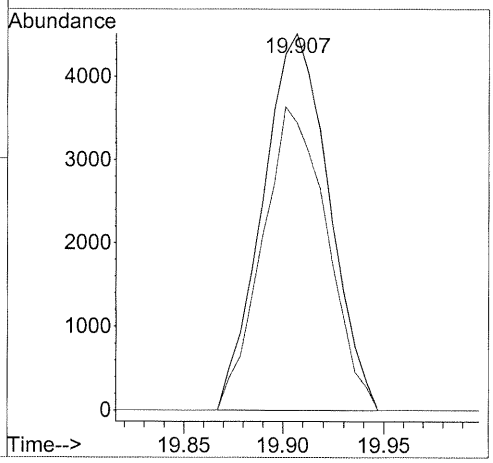


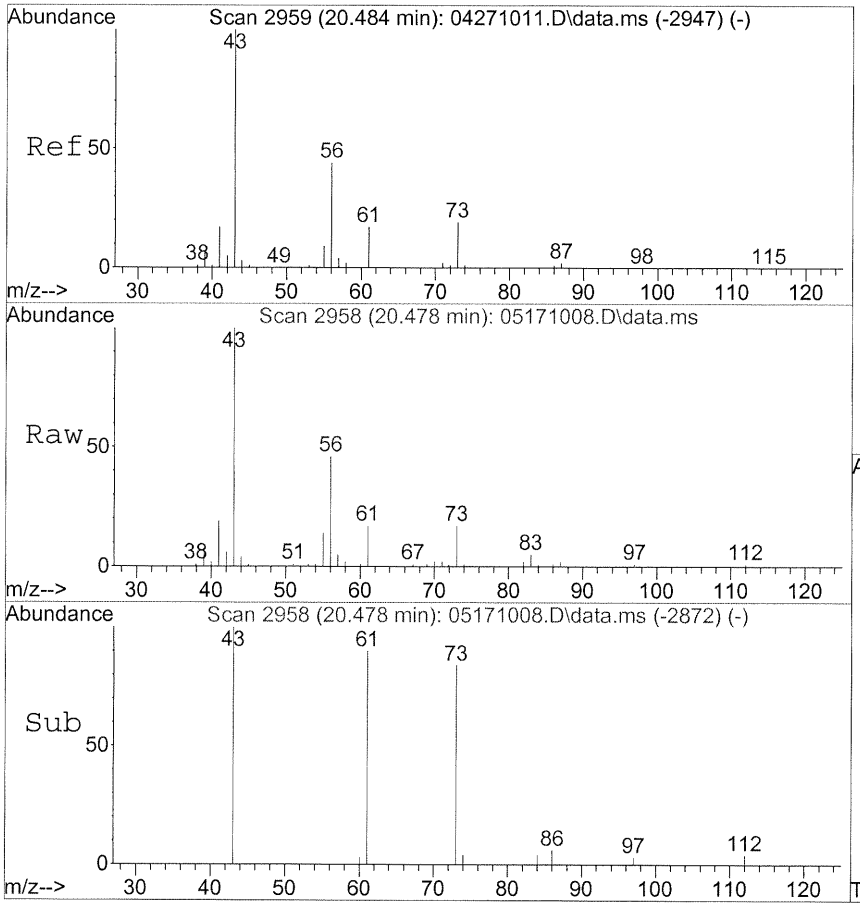



#60
Dibromochloromethane
Concen: 0.38 ng
RT: 19.91 min Scan# 2858
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:129 Resp: 10323

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 127 | 78.3 | 57.2 | 97.2 |

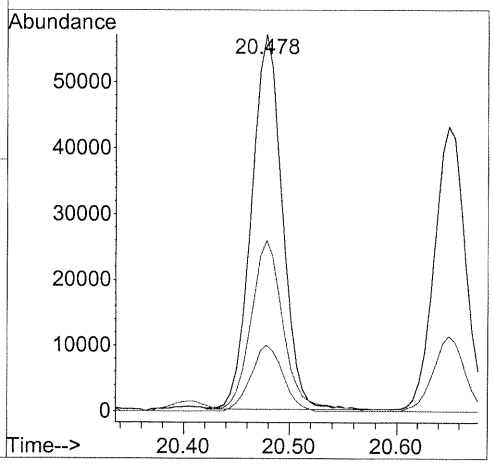


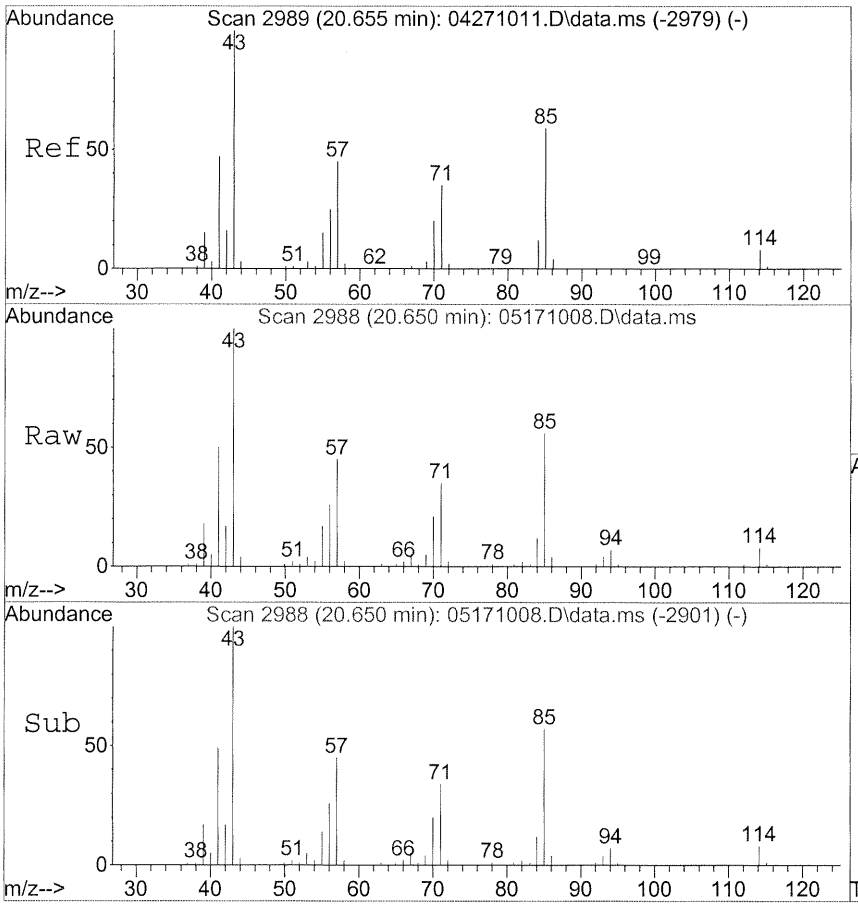




#62
n-Butyl Acetate
Concen: 2.09 ng
RT: 20.48 min Scan# 2958
Delta R.T. -0.011 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 43 Resp: 115646

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 56 | 48.1 | 19.7 | 59.7 |
| 73 | 18.1 | 0.0 | 34.2 |

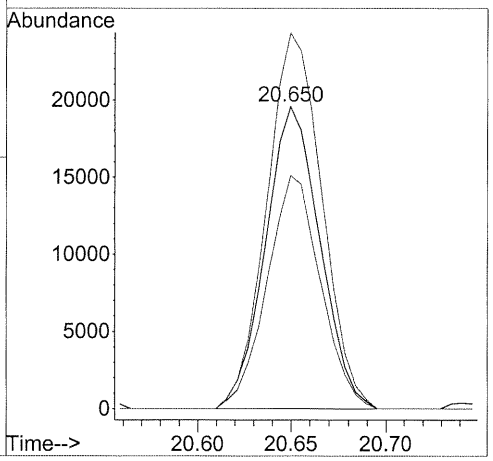


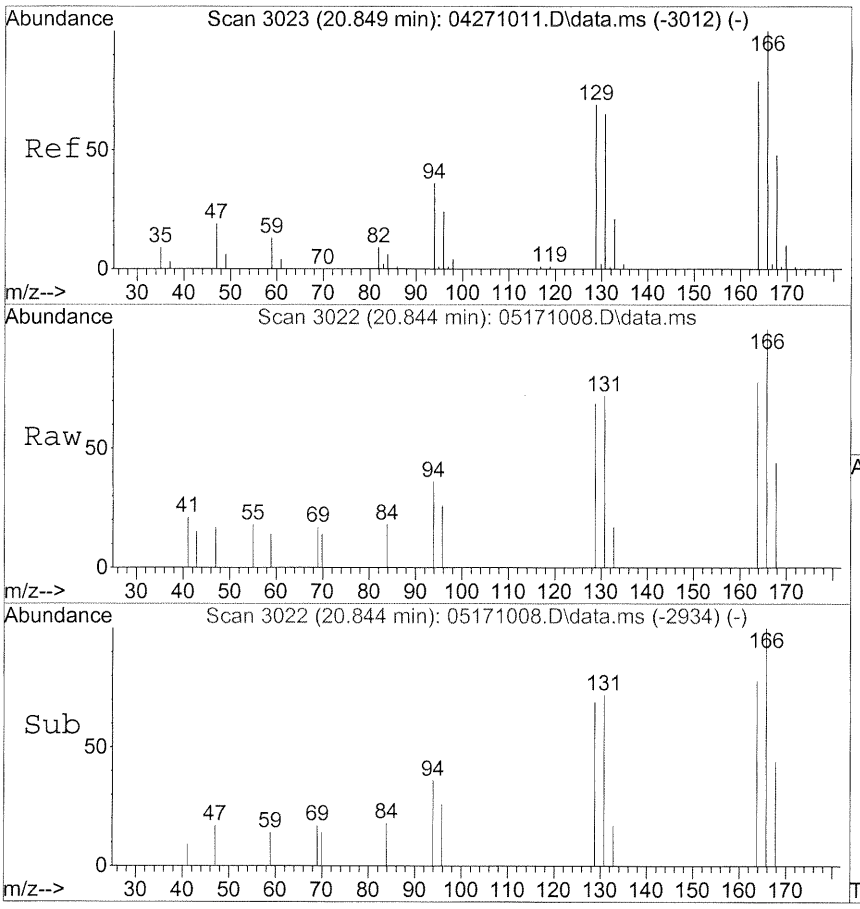



#63
n-Octane
Concen: 1.92 ng
RT: 20.65 min Scan# 2988
Delta R.T. -0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 57 Resp: 39449

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 85 | 125.8 | 81.8 | 122.8# |
| 71 | 75.6 | 55.0 | 82.6 |

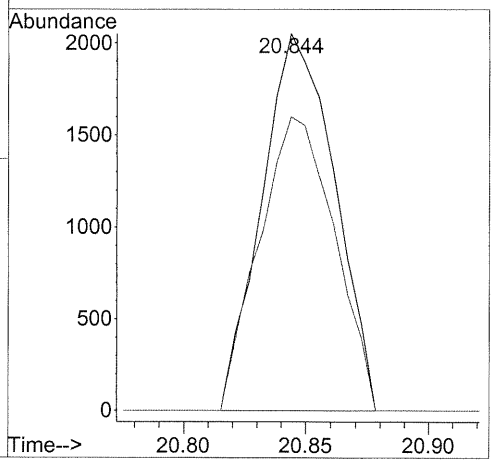


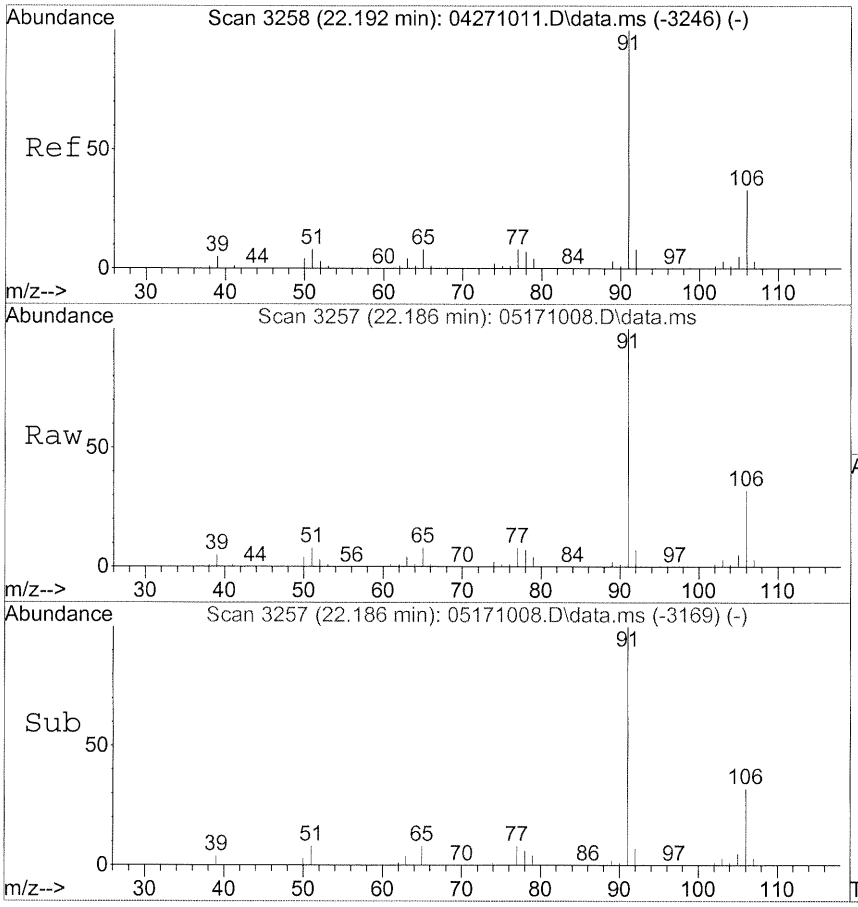




#64
Tetrachloroethene
Concen: 0.12 ng
RT: 20.84 min Scan# 3022
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:166 Resp: 4213

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 80.8 | 58.4 | 98.4 |

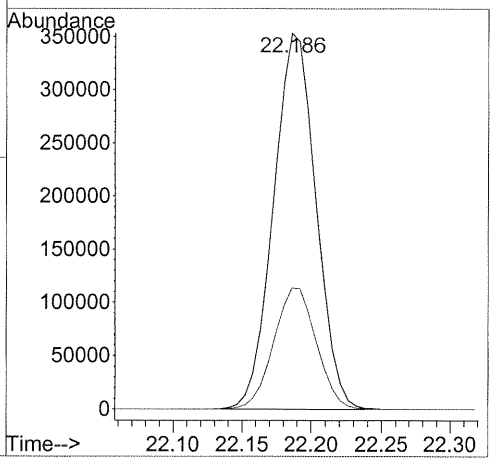


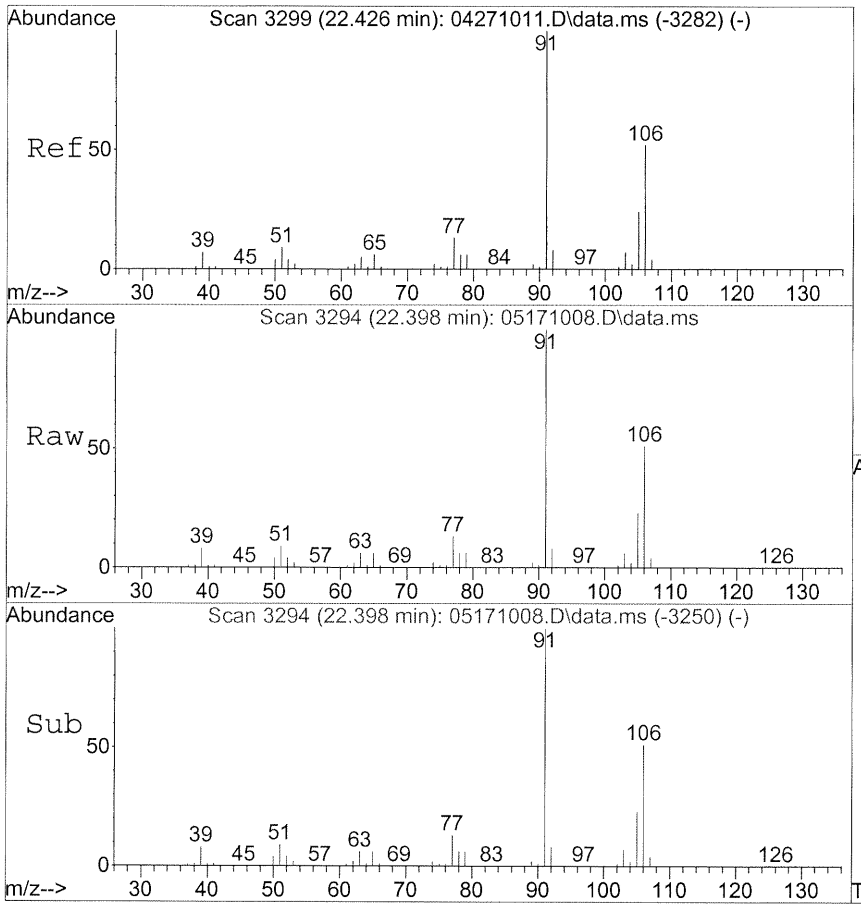



#66
Ethylbenzene
Concen: 5.97 ng
RT: 22.19 min Scan# 3257
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 91 Resp: 749104

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 32.2 | 9.8 | 49.8 |

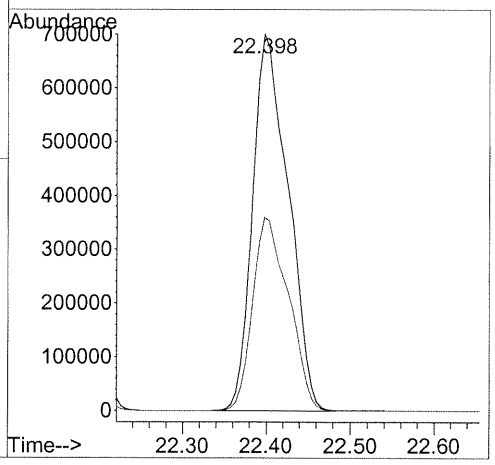


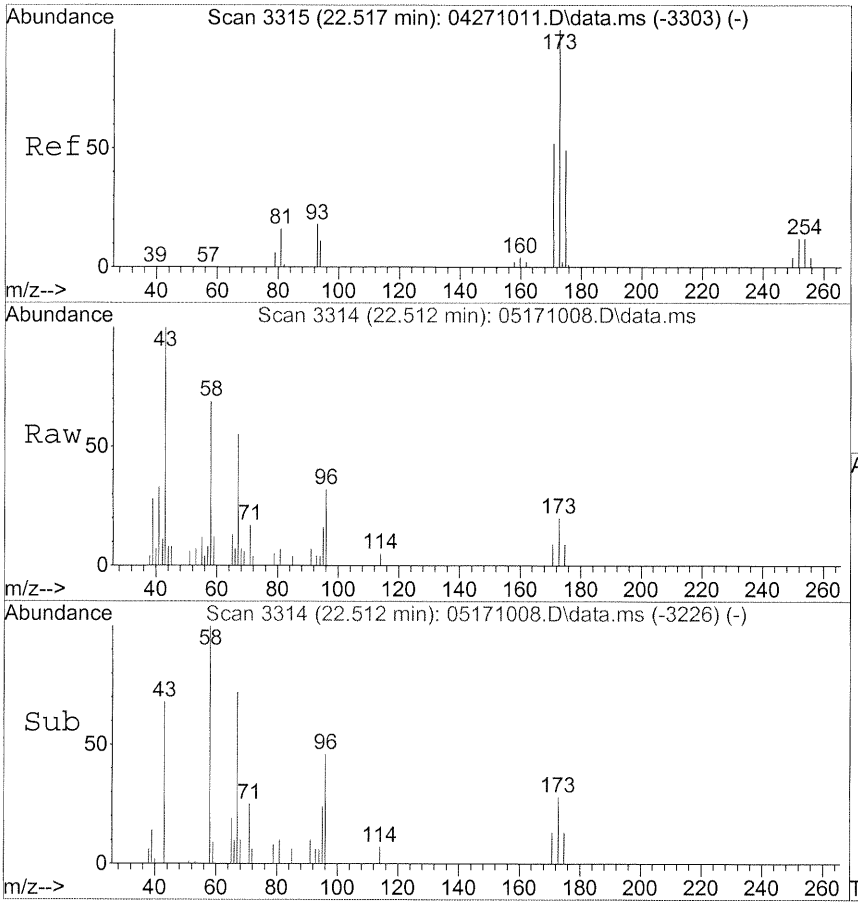




#67
m- & p-Xylenes
Concen: 20.98 ng
RT: 22.40 min Scan# 3294
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 91 Resp: 2079711

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 51.7 | 26.8 | 66.8 |

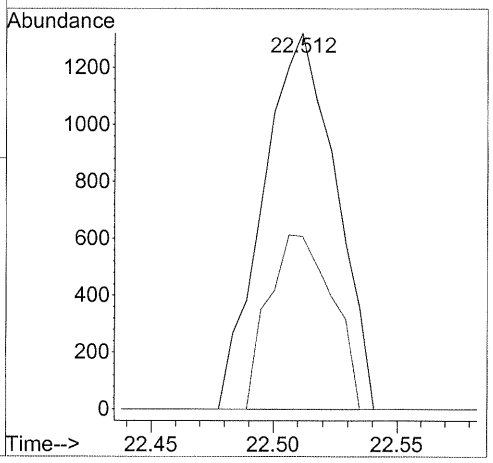


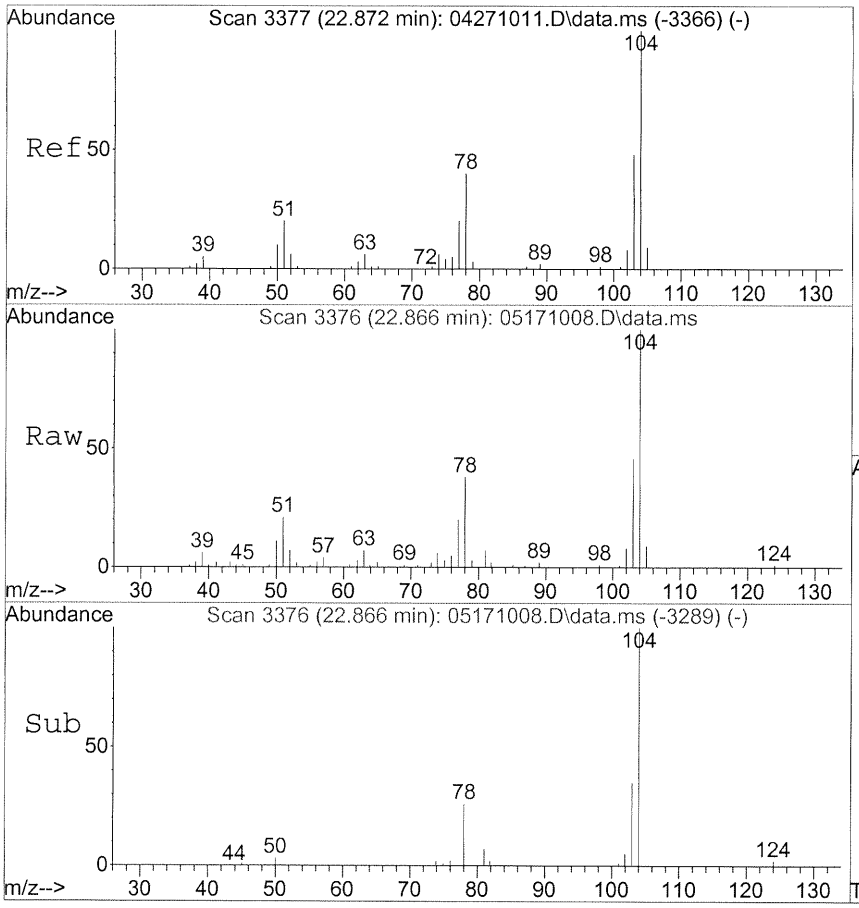



#68
Bromoform
Concen: 0.10 ng
RT: 22.51 min Scan# 3314
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:173 Resp: 2691

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 40.9 | 28.5 | 68.5 |

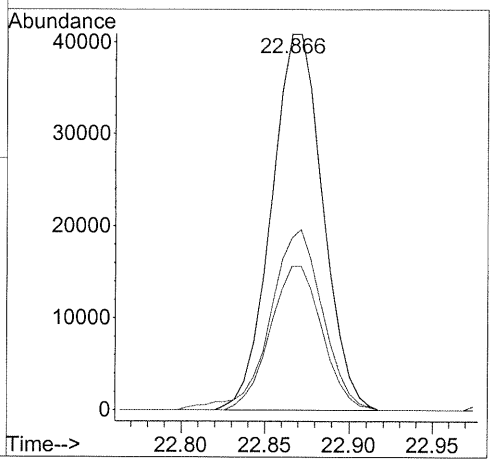


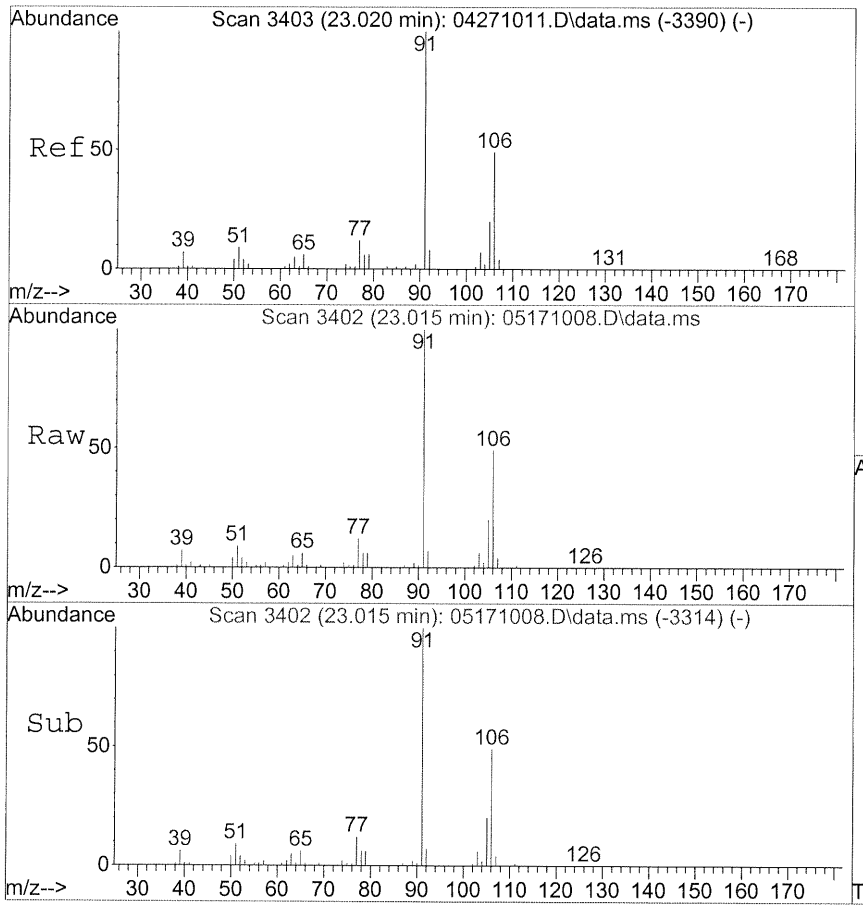




#69
Styrene
Concen: 1.12 ng
RT: 22.87 min Scan# 3376
Delta R.T. -0.006 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:104 Resp: 86989

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 38.6 | 26.1 | 66.1 |
| 103 | 48.9 | 28.7 | 68.7 |

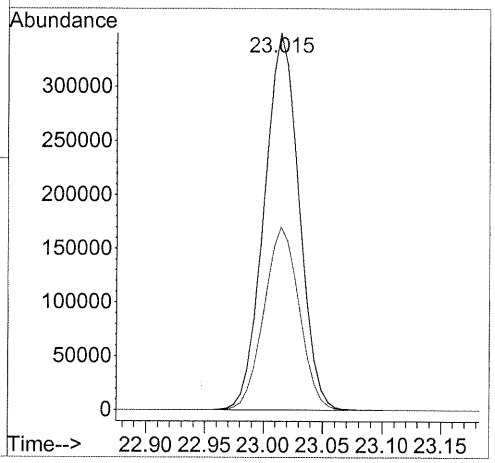


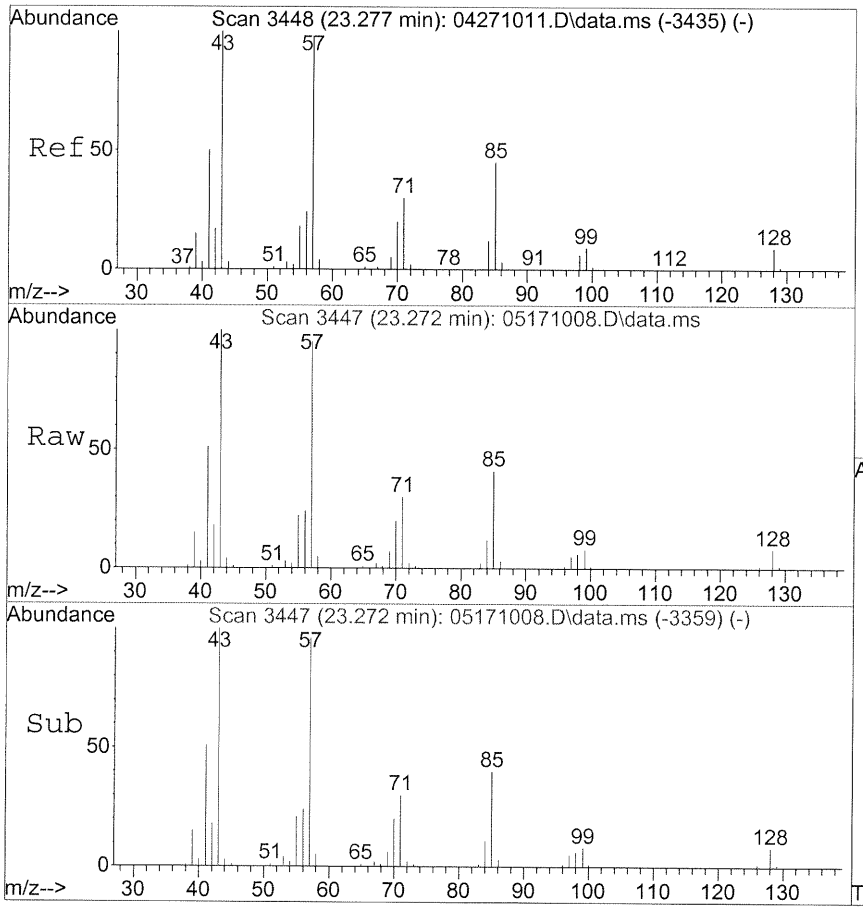



#70
o-Xylene
Concen: 7.14 ng
RT: 23.01 min Scan# 3402
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 91 Resp: 721000

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 49.0 | 24.4 | 64.4 |

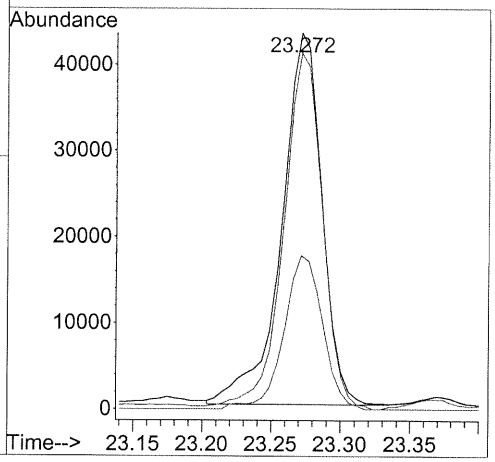


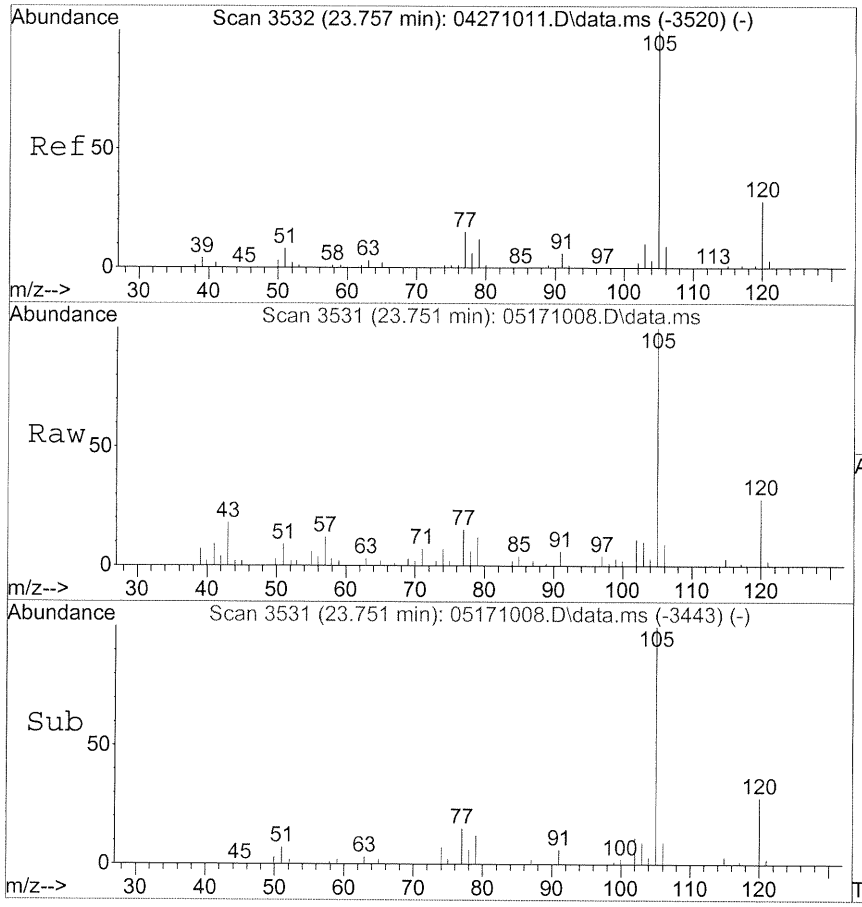




#71
n-Nonane
Concen: 1.99 ng
RT: 23.27 min Scan# 3447
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 43 Resp: 87740

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 92.3 | 65.6 | 105.6 |
| 85 | 39.5 | 9.9 | 49.9 |

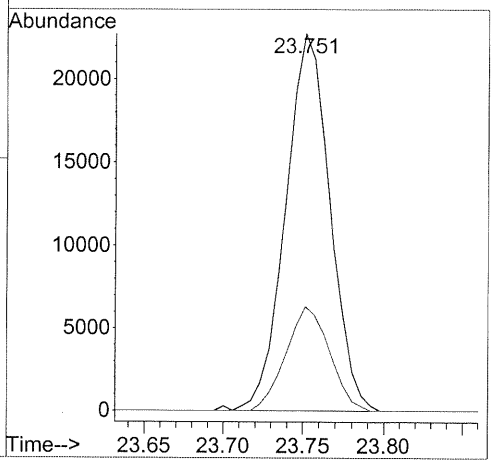


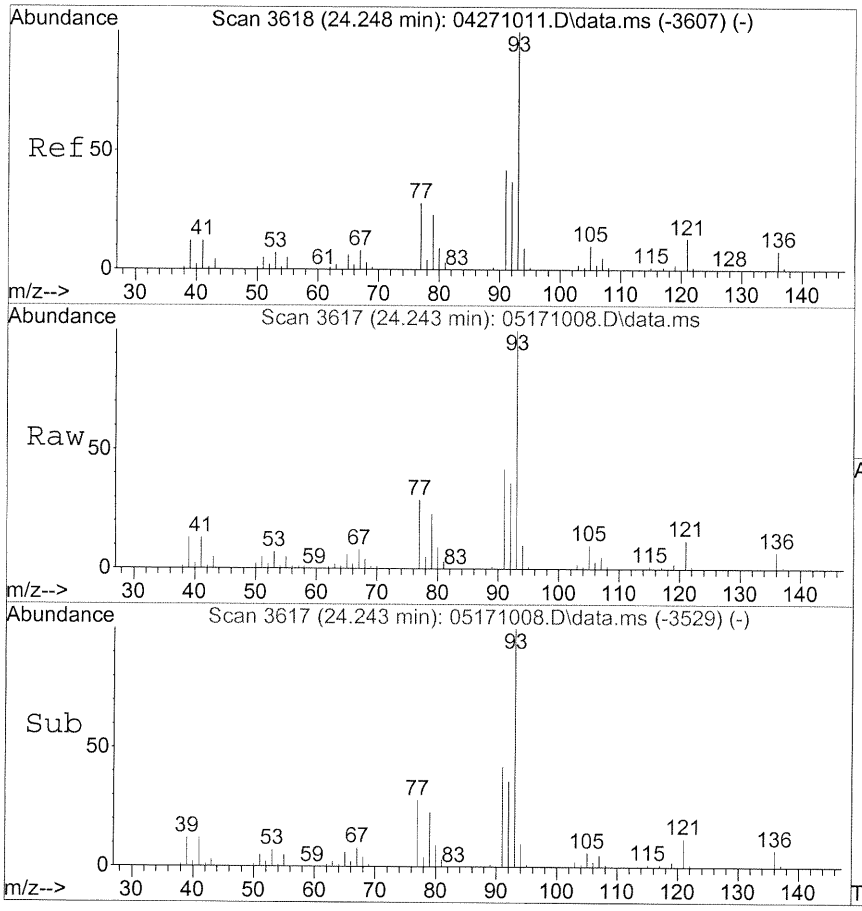



#74
Cumene
Concen: 0.31 ng
RT: 23.75 min Scan# 3531
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:105 Resp: 43388

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.2 | 5.2 | 45.2 |

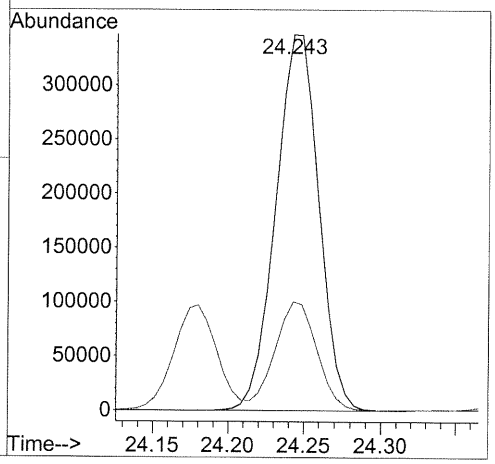


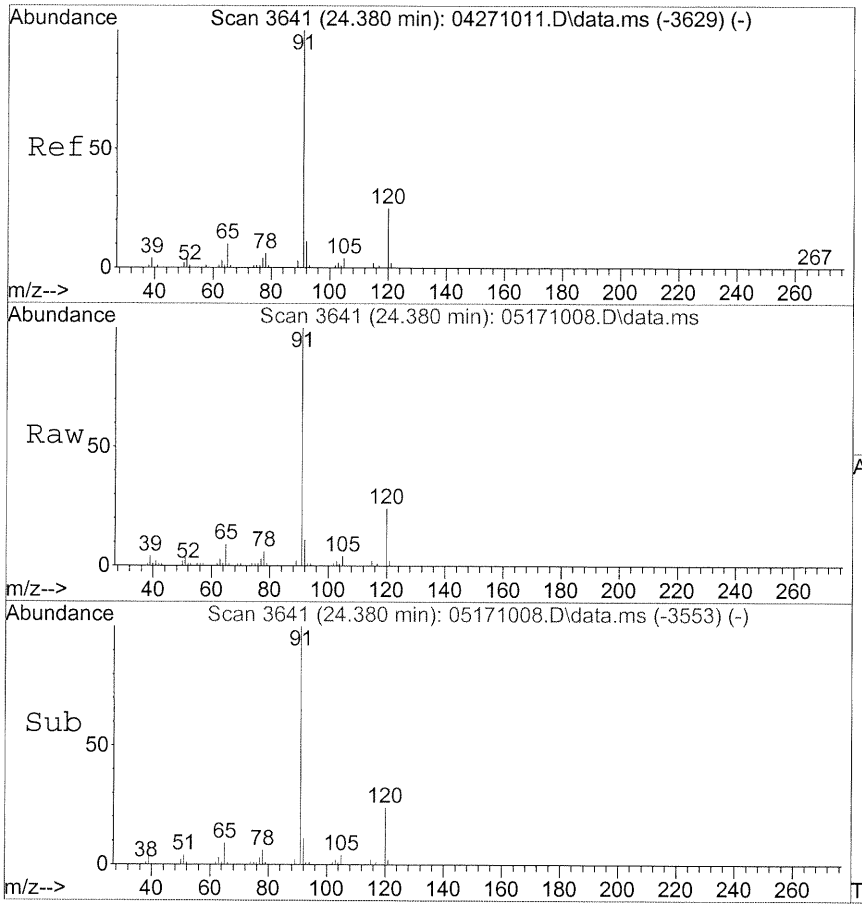




#75
alpha-Pinene
Concen: 10.64 ng
RT: 24.24 min Scan# 3617
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 93 Resp: 681536

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 93 | 100 | | |
| 77 | 28.1 | 12.3 | 52.3 |

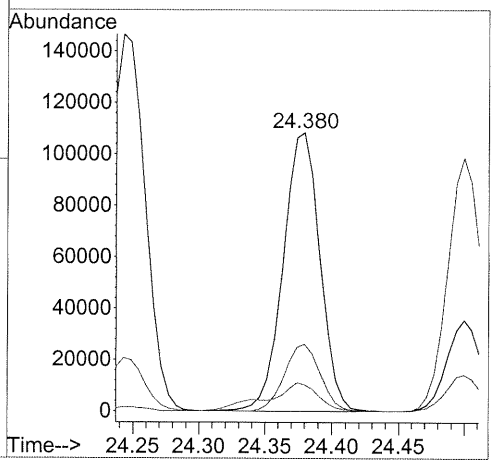


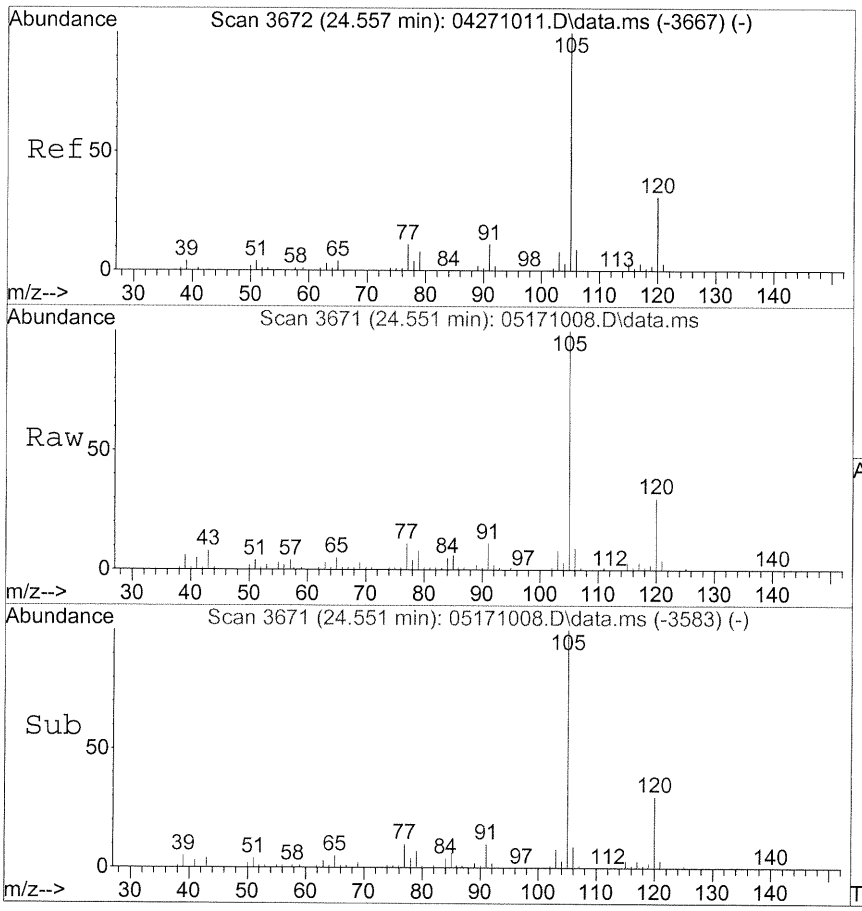



#76
n-Propylbenzene
Concen: 1.29 ng
RT: 24.38 min Scan# 3641
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 91 Resp: 206857

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 23.2 | 0.9 | 40.9 |
| 65 | 14.0 | 0.0 | 31.2 |

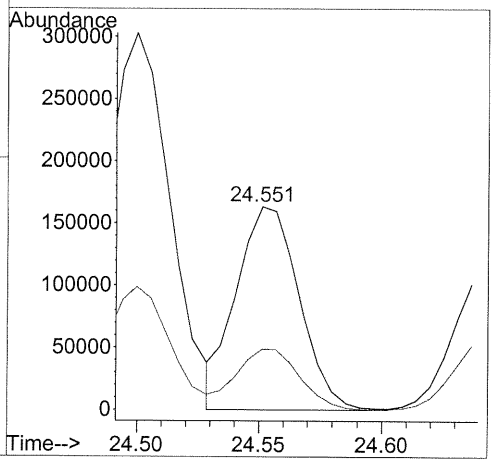


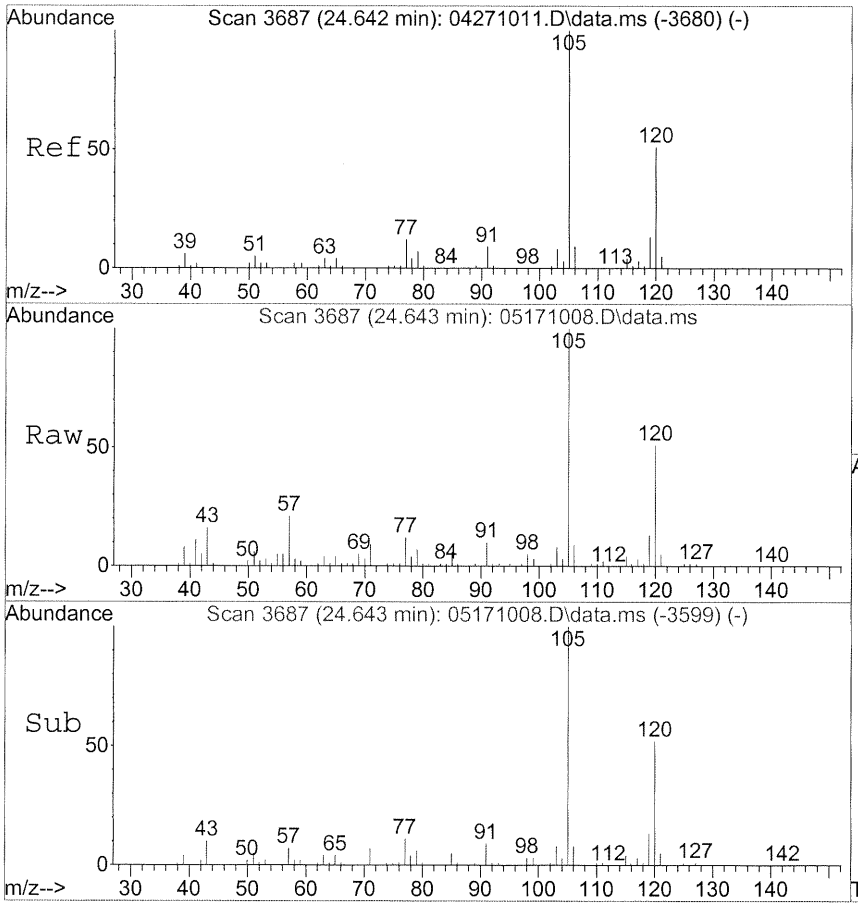




#78
4-Ethyltoluene
Concen: 2.31 ng
RT: 24.55 min Scan# 3671
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:105 Resp: 293766

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.0 | 8.2 | 48.2 |

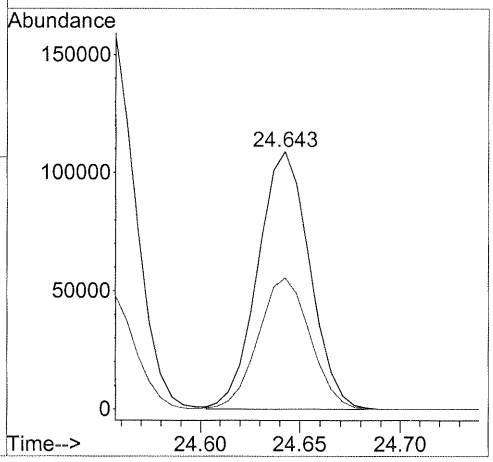


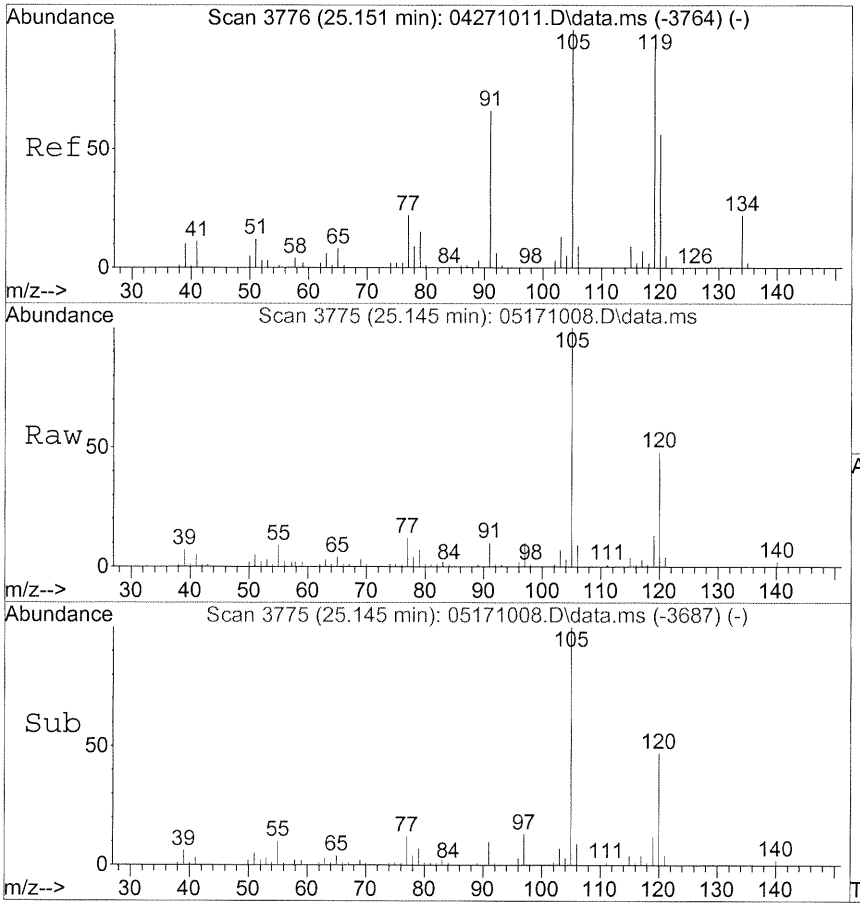



#79
1,3,5-Trimethylbenzene
Concen: 1.89 ng
RT: 24.64 min Scan# 3687
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:105 Resp: 196225

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 51.1 | 26.2 | 66.2 |

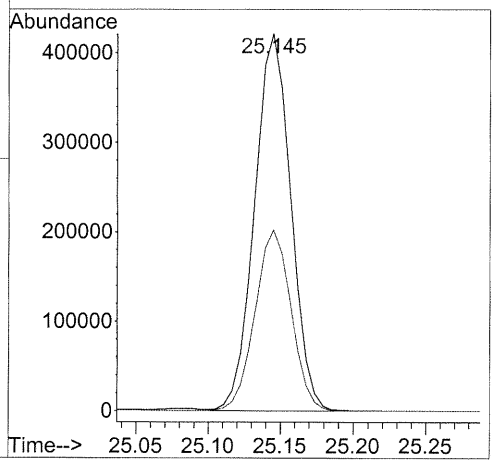


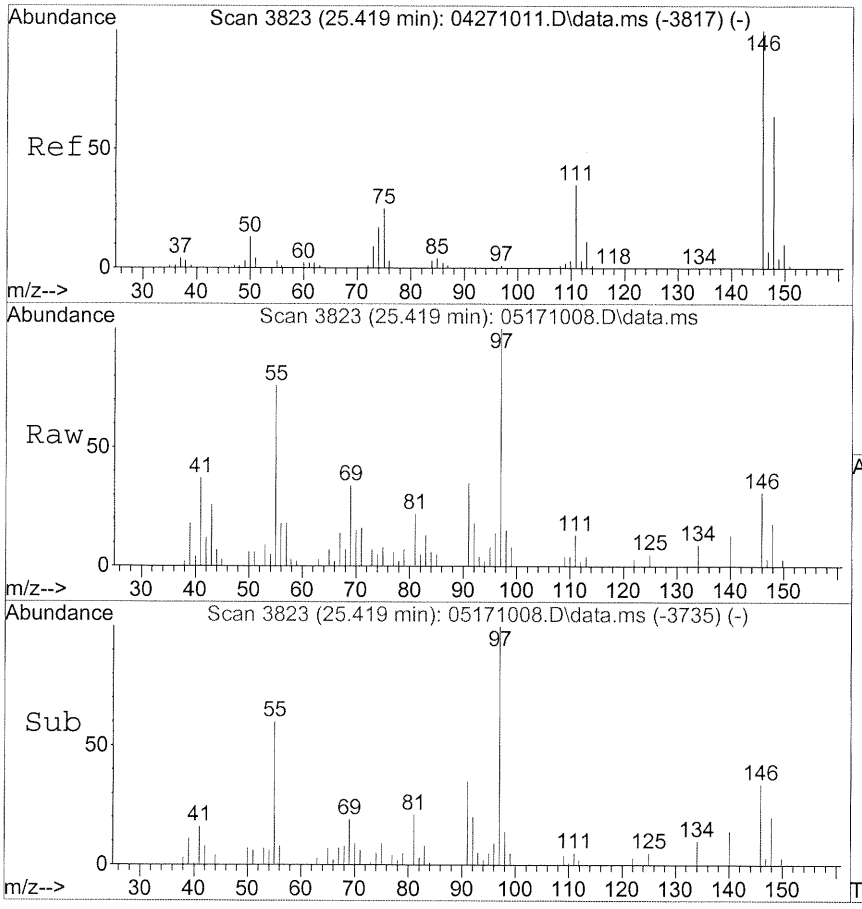




#82
1,2,4-Trimethylbenzene
Concen: 6.84 ng
RT: 25.15 min Scan# 3775
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:105 Resp: 735669

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.7 | 30.1 | 70.1 |

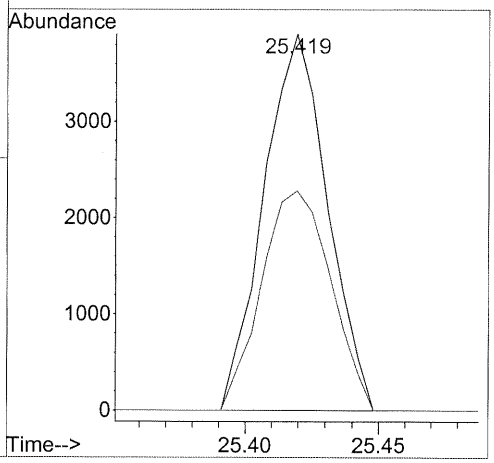


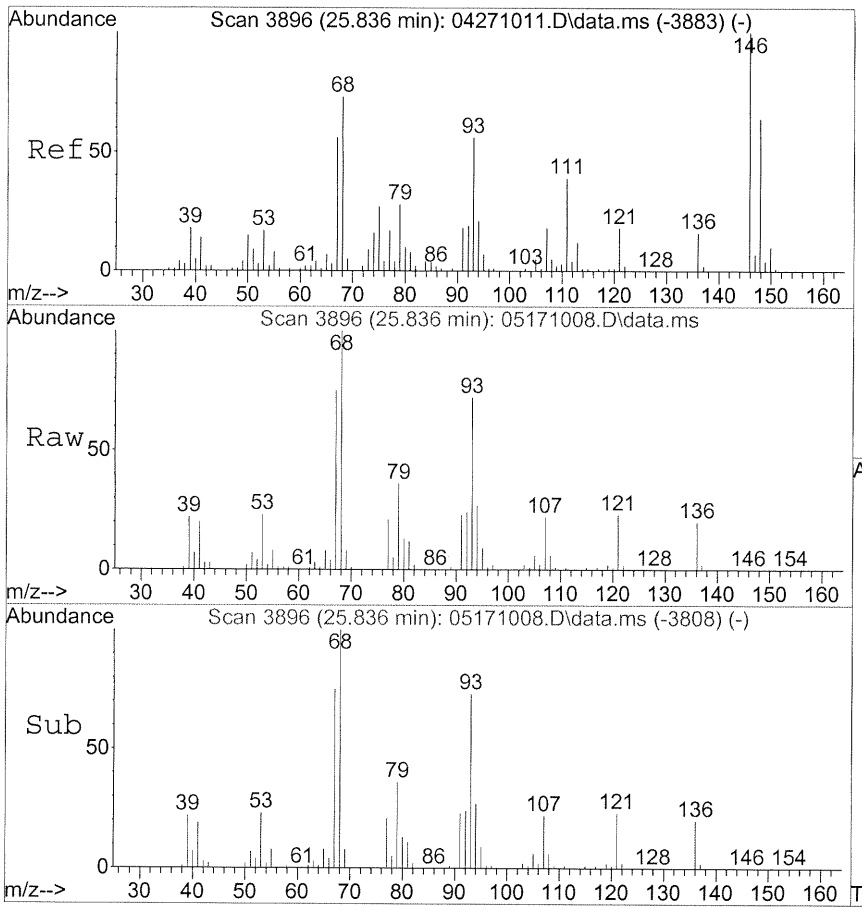



#86
1,4-Dichlorobenzene
Concen: 0.10 ng
RT: 25.42 min Scan# 3823
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:146 Resp: 6470

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 148 | 63.6 | 43.8 | 83.8 |

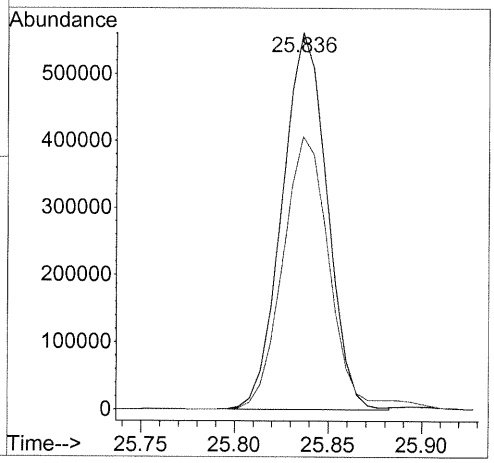


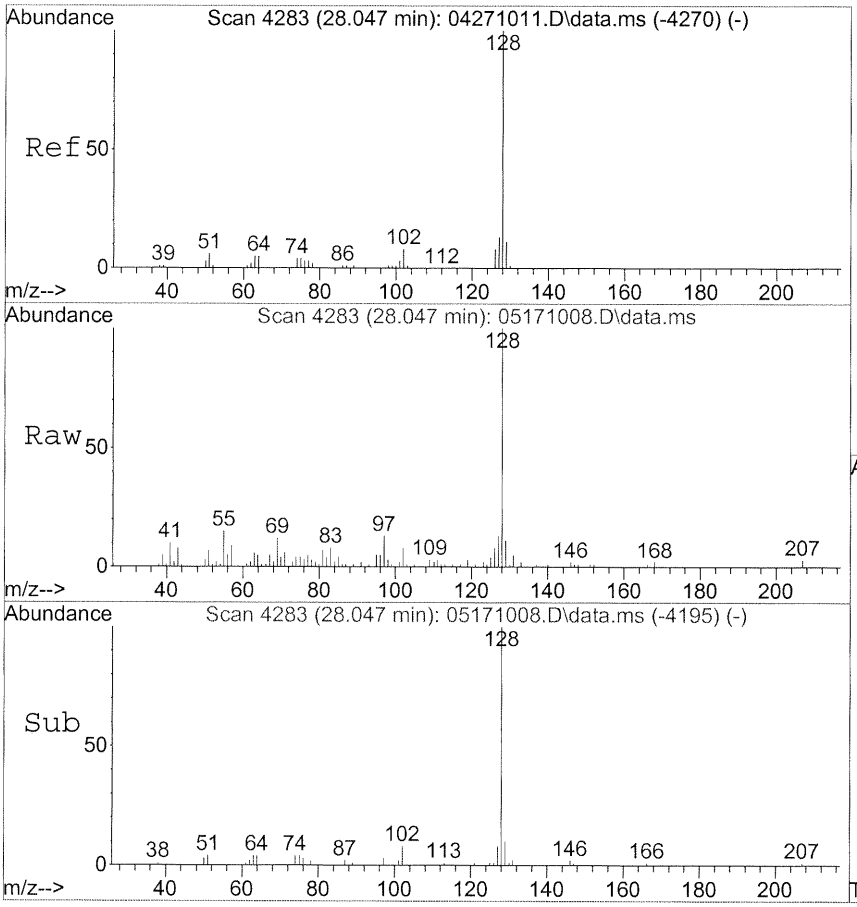




#91
d-Limonene
Concen: 24.93 ng
RT: 25.84 min Scan# 3896
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion: 68 Resp: 930675

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 68 | 100 | | |
| 93 | 76.4 | 42.0 | 82.0 |

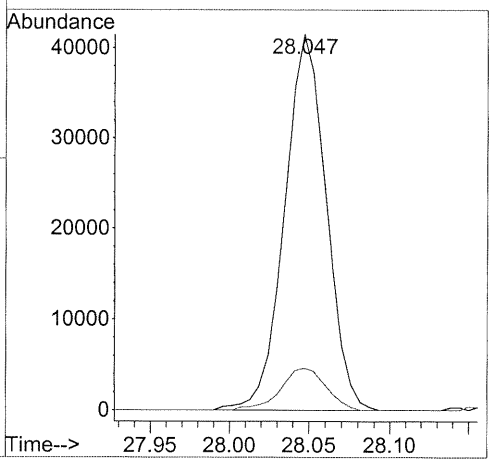





#95
Naphthalene
Concen: 0.54 ng
RT: 28.05 min Scan# 4283
Delta R.T. 0.000 min
Lab File: 05171008.D
Acq: 17 May 2010 15:39

Tgt Ion:128 Resp: 74379

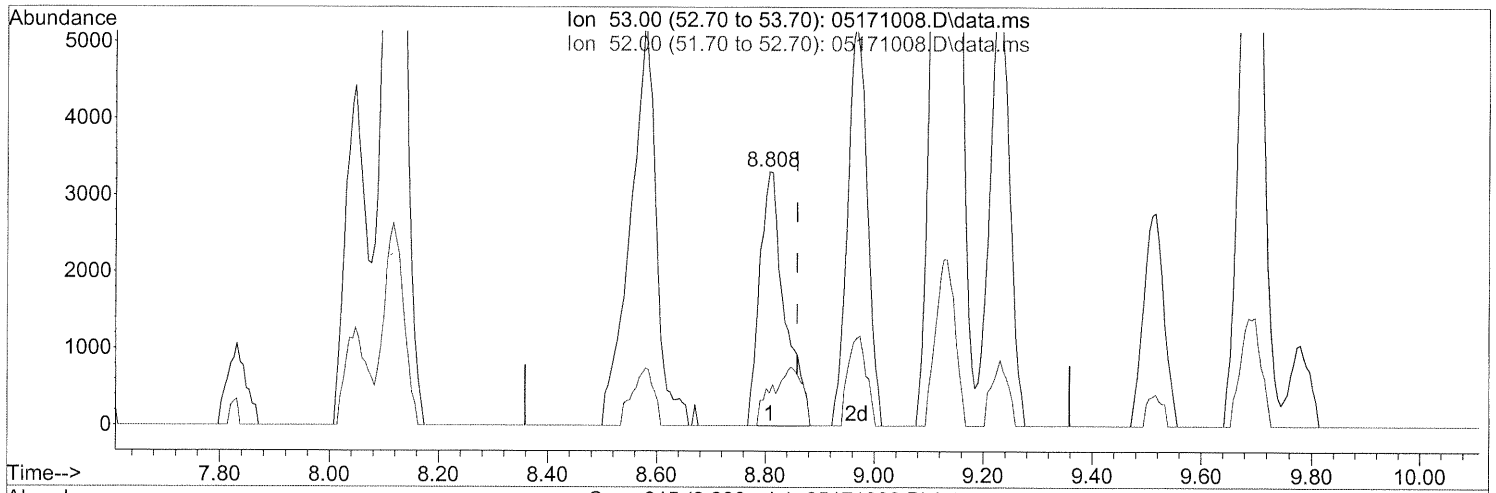
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 129 | 12.0 | 0.0 | 31.1 |

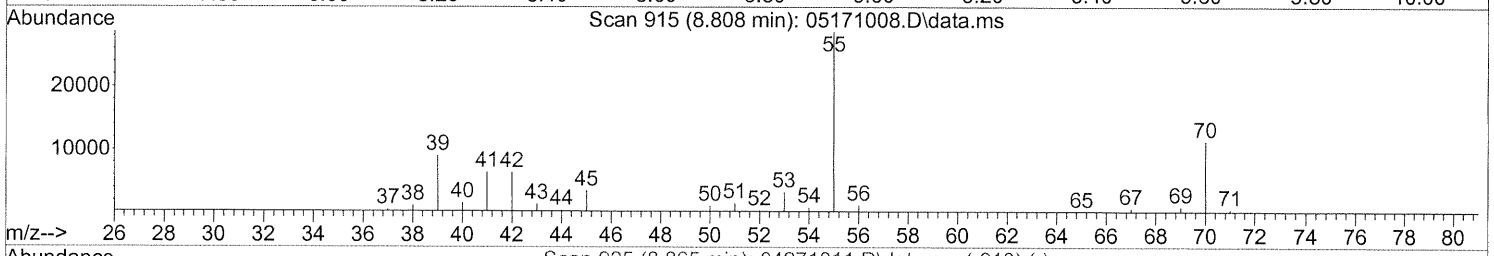


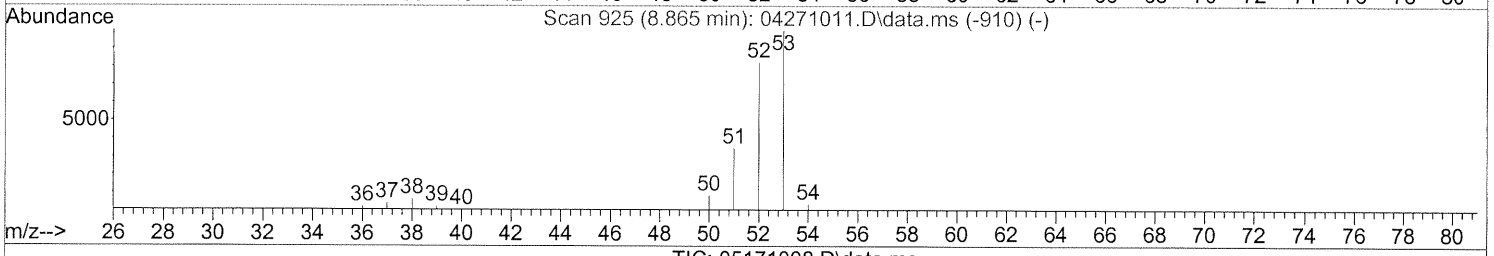
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171008.D\data.ms

(16) Acrylonitrile (T)

8.808min (-0.051) 0.38ng

response 10468

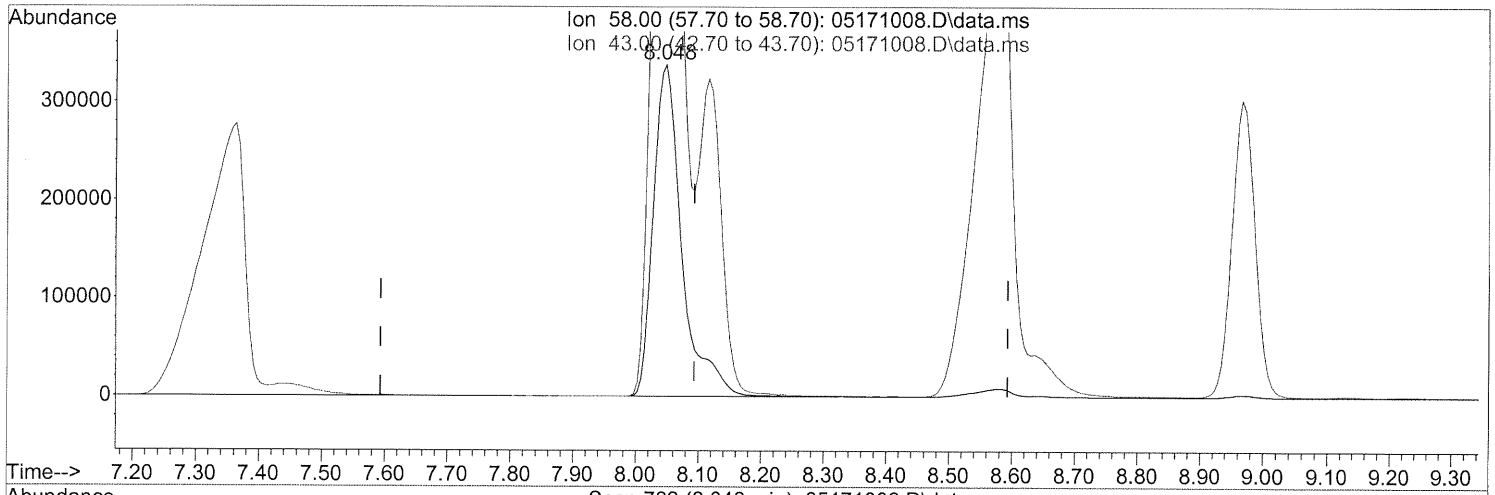
| Ion | Exp% | Act% |
|---|---|---|
| 53.00 | 100 | 100 |
| 52.00 | 84.10 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

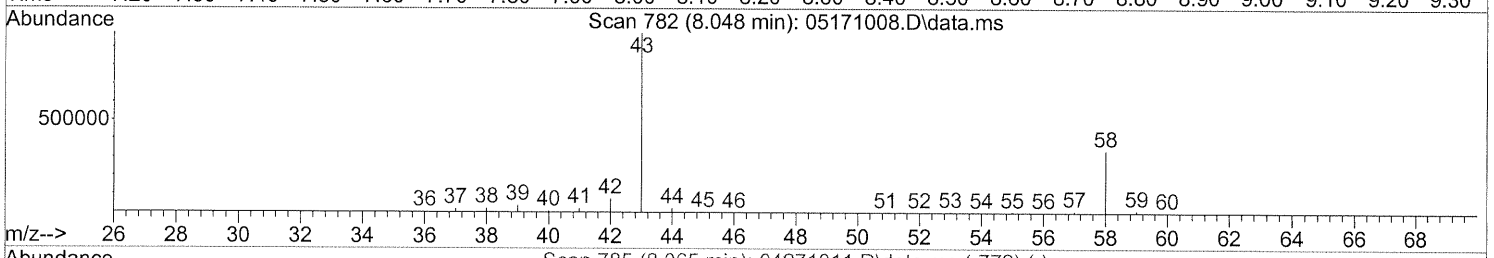
FP

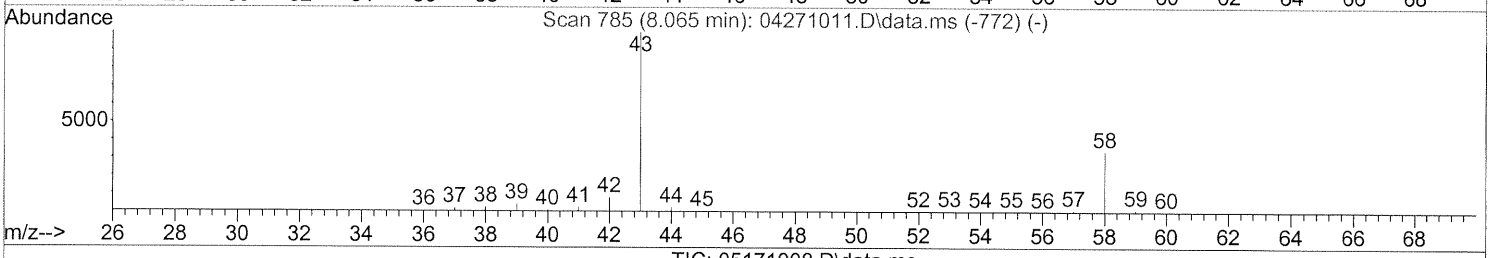
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171008.D\data.ms

(13) Acetone (T)

8.048min (-0.046) 60.08ng

response 1072808

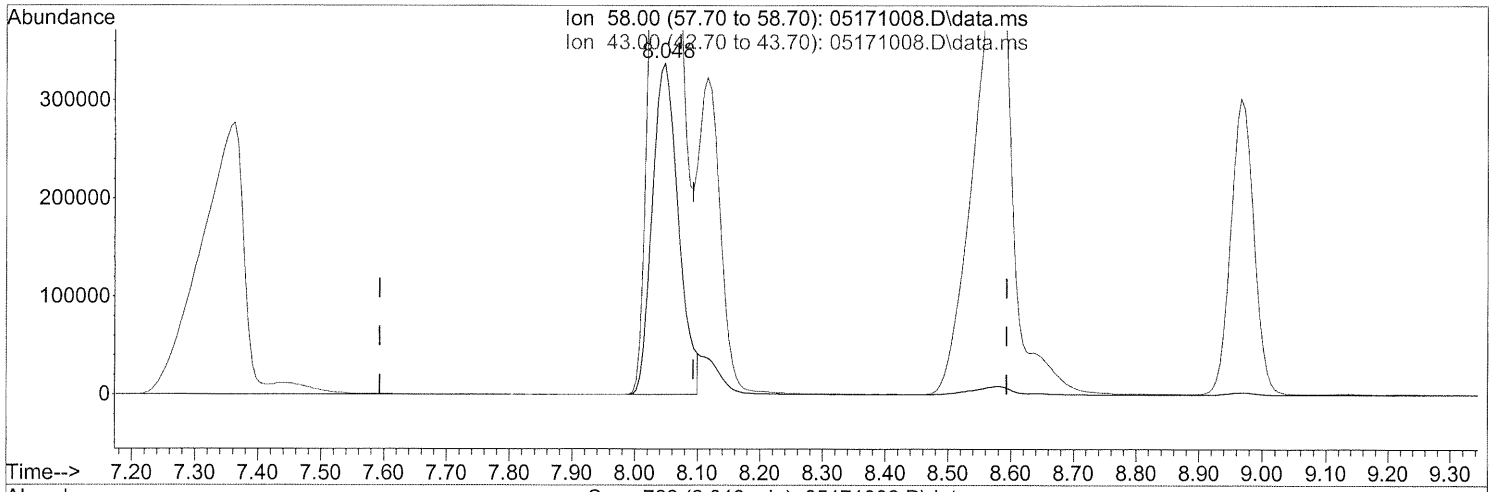
SH

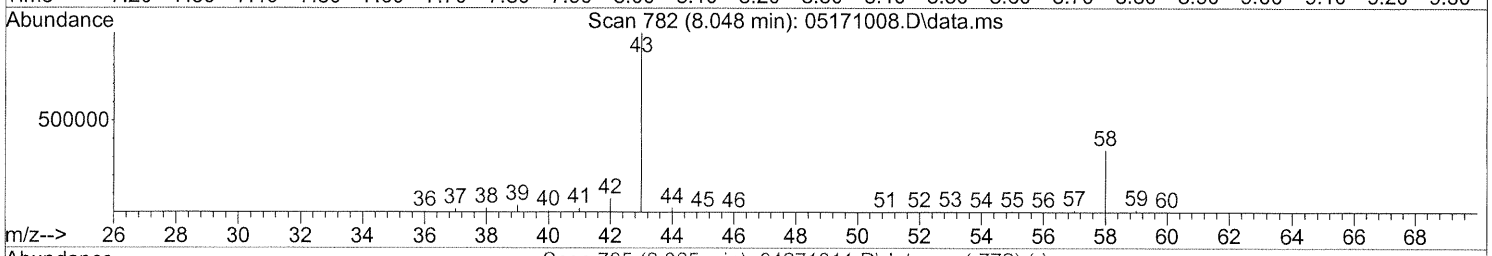
| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 269.17# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

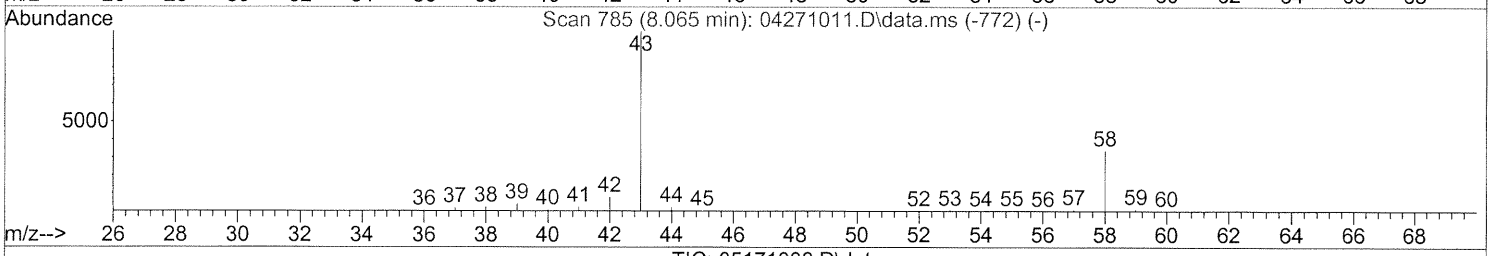
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171008.D\data.ms

(13) Acetone (T)

8.048min (-0.046) 54.98ng m

response 981881

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 294.10# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SH → IC

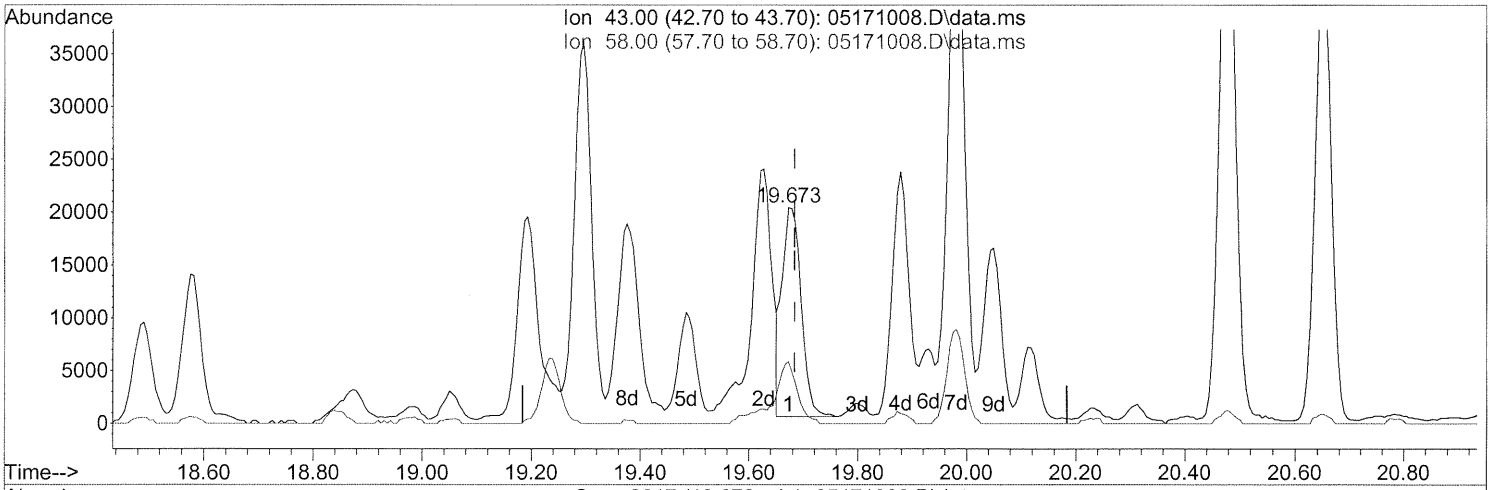
[illegible] 5/19/10

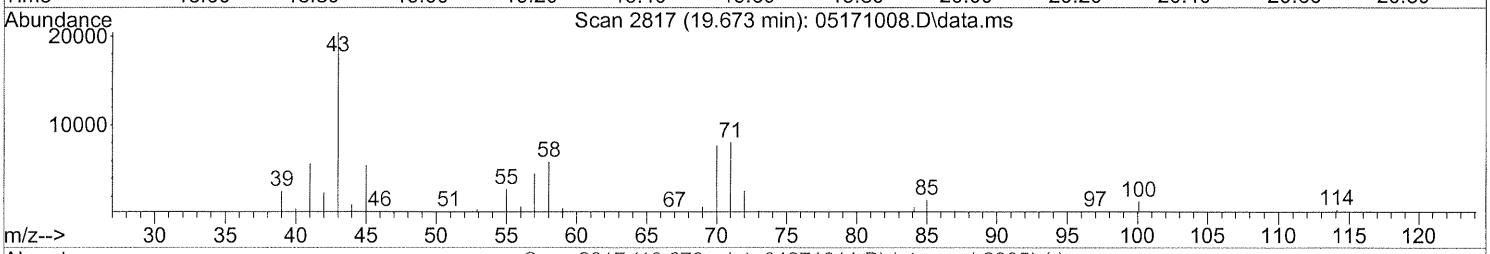
[illegible] 5/20/10

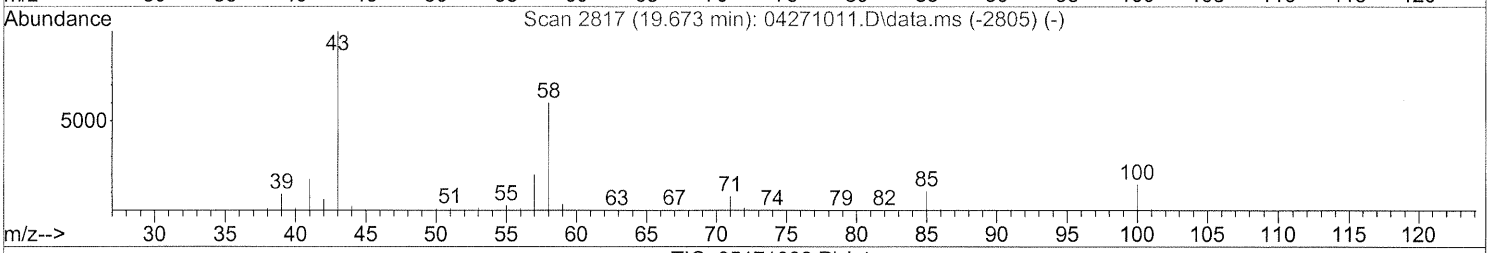
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171008.D\data.ms

(59) 2-Hexanone (T)

19.673min (-0.011) 1.00ng

response 48646

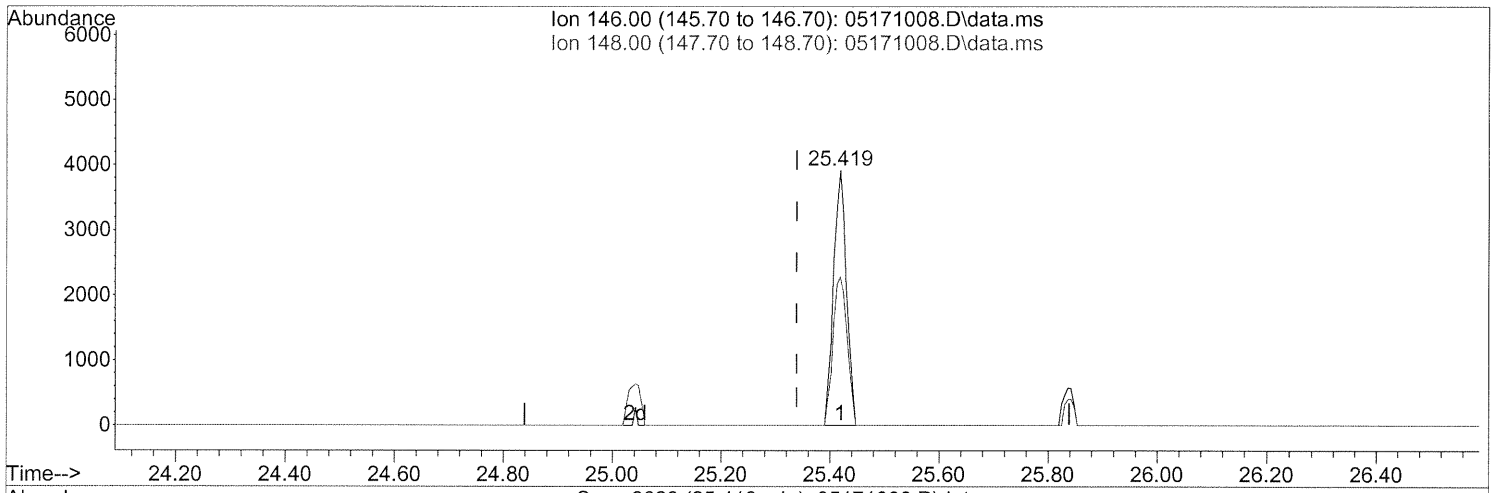
FP

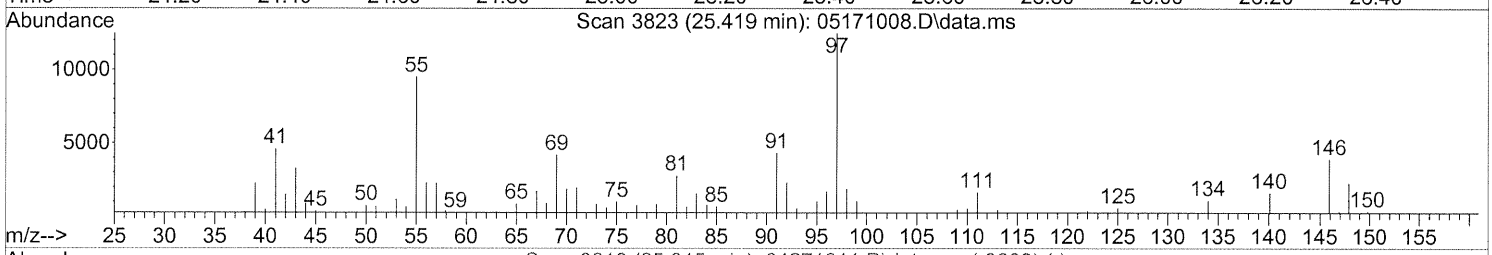
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 58.00 | 53.30 | 37.72 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

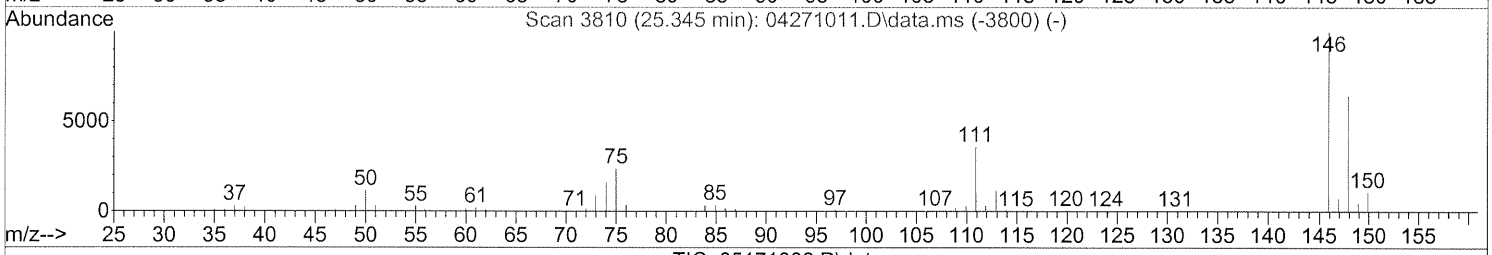
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171008.D\data.ms

(85) 1,3-Dichlorobenzene (T)

25.419min (+0.080) 0.10ng

response 6470

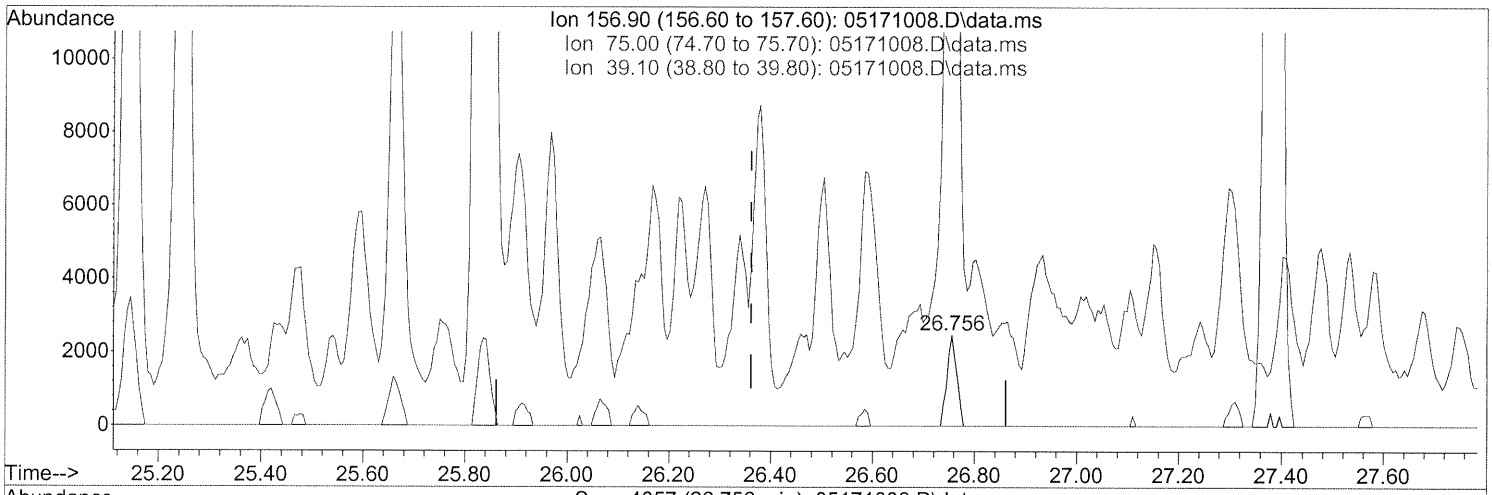
7P

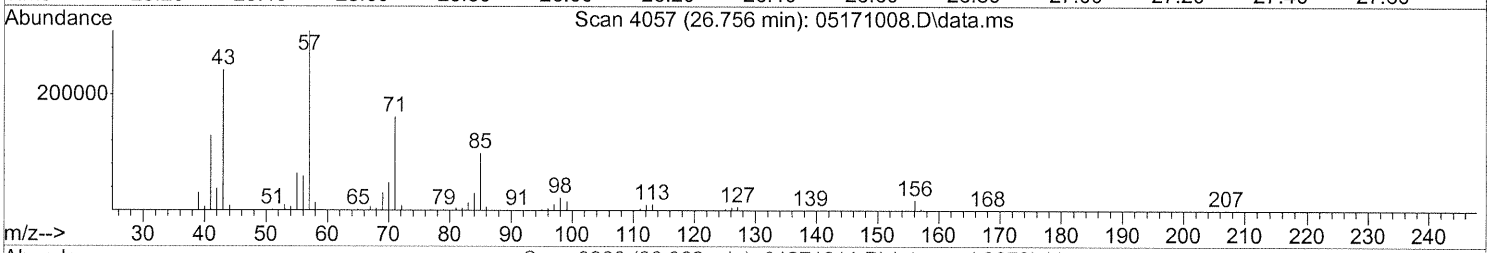
| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 63.70 | 63.60 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

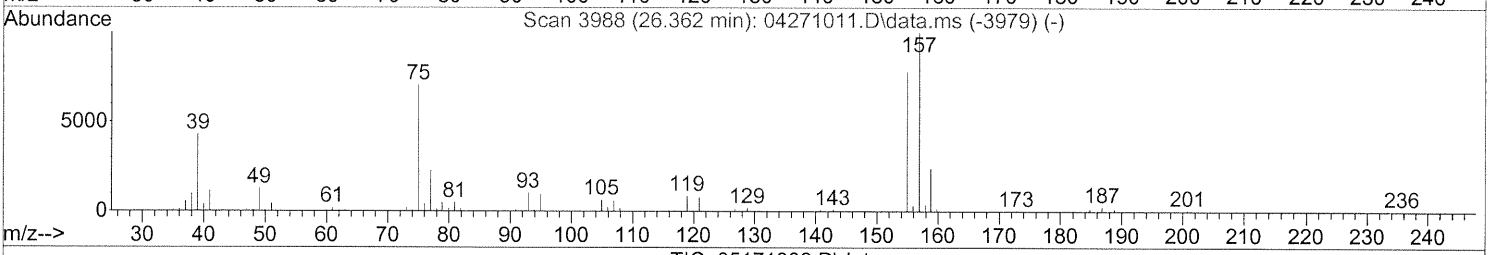
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171008.D\data.ms

(92) 1,2-Dibromo-3-Chloropropane (T)

26.756min (+0.394) 0.16ng

response 3276

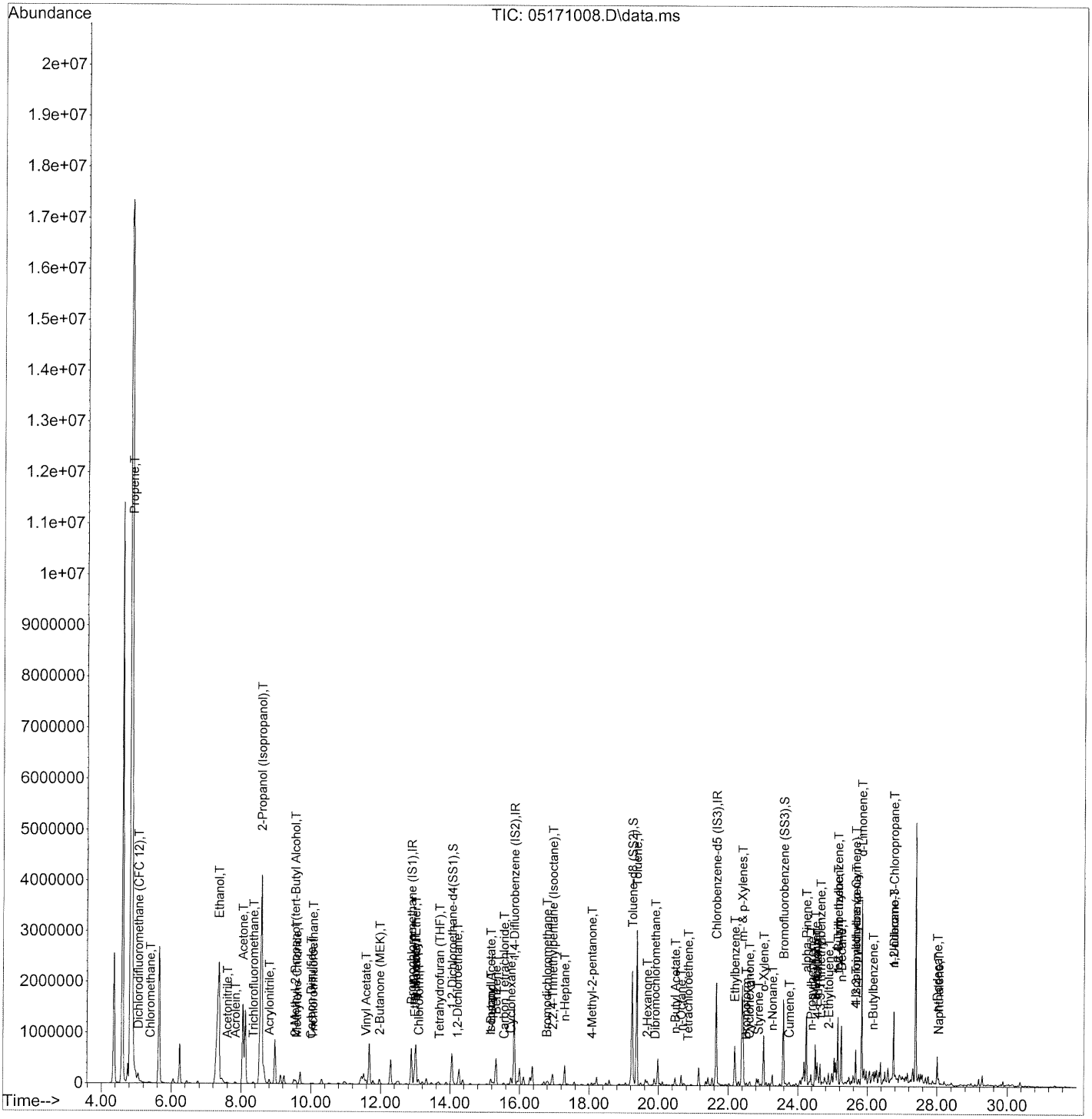
| Ion | Exp% | Act% |
|---|---|---|
| 156.90 | 100 | 100 |
| 75.00 | 110.30 | 0.00# |
| 39.10 | 79.90 | 1368.10# |
| 0.00 | 0.00 | 0.00 |

FP

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 404982 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1930943 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 804552 | 25.000 | ng | | 0.00 |
| System Monitoring Compounds | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 601494 | 24.609 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 98.44% | | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 2013105 | 24.808 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.24% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 675342 | 23.760 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 95.04% | | | | |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 722844 | 31.506 | ng | | 95 |
| 3) Dichlorodifluoromethan... | 5.05 | 85 | 71167 | 1.319 | ng | | 99 |
| 4) Chloromethane | 5.40 | 50 | 20122 | 0.615 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.65 | 135 | 1445 | N.D. | | | |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 6.14 | 54 | 1948 | N.D. | | | |
| 8) Bromomethane | 6.64 | 94 | 605 | N.D. | | | |
| 9) Chloroethane | 6.98 | 64 | 699 | N.D. | | | |
| 10) Ethanol | 7.36 | 45 | 6734810 | 481.926 | ng | | 99 |
| 11) Acetonitrile | 7.60 | 41 | 14932 | 0.441 | ng | | 94 |
| 12) Acrolein | 7.83 | 56 | 38832 | 2.818 | ng | | 100 |
| 13) Acetone | 8.05 | 58 | 1072808 | 60.076 | ng | # | 73 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 35261 | 0.718 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.58 | 45 | 10646923 | 204.633 | ng | | 99 |
| 16) Acrylonitrile | 8.81 | 53 | 10468 | 0.385 | ng | # | 7 |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.54 | 59 | 44846 | 0.730 | ng | # | 65 |
| 19) Methylene Chloride | 9.59 | 84 | 5192 | 0.193 | ng | # | 75 |
| 20) 3-Chloro-1-propene (Al... | 9.78 | 41 | 1403 | N.D. | | | |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 7000 | 0.284 | ng | # | 78 |
| 22) Carbon Disulfide | 10.00 | 76 | 27319 | 0.315 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 24) 1,1-Dichloroethane | 11.48 | 63 | 873 | N.D. | | | |
| 25) Methyl tert-Butyl Ether | 11.50 | 73 | 3316 | N.D. | | | |
| 26) Vinyl Acetate | 11.58 | 86 | 26998 | 4.344 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 49405 | 3.012 | ng | # | 72 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 13.01 | 87 | 7603 | 0.338 | ng | # | 1 |
| 30) Ethyl Acetate | 12.98 | 61 | 73291 | 8.413 | ng | | 86 |
| 31) n-Hexane | 13.01 | 57 | 476029 | 11.465 | ng | # | 96 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.10 | 83 | 87912 | 1.992 ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.69 | 72 | 2927 | 0.184 ng | # | 1 |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 25018 | 0.755 ng | | 100 |
| 38) 1,1,1-Trichloroethane | 14.62 | 97 | 406 | N.D. | | |
| 39) Isopropyl Acetate | 15.17 | 61 | 3043 | 0.205 ng | # | 1 |
| 40) 1-Butanol | 15.17 | 56 | 96351 | 4.137 ng | | 83 |
| 41) Benzene | 15.32 | 78 | 692218 | 6.297 ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 15730 | 0.466 ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 82239 | 2.009 ng | # | 82 |
| 44) tert-Amyl Methyl Ether | 16.21 | 73 | 3994 | N.D. | | |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 1969 | N.D. | | |
| 46) Bromodichloromethane | 16.78 | 83 | 34502 | 1.045 ng | | 79 |
| 47) Trichloroethene | 16.86 | 130 | 849 | N.D. | | |
| 48) 1,4-Dioxane | 16.82 | 88 | 842 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 244945 | 2.426 ng | | 93 |
| 50) Methyl Methacrylate | 17.11 | 100 | 201 | N.D. | | |
| 51) n-Heptane | 17.30 | 71 | 126216 | 4.826 ng | | 89 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 15234 | 0.732 ng | | 97 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 18.87 | 97 | 641 | N.D. | | |
| 58) Toluene | 19.37 | 91 | 2981301 | 26.050 ng | | 98 |
| 59) 2-Hexanone | 19.67 | 43 | 48646 | 1.004 ng | | 78 |
| 60) Dibromochloromethane | 19.91 | 129 | 10323 | 0.377 ng | | 99 |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.48 | 43 | 115646 | 2.091 ng | | 88 |
| 63) n-Octane | 20.65 | 57 | 39449 | 1.921 ng | # | 83 |
| 64) Tetrachloroethene | 20.84 | 166 | 4213 | 0.118 ng | | 97 |
| 65) Chlorobenzene | 21.71 | 112 | 1493 | N.D. | | |
| 66) Ethylbenzene | 22.19 | 91 | 749104 | 5.972 ng | | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 2079711 | 20.984 ng | | 93 |
| 68) Bromoform | 22.51 | 173 | 2691 | 0.105 ng | | 89 |
| 69) Styrene | 22.87 | 104 | 86989 | 1.116 ng | | 94 |
| 70) o-Xylene | 23.01 | 91 | 721000 | 7.135 ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 87740 | 1.991 ng | | 90 |
| 72) 1,1,2,2-Tetrachloroethane | 23.02 | 83 | 1495 | N.D. | | |
| 74) Cumene | 23.75 | 105 | 43388 | 0.314 ng | | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 681536 | 10.638 ng | | 92 |
| 76) n-Propylbenzene | 24.38 | 91 | 206857 | 1.291 ng | | 94 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 556910 | 4.404 ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 293766 | 2.306 ng | | 97 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 196225 | 1.887 ng | | 93 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171008.D
Acq On : 17 May 2010 15:39
Operator : LM
Sample : P1001650-001 (1000ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 17 17:19:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

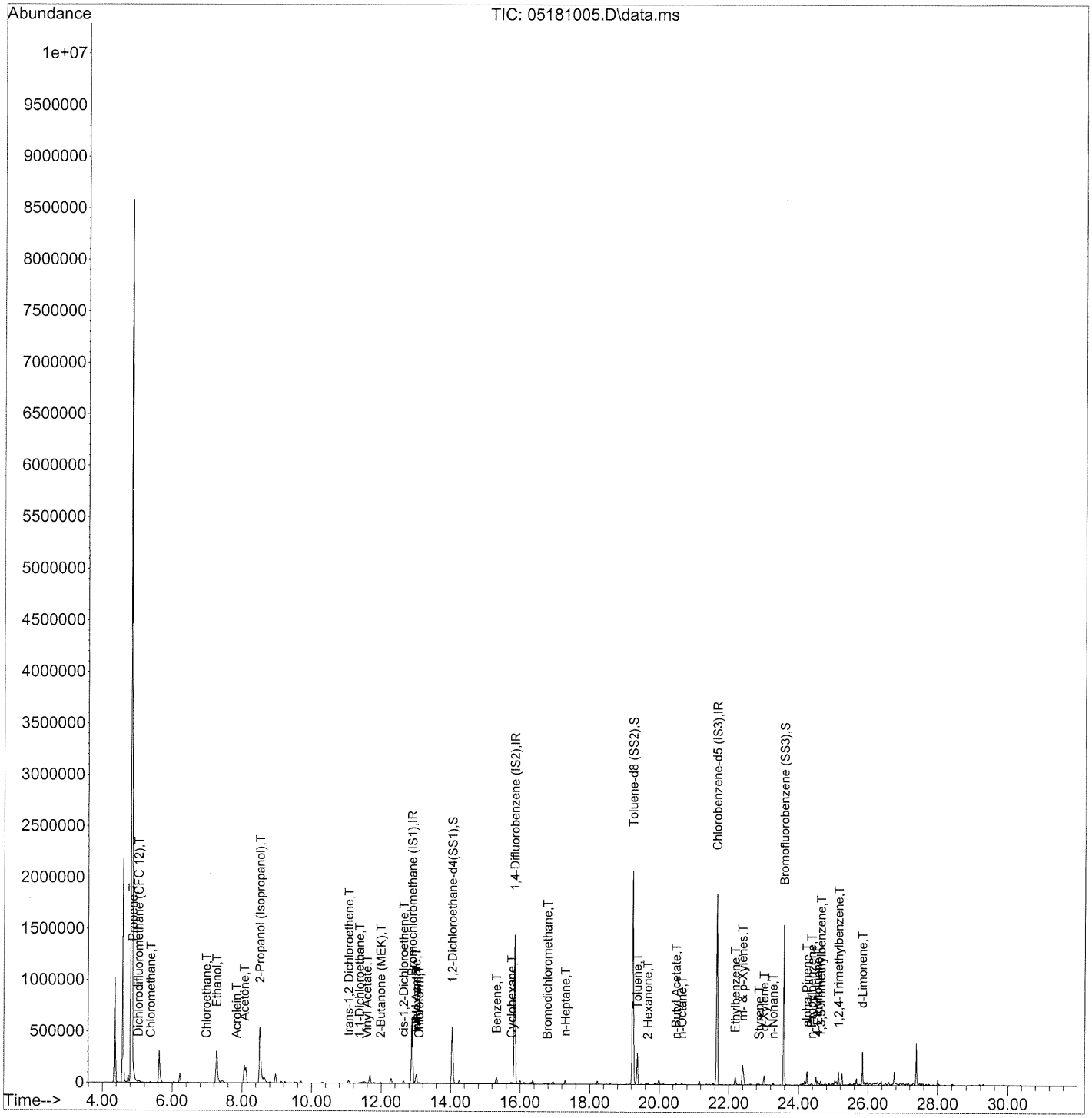
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 2420 | N.D. | | |
| 81) 2-Ethyltoluene | 24.88 | 105 | 181562 | 1.384 ng | | 96 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 735669 | 6.842 ng | | 97 |
| 83) n-Decane | 25.25 | 57 | 419160 | 8.555 ng | | 89 |
| 84) Benzyl Chloride | 25.31 | 91 | 1154 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.42 | 146 | 6470 | N.D. | | |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 6470 | N.D. | | |
| 87) sec-Butylbenzene | 25.48 | 105 | 13128 | N.D. | | |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 159513 | 1.149 ng | | 95 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 150668 | 1.391 ng | | 93 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 771 | N.D. | | |
| 91) d-Limonene | 25.84 | 68 | 930675 | 24.928 ng | | 81 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.76 | 157 | 3276 | 0.163 ng | # | 1 |
| 93) n-Undecane | 26.76 | 57 | 489300 | 10.085 ng | | 84 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 86 | N.D. | | |
| 95) Naphthalene | 28.05 | 128 | 74379 | 0.545 ng | | 98 |
| 96) n-Dodecane | 28.01 | 57 | 182255 | 3.623 ng | | 92 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.60 | 55 | 27661 | 0.843 ng | # | 73 |
| 99) tert-Butylbenzene | 25.15 | 119 | 93386 | 0.840 ng | # | 57 |
| 100) n-Butylbenzene | 26.16 | 91 | 47677 | 0.431 ng | # | 38 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001650-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 19 16:18:12 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001650-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 19 16:18:12 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 366137 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1757407 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 743087 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 552160 | 24.987 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 99.96% | | | ✓ |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1854330 | 24.742 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 98.96% | | | ✓ |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 614420 | 23.404 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 93.60% | | | ✓ |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 74562 | 3.595 | ng | | 96 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 7812 | 0.160 | ng | # | 94 |
| 4) Chloromethane | 5.38 | 50 | 5462 | 0.185 | ng | | 96 |
| 9) Chloroethane | 6.98 | 64 | 2290 | 0.136 | ng | | 85 |
| 10) Ethanol | 7.28 | 45 | 641764m | 50.795 | ng | | |
| 12) Acrolein | 7.84 | 56 | 3757 | 0.302 | ng | | 90 |
| 13) Acetone | 8.07 | 58 | 106064 | 6.570 | ng | | 87 |
| 15) 2-Propanol (Isopropanol) | 8.52 | 45 | 1244035m | 26.447 | ng | | |
| 23) trans-1,2-Dichloroethene | 11.06 | 61 | 23980 | 0.817 | ng | | 80 |
| 24) 1,1-Dichloroethane | 11.38 | 63 | 9453 | 0.247 | ng | | 96 |
| 26) Vinyl Acetate | 11.59 | 86 | 2345 | 0.417 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.98 | 72 | 5268 | 0.355 | ng | # | 74 |
| 28) cis-1,2-Dichloroethene | 12.65 | 61 | 19106 | 0.671 | ng | | 77 |
| 30) Ethyl Acetate | 13.00 | 61 | 6580 | 0.835 | ng | | 86 |
| 31) n-Hexane | 13.01 | 57 | 45503 | 1.212 | ng | # | 97 |
| 32) Chloroform | 13.09 | 83 | 8817 | 0.221 | ng | | 100 |
| 41) Benzene | 15.32 | 78 | 81138 | 0.811 | ng | | 98 |
| 43) Cyclohexane | 15.75 | 84 | 9493 | 0.255 | ng | # | 86 |
| 46) Bromodichloromethane | 16.78 | 83 | 3425 | 0.114 | ng | # | 69 |
| 51) n-Heptane | 17.30 | 71 | 11399 | 0.479 | ng | | 91 |
| 58) Toluene | 19.37 | 91 | 300242 | 2.840 | ng | | 99 |
| 59) 2-Hexanone | 19.67 | 43 | 5067 | 0.113 | ng | # | 55 |
| 62) n-Butyl Acetate | 20.48 | 43 | 9931 | 0.194 | ng | | 90 |
| 63) n-Octane | 20.66 | 57 | 3740 | 0.197 | ng | | 90 |
| 66) Ethylbenzene | 22.19 | 91 | 71162 | 0.614 | ng | | 97 |
| 67) m- & p-Xylenes | 22.40 | 91 | 199096 | 2.175 | ng | | 94 |
| 69) Styrene | 22.87 | 104 | 7820 | 0.109 | ng | | 94 |
| 70) o-Xylene | 23.01 | 91 | 67645 | 0.725 | ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 8230 | 0.202 | ng | | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 63244 | 1.069 | ng | | 93 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001650-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 19 16:18:12 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 76) n-Propylbenzene | 24.37 | 91 | 19685 | 0.133 ng | 94 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 26980 | 0.229 ng | 97 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 18139 | 0.189 ng | 91 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 67163 | 0.676 ng | 97 |
| 91) d-Limonene | 25.84 | 68 | 80695 | 2.340 ng | 82 |

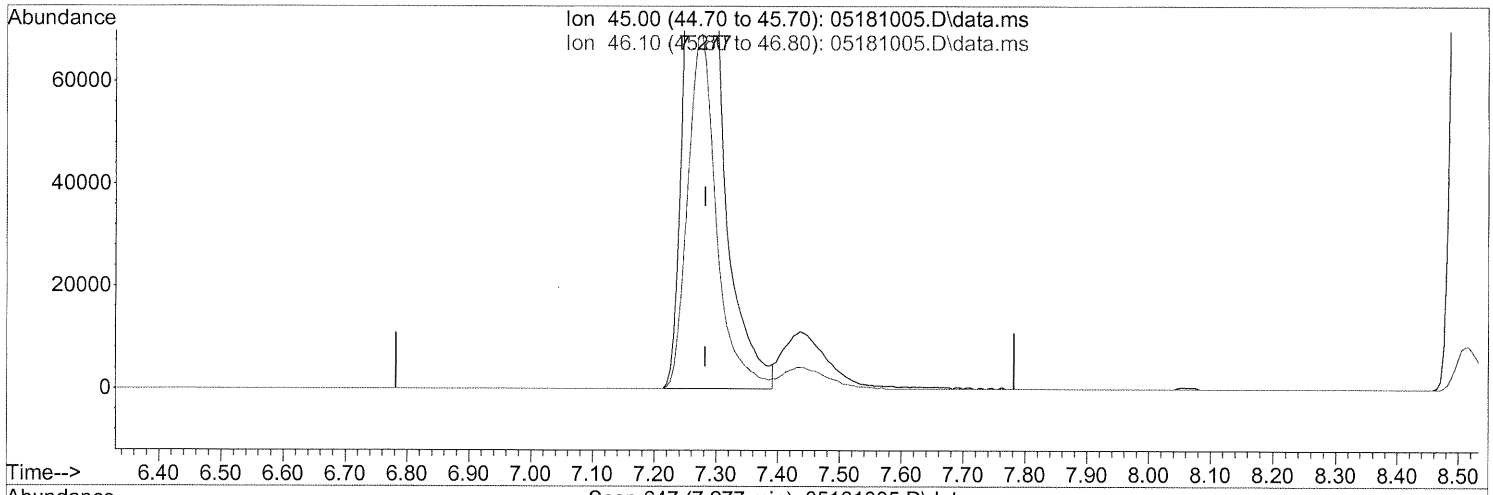
(#) = qualifier out of range (m) = manual integration (+) = signals summed

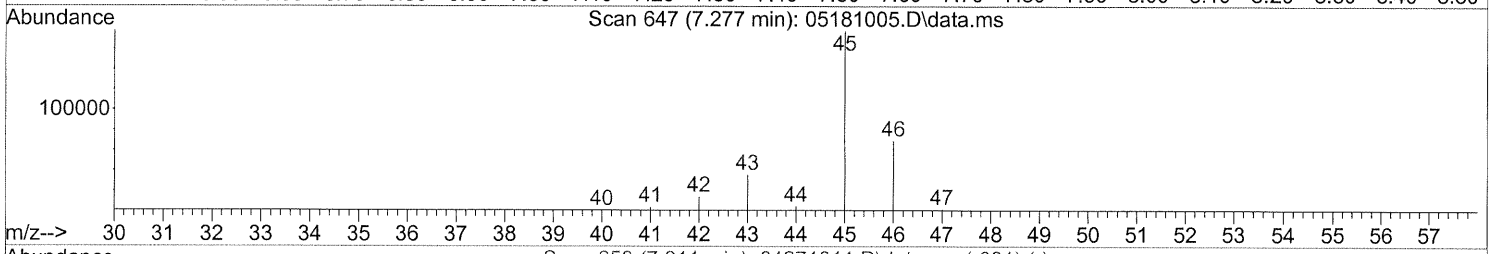
MA 5/19/10

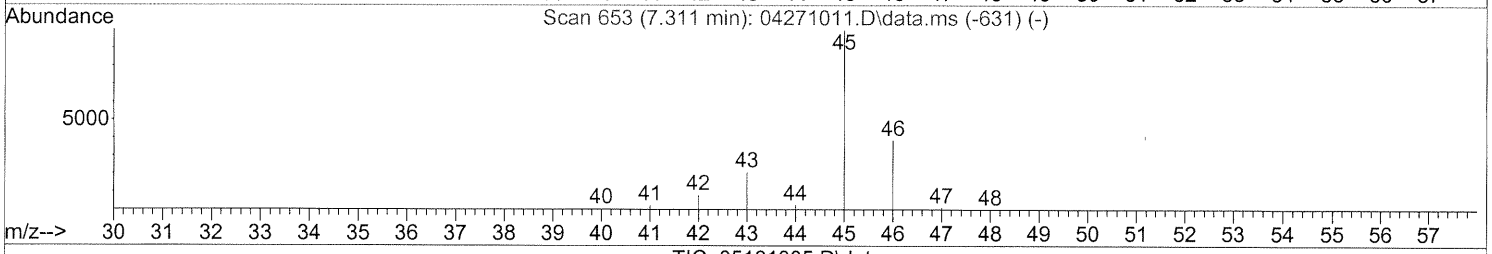
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA 1650 5/19/10
Sample : P1001~~605~~-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 12:28:10 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181005.D\data.ms

(10) Ethanol (T)

7.277min (-0.006) 46.24ng

response 584255

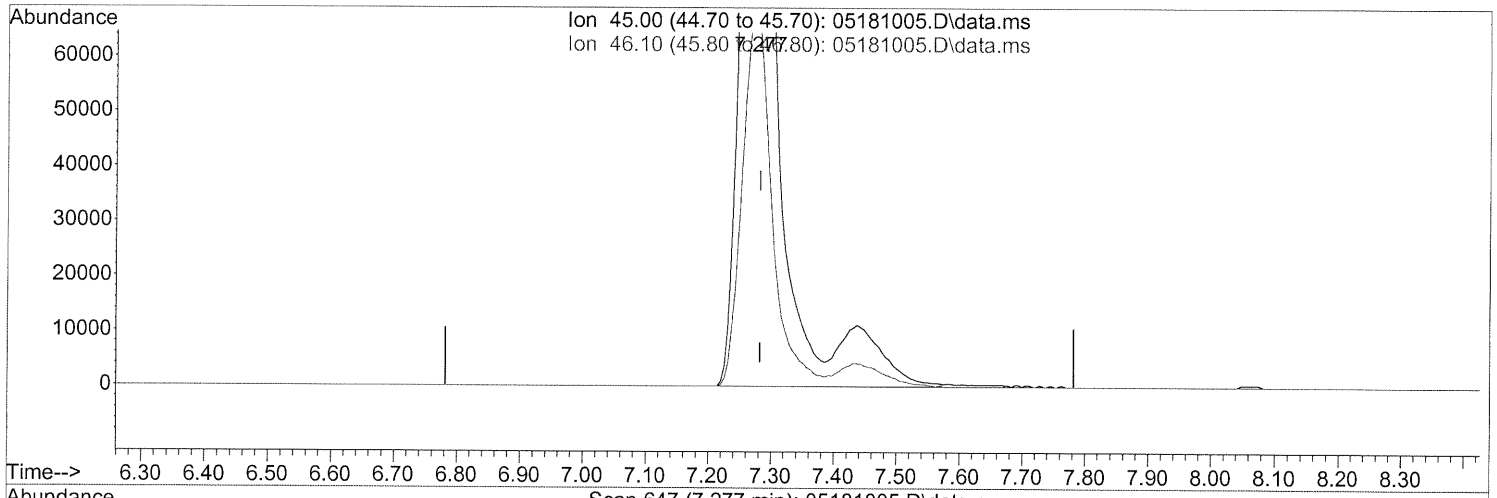
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.73 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

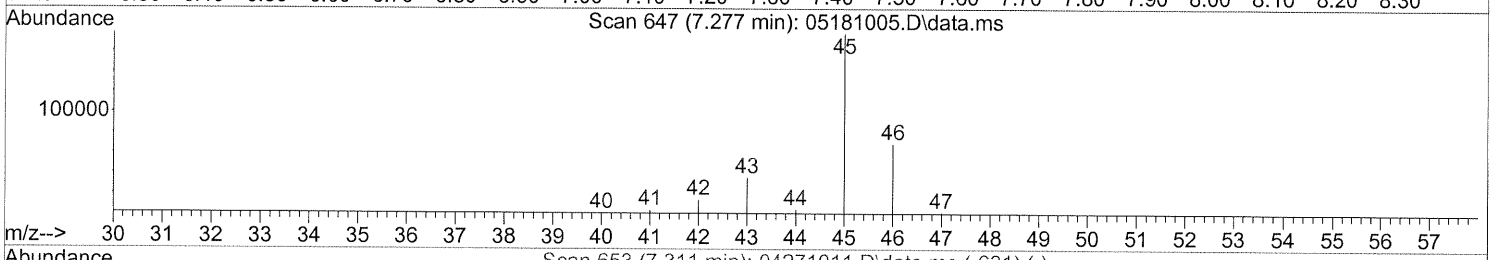
SP

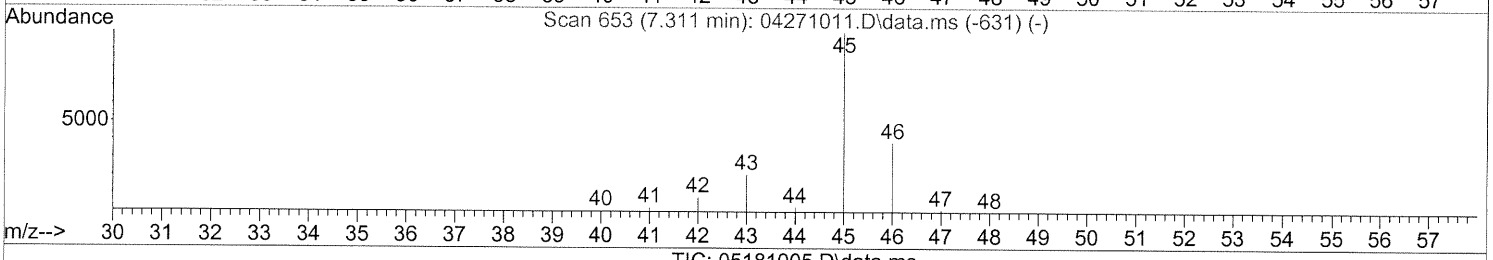
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001650-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 19 16:18:12 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181005.D\data.ms

(10) Ethanol (T)

7.277min (-0.006) 50.80ng m

response 641764

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 35.26 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP→IC

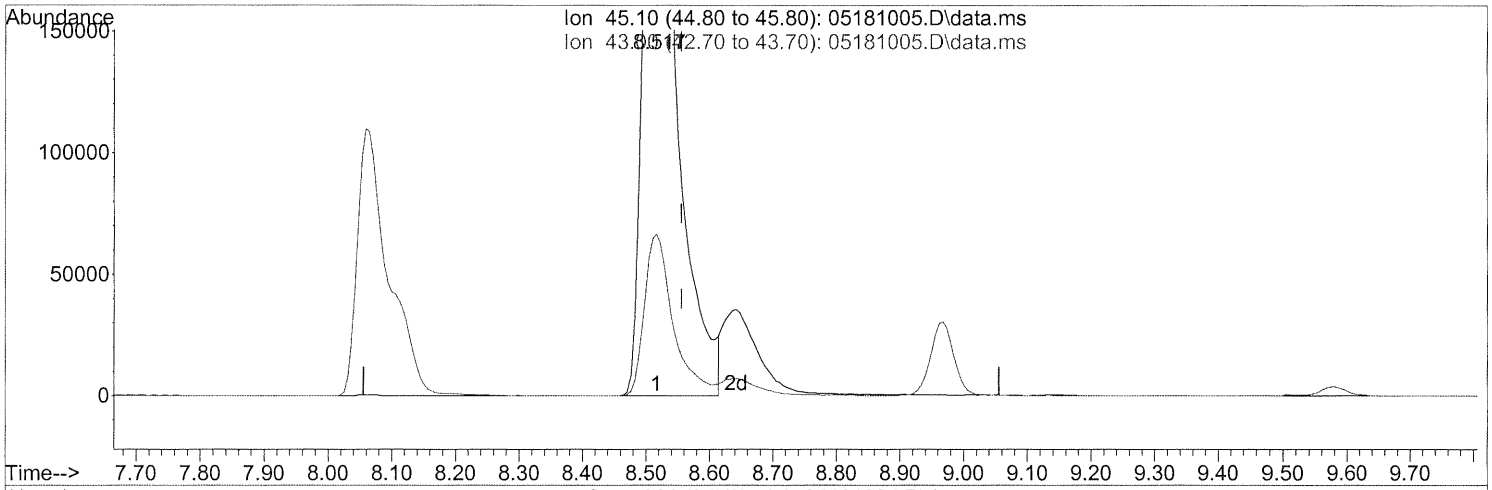
MA 5/19/10

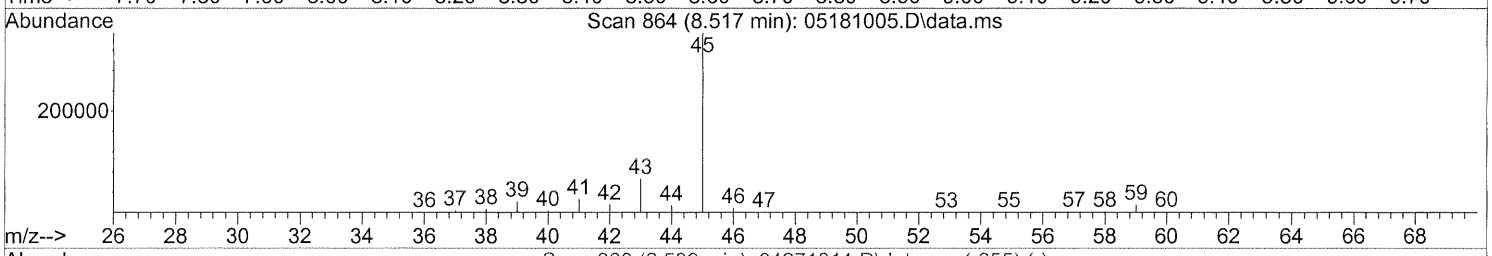
5/20/10

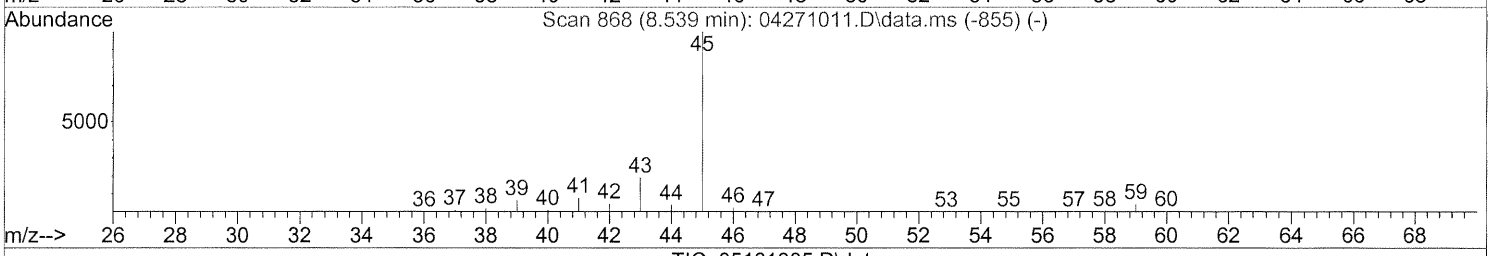
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA 1650 5/19/10
Sample : P100~~1605~~-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 12:28:10 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181005.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.517min (-0.039) 23.50ng

response ˜1105359

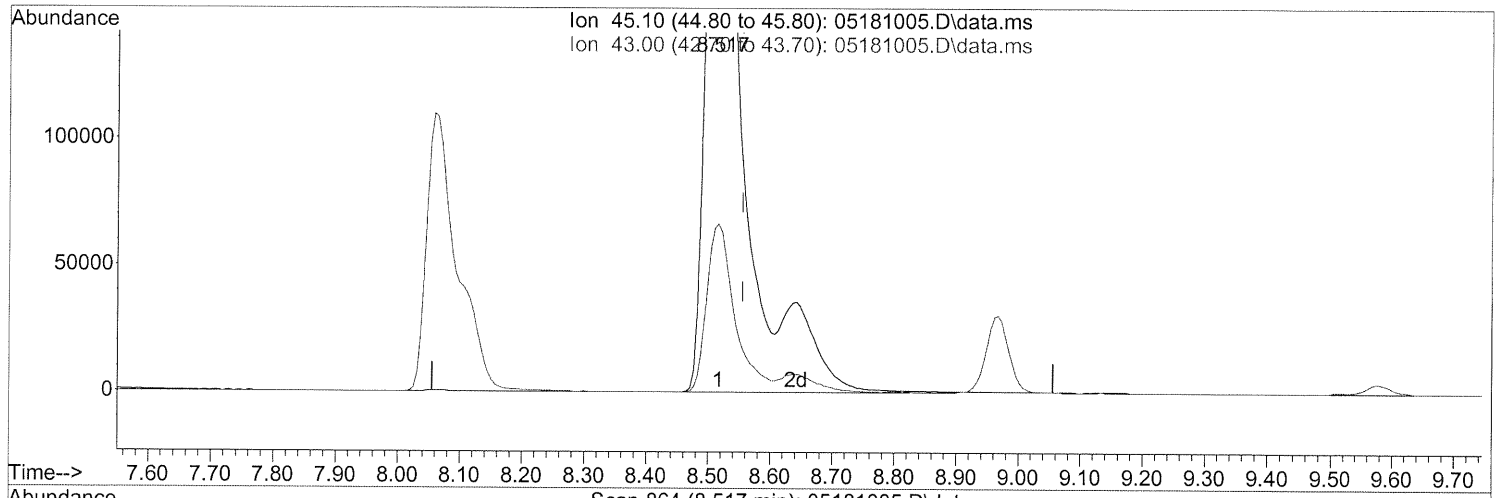
SP

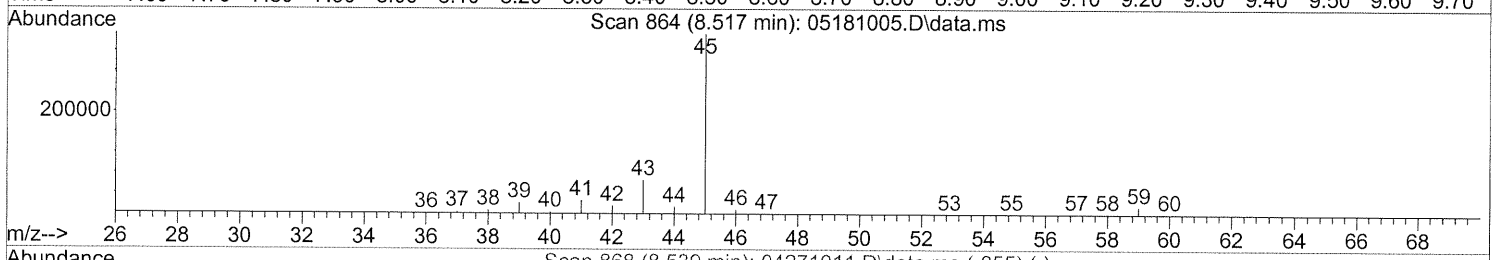
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 18.88 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

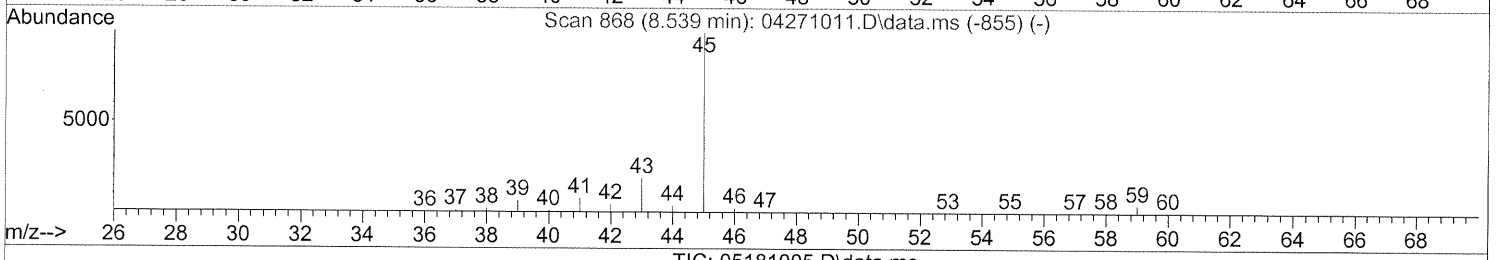
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001650-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 19 16:18:12 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181005.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.517min (-0.039) 26.45ng m

response 1244035

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 16.78 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP—71C

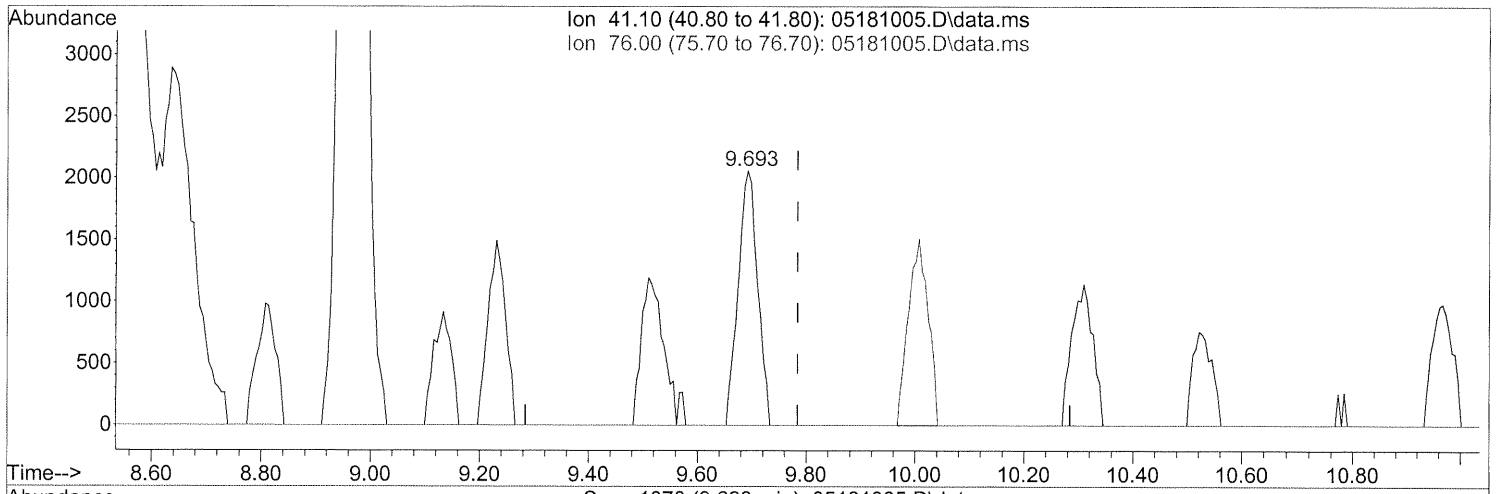
JSA 5/19/10

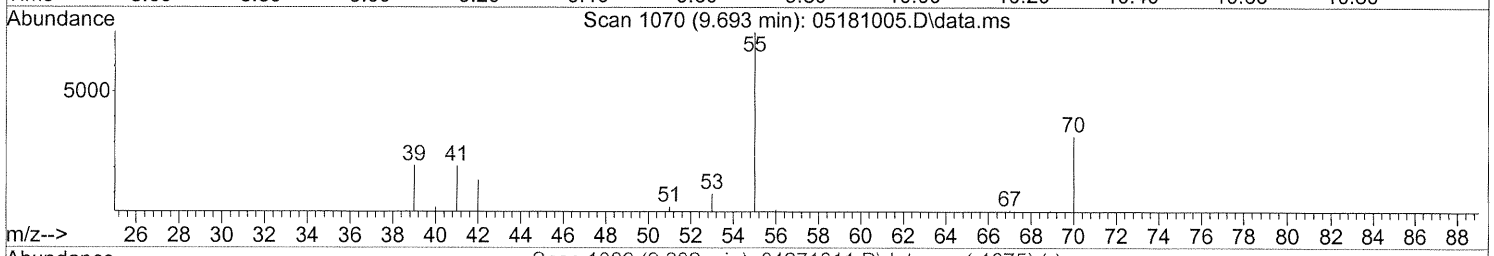
5/20/10

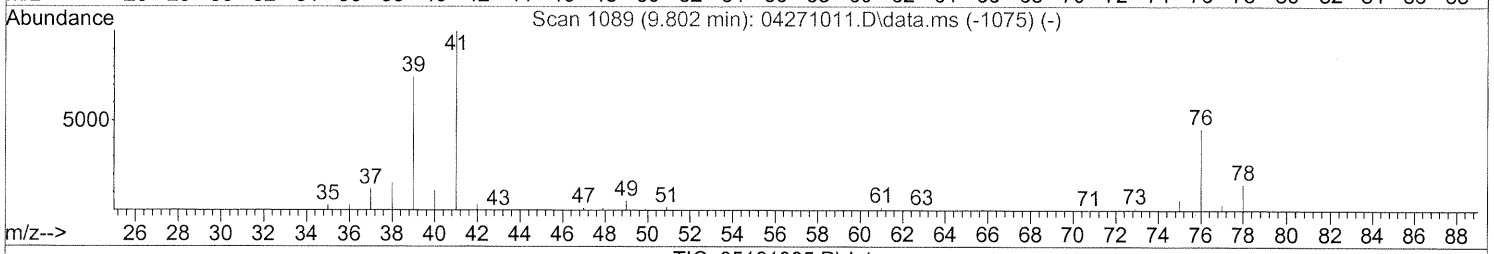
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001605-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 12:28:10 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181005.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.693min (-0.091) 0.21ng

response 5074

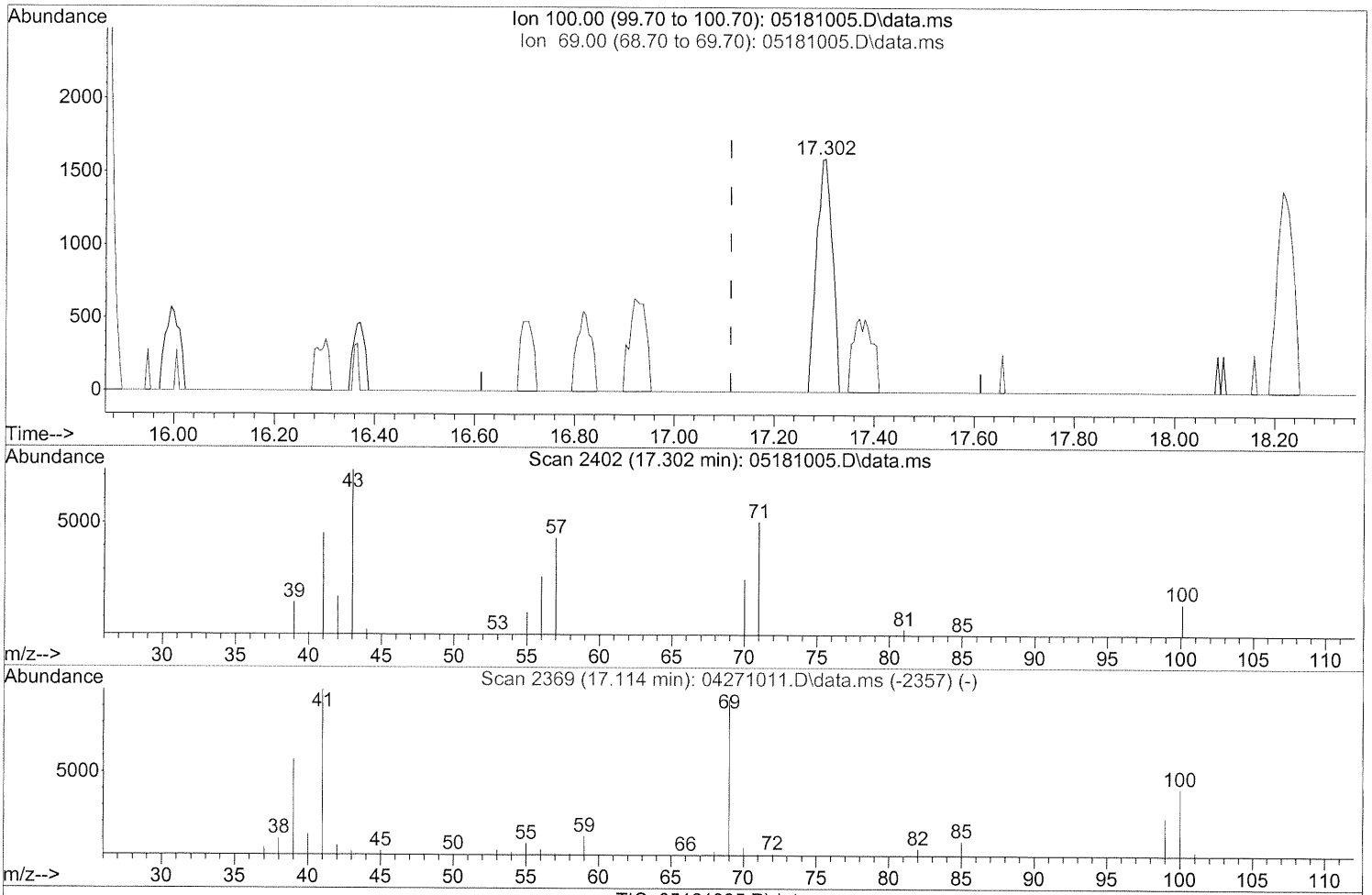
| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 76.00 | 32.80 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

TP

# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001605-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 12:28:10 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181005.D\data.ms

(50) Methyl Methacrylate (T)

17.302min (+0.189) 0.33ng

response 3536

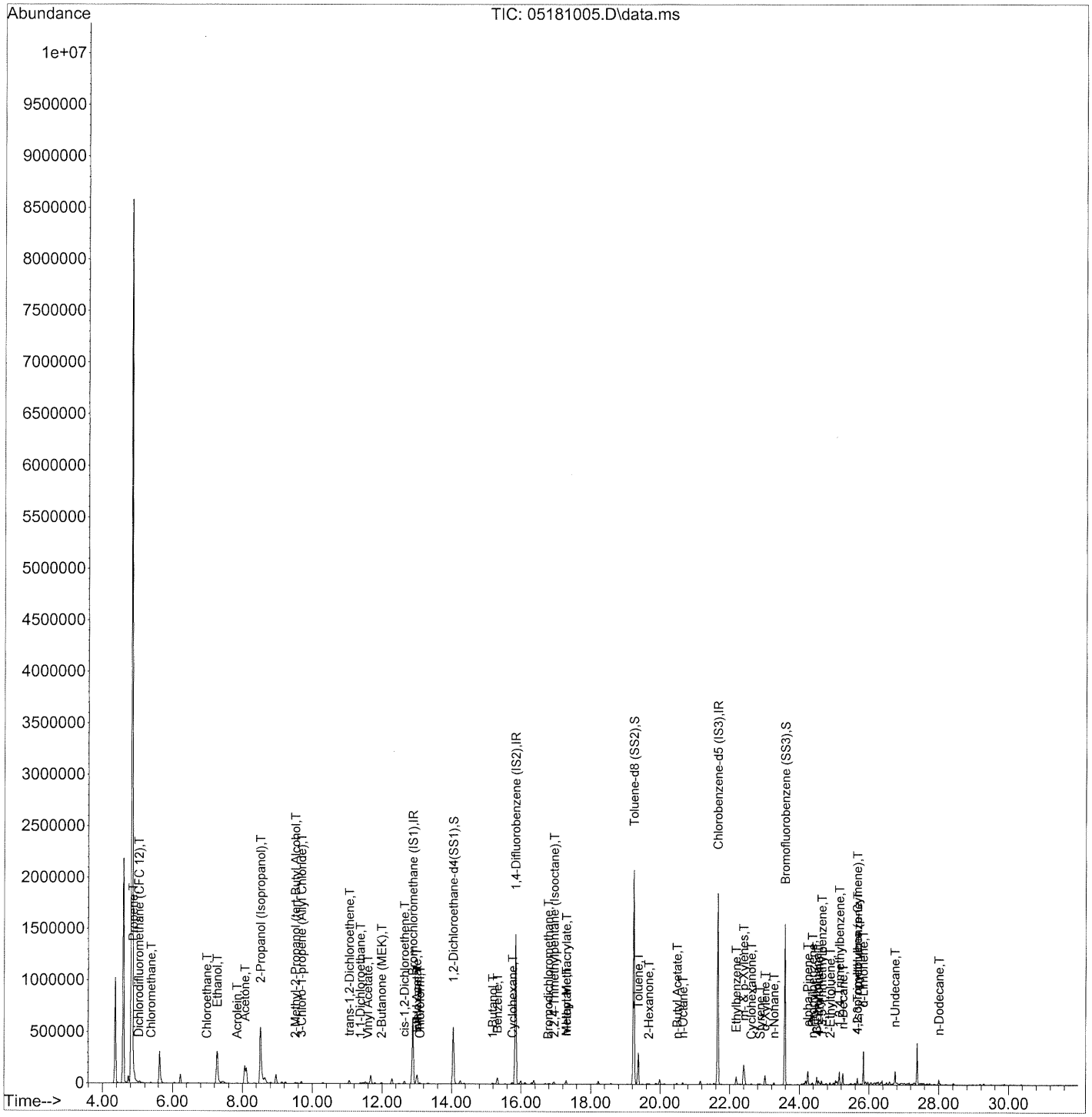
FP

| Ion | Exp% | Act% |
|---|---|---|
| 100.00 | 100 | 100 |
| 69.00 | 311.50 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001605-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 12:28:10 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001605-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 12:28:10 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 366137 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1757407 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 743087 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 552160 | 24.987 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.96% | | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1854330 | 24.742 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 98.96% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 614420 | 23.404 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 93.60% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 74562 | 3.595 | ng | | 96 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 7812 | 0.160 | ng | # | 94 |
| 4) Chloromethane | 5.38 | 50 | 5462 | 0.185 | ng | | 96 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 0.00 | 135 | 0 | N.D. | | | |
| 6) Vinyl Chloride | 5.83 | 62 | 1674 | N.D. | | | |
| 7) 1,3-Butadiene | 0.00 | 54 | 0 | N.D. | | | |
| 8) Bromomethane | 0.00 | 94 | 0 | N.D. | | | |
| 9) Chloroethane | 6.98 | 64 | 2290 | 0.136 | ng | | 85 |
| 10) Ethanol | 7.28 | 45 | 584255 | 46.243 | ng | | 99 |
| 11) Acetonitrile | 7.61 | 41 | 1917 | N.D. | | | |
| 12) Acrolein | 7.84 | 56 | 3757 | 0.302 | ng | | 90 |
| 13) Acetone | 8.07 | 58 | 106064 | 6.570 | ng | | 87 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 3502 | N.D. | | | |
| 15) 2-Propanol (Isopropanol) | 8.52 | 45 | 1105359 | 23.499 | ng | | 99 |
| 16) Acrylonitrile | 8.81 | 53 | 920 | N.D. | | | |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.52 | 59 | 11981 | 0.216 | ng | | 84 |
| 19) Methylene Chloride | 9.59 | 84 | 1172 | N.D. | | | |
| 20) 3-Chloro-1-propene (Al... | 9.69 | 41 | 5074 | 0.207 | ng | # | 42 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 520 | N.D. | | | |
| 22) Carbon Disulfide | 10.01 | 76 | 3809 | N.D. | | | |
| 23) trans-1,2-Dichloroethene | 11.06 | 61 | 23980 | 0.817 | ng | | 80 |
| 24) 1,1-Dichloroethane | 11.38 | 63 | 9453 | 0.247 | ng | | 96 |
| 25) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | | | |
| 26) Vinyl Acetate | 11.59 | 86 | 2345 | 0.417 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.98 | 72 | 5268 | 0.355 | ng | # | 74 |
| 28) cis-1,2-Dichloroethene | 12.65 | 61 | 19106 | 0.671 | ng | | 77 |
| 29) Diisopropyl Ether | 13.00 | 87 | 183 | N.D. | | | |
| 30) Ethyl Acetate | 13.00 | 61 | 6580 | 0.835 | ng | | 86 |
| 31) n-Hexane | 13.01 | 57 | 45503 | 1.212 | ng | # | 97 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001605-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 12:28:10 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.09 | 83 | 8817 | 0.221 ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.71 | 72 | 203 | N.D. | | |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 2618 | N.D. | | |
| 38) 1,1,1-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 39) Isopropyl Acetate | 0.00 | 61 | 0 | N.D. | | |
| 40) 1-Butanol | 15.18 | 56 | 9251 | 0.436 ng | | 87 |
| 41) Benzene | 15.32 | 78 | 81138 | 0.811 ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 1574 | N.D. | | |
| 43) Cyclohexane | 15.75 | 84 | 9493 | 0.255 ng | # | 86 |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | | |
| 45) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | | |
| 46) Bromodichloromethane | 16.78 | 83 | 3425 | 0.114 ng | # | 69 |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | | |
| 48) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 23901 | 0.260 ng | | 86 |
| 50) Methyl Methacrylate | 17.30 | 100 | 3536 | 0.334 ng | # | 1 |
| 51) n-Heptane | 17.30 | 71 | 11399 | 0.479 ng | | 91 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 18.09 | 58 | 968 | N.D. | | |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 58) Toluene | 19.37 | 91 | 300242 | 2.840 ng | | 99 |
| 59) 2-Hexanone | 19.67 | 43 | 5067 | 0.113 ng | # | 55 |
| 60) Dibromochloromethane | 19.91 | 129 | 651 | N.D. | | |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.48 | 43 | 9931 | 0.194 ng | | 90 |
| 63) n-Octane | 20.66 | 57 | 3740 | 0.197 ng | | 90 |
| 64) Tetrachloroethene | 20.84 | 166 | 504 | N.D. | | |
| 65) Chlorobenzene | 0.00 | 112 | 0 | N.D. | | |
| 66) Ethylbenzene | 22.19 | 91 | 71162 | 0.614 ng | | 97 |
| 67) m- & p-Xylenes | 22.40 | 91 | 199096 | 2.175 ng | | 94 |
| 68) Bromoform | 0.00 | 173 | 0 | N.D. | | |
| 69) Styrene | 22.87 | 104 | 7820 | 0.109 ng | | 94 |
| 70) o-Xylene | 23.01 | 91 | 67645 | 0.725 ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 8230 | 0.202 ng | | 96 |
| 72) 1,1,2,2-Tetrachloroethane | 0.00 | 83 | 0 | N.D. | | |
| 74) Cumene | 23.76 | 105 | 3923 | N.D. | | |
| 75) alpha-Pinene | 24.24 | 93 | 63244 | 1.069 ng | | 93 |
| 76) n-Propylbenzene | 24.37 | 91 | 19685 | 0.133 ng | | 94 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 51372 | 0.440 ng | | 97 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 26980 | 0.229 ng | | 97 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 18139 | 0.189 ng | | 91 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181005.D
Acq On : 18 May 2010 10:33
Operator : WA
Sample : P1001605-001 dIL (100ml)
Misc :
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 18 12:28:10 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 25.04 | 118 | 391 | N.D. | | |
| 81) 2-Ethyltoluene | 24.88 | 105 | 17087 | 0.141 ng | | 98 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 67163 | 0.676 ng | | 97 |
| 83) n-Decane | 25.25 | 57 | 39948 | 0.883 ng | | 91 |
| 84) Benzyl Chloride | 25.42 | 91 | 664 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.42 | 146 | 604 | N.D. | | |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 604 | N.D. | | |
| 87) sec-Butylbenzene | 25.48 | 105 | 1079 | N.D. | | |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 14555 | 0.113 ng | | 95 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 13769 | 0.138 ng | | 94 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 89 | N.D. | | |
| 91) d-Limonene | 25.84 | 68 | 80695 | 2.340 ng | | 82 |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 93) n-Undecane | 26.75 | 57 | 42974 | 0.959 ng | | 77 |
| 94) 1,2,4-Trichlorobenzene | 0.00 | 180 | 0 | N.D. | | |
| 95) Naphthalene | 28.05 | 128 | 7370 | N.D. | | |
| 96) n-Dodecane | 28.01 | 57 | 16012 | 0.345 ng | | 91 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.61 | 55 | 3164 | 0.104 ng | # | 74 |
| 99) tert-Butylbenzene | 25.15 | 119 | 8479 | N.D. | | |
| 100) n-Butylbenzene | 26.16 | 91 | 4809 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110355** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P1001650-002

Test Code: EPA TO-15 Date Collected: 5/9/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 5/11/10
Analyst: Liliana Marghitoiu Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01209

Initial Pressure (psig): -2.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.44

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | **Propene** | **52** | 0.72 | **31** | 0.42 | |
| 75-71-8 | **Dichlorodifluoromethane (CFC 12)** | **2.2** | 0.72 | **0.44** | 0.15 | |
| 74-87-3 | **Chloromethane** | **0.90** | 0.29 | **0.44** | 0.14 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.72 | ND | 0.10 | |
| 75-01-4 | Vinyl Chloride | ND | 0.14 | ND | 0.056 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.29 | ND | 0.13 | |
| 74-83-9 | Bromomethane | ND | 0.14 | ND | 0.037 | |
| 75-00-3 | Chloroethane | ND | 0.14 | ND | 0.055 | |
| 64-17-5 | **Ethanol** | **730** | 7.2 | **390** | 3.8 | |
| 75-05-8 | Acetonitrile | ND | 0.72 | ND | 0.43 | |
| 107-02-8 | Acrolein | ND | 2.9 | ND | 1.3 | |
| 67-64-1 | **Acetone** | **72** | 7.2 | **30** | 3.0 | |
| 75-69-4 | **Trichlorofluoromethane** | **1.1** | 0.14 | **0.20** | 0.026 | |
| 67-63-0 | **2-Propanol (Isopropyl Alcohol)** | **380** | 14 | **160** | 5.9 | **D** |
| 107-13-1 | Acrylonitrile | ND | 0.72 | ND | 0.33 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.14 | ND | 0.036 | |
| 75-09-2 | Methylene Chloride | ND | 0.72 | ND | 0.21 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.14 | ND | 0.046 | |
| 76-13-1 | **Trichlorotrifluoroethane** | **0.44** | 0.14 | **0.057** | 0.019 | |
| 75-15-0 | Carbon Disulfide | ND | 7.2 | ND | 2.3 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.14 | ND | 0.036 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.14 | ND | 0.036 | |
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 0.14 | ND | 0.040 | |
| 108-05-4 | Vinyl Acetate | ND | 7.2 | ND | 2.0 | |
| 78-93-3 | 2-Butanone (MEK) | ND | 7.2 | ND | 2.4 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

Verified By: Rec Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110355** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P1001650-002

Test Code: EPA TO-15 Date Collected: 5/9/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 5/11/10
Analyst: Liliana Marghitoiu Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01209

Initial Pressure (psig): -2.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.44

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.14 | ND | 0.036 | |
| 141-78-6 | **Ethyl Acetate** | **12** | 0.72 | **3.2** | 0.20 | |
| 110-54-3 | **n-Hexane** | **18** | 0.72 | **5.0** | 0.20 | |
| 67-66-3 | **Chloroform** | **3.1** | 0.14 | **0.63** | 0.029 | |
| 109-99-9 | Tetrahydrofuran (THF) | ND | 0.72 | ND | 0.24 | |
| 107-06-2 | **1,2-Dichloroethane** | **1.2** | 0.14 | **0.29** | 0.036 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.14 | ND | 0.026 | |
| 71-43-2 | **Benzene** | **9.8** | 0.14 | **3.1** | 0.045 | |
| 56-23-5 | **Carbon Tetrachloride** | **0.71** | 0.14 | **0.11** | 0.023 | |
| 110-82-7 | **Cyclohexane** | **3.1** | 0.72 | **0.90** | 0.21 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.14 | ND | 0.031 | |
| 75-27-4 | **Bromodichloromethane** | **1.6** | 0.14 | **0.24** | 0.022 | |
| 79-01-6 | Trichloroethene | ND | 0.14 | ND | 0.027 | |
| 123-91-1 | 1,4-Dioxane | ND | 0.72 | ND | 0.20 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.72 | ND | 0.18 | |
| 142-82-5 | **n-Heptane** | **7.5** | 0.72 | **1.8** | 0.18 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.72 | ND | 0.16 | |
| 108-10-1 | **4-Methyl-2-pentanone** | **1.1** | 0.72 | **0.26** | 0.18 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.72 | ND | 0.16 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.14 | ND | 0.026 | |
| 108-88-3 | **Toluene** | **40** | 0.72 | **11** | 0.19 | |
| 591-78-6 | 2-Hexanone | ND | 0.72 | ND | 0.18 | |
| 124-48-1 | **Dibromochloromethane** | **0.57** | 0.14 | **0.067** | 0.017 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.14 | ND | 0.019 | |
| 123-86-4 | **n-Butyl Acetate** | **1.6** | 0.72 | **0.34** | 0.15 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110355**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P1001650-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01209

Date Collected: 5/9/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -2.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.44

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | **n-Octane** | **3.1** | 0.72 | **0.67** | 0.15 | |
| 127-18-4 | **Tetrachloroethene** | **0.35** | 0.14 | **0.052** | 0.021 | |
| 108-90-7 | Chlorobenzene | ND | 0.14 | ND | 0.031 | |
| 100-41-4 | **Ethylbenzene** | **9.2** | 0.72 | **2.1** | 0.17 | |
| 179601-23-1 | **m,p-Xylenes** | **32** | 0.72 | **7.4** | 0.17 | |
| 75-25-2 | Bromoform | ND | 0.72 | ND | 0.070 | |
| 100-42-5 | **Styrene** | **1.7** | 0.72 | **0.41** | 0.17 | |
| 95-47-6 | **o-Xylene** | **11** | 0.72 | **2.5** | 0.17 | |
| 111-84-2 | **n-Nonane** | **2.9** | 0.72 | **0.56** | 0.14 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.14 | ND | 0.021 | |
| 98-82-8 | Cumene | ND | 0.72 | ND | 0.15 | |
| 80-56-8 | **alpha-Pinene** | **17** | 0.72 | **3.0** | 0.13 | |
| 103-65-1 | **n-Propylbenzene** | **1.9** | 0.72 | **0.39** | 0.15 | |
| 622-96-8 | **4-Ethyltoluene** | **3.5** | 0.72 | **0.71** | 0.15 | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **2.9** | 0.72 | **0.58** | 0.15 | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **10** | 0.72 | **2.1** | 0.15 | |
| 100-44-7 | Benzyl Chloride | ND | 0.72 | ND | 0.14 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.14 | ND | 0.024 | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.14 | ND | 0.024 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.14 | ND | 0.024 | |
| 5989-27-5 | **d-Limonene** | **41** | 0.72 | **7.4** | 0.13 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.72 | ND | 0.075 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.72 | ND | 0.097 | |
| 91-20-3 | Naphthalene | ND | 0.72 | ND | 0.14 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.72 | ND | 0.068 | |

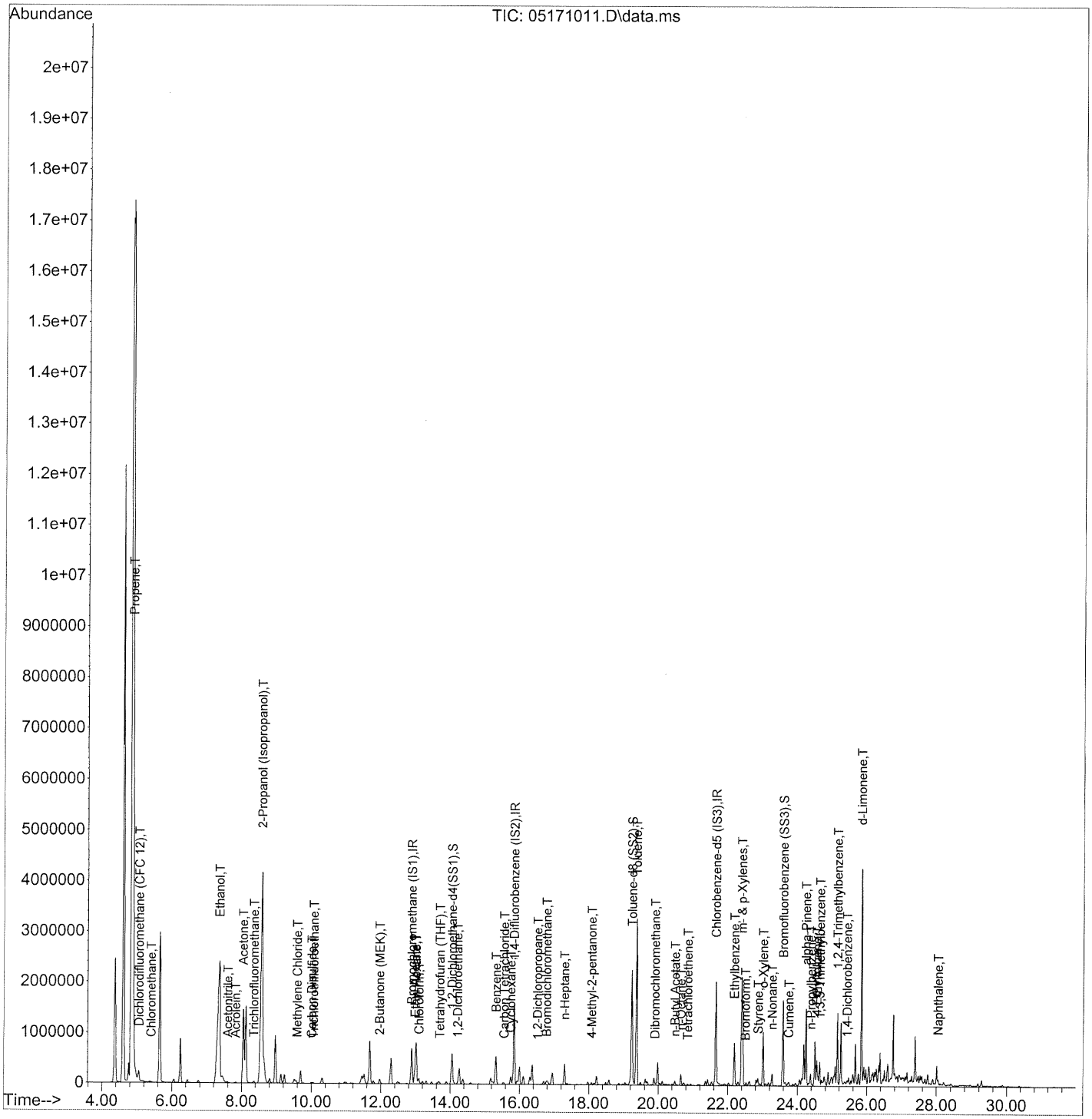
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Re Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:24:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:24:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 406195 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1930296 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 814276 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 601912 | 24.552 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.20% | | ✓ |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 2031751 | 24.739 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.96% | | ✓ |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 677152 | 23.539 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.16% | | ✓ |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 838870 | 36.453 | ng | | 96 |
| 3) Dichlorodifluoromethan... | 5.05 | 85 | 82214 | 1.519 | ng | | 99 |
| 4) Chloromethane | 5.40 | 50 | 20492 | 0.625 | ng | | 100 |
| 10) Ethanol | 7.36 | 45 | 7110894 | 507.319 | ng | | 99 |
| 11) Acetonitrile | 7.60 | 41 | 15378 | 0.453 | ng | | 94 |
| 12) Acrolein | 7.83 | 56 | 19761 | 1.430 | ng | | 99 |
| 13) Acetone | 8.04 | 58 | 899881m | 50.241 | ng | | |
| 14) Trichlorofluoromethane | 8.35 | 101 | 38703 | 0.786 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.58 | 45 | 11316129 | 216.845 | ng | su dil | 99 |
| 19) Methylene Chloride | 9.59 | 84 | 5275 | 0.196 | ng | # | 75 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 7489 | 0.303 | ng | # | 80 |
| 22) Carbon Disulfide | 10.01 | 76 | 42707 | 0.491 | ng | | 99 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 43649 | 2.653 | ng | # | 68 |
| 30) Ethyl Acetate | 12.98 | 61 | 70175 | 8.032 | ng | | 83 |
| 31) n-Hexane | 13.01 | 57 | 508426 | 12.209 | ng | # | 96 |
| 32) Chloroform | 13.10 | 83 | 94321 | 2.131 | ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.70 | 72 | 3086 | 0.193 | ng | # | 1 |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 27289 | 0.822 | ng | | 99 |
| 41) Benzene | 15.32 | 78 | 745603 | 6.785 | ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 16562 | 0.491 | ng | | 100 |
| 43) Cyclohexane | 15.75 | 84 | 87861 | 2.147 | ng | # | 80 |
| 45) 1,2-Dichloropropane | 16.52 | 63 | 2320 | 0.097 | ng | | 87 |
| 46) Bromodichloromethane | 16.78 | 83 | 36887 | 1.118 | ng | | 78 |
| 51) n-Heptane | 17.30 | 71 | 135572 | 5.186 | ng | | 90 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 15582 | 0.749 | ng | | 92 |
| 58) Toluene | 19.37 | 91 | 3223095 | 27.827 | ng | | 98 |
| 60) Dibromochloromethane | 19.91 | 129 | 10966 | 0.396 | ng | | 100 |
| 62) n-Butyl Acetate | 20.48 | 43 | 62423 | 1.115 | ng | | 81 |
| 63) n-Octane | 20.65 | 57 | 45349 | 2.182 | ng | # | 83 |
| 64) Tetrachloroethene | 20.84 | 166 | 8856 | 0.245 | ng | | 97 |

Quantitation Report (QT Reviewed)

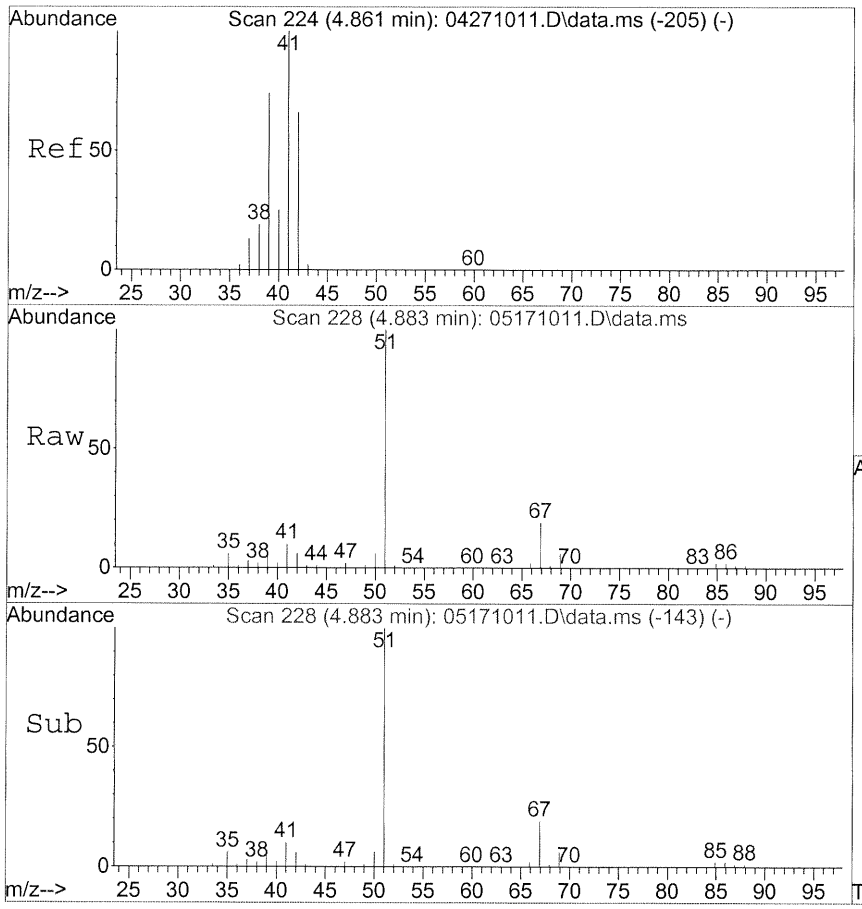
Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:24:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 66) Ethylbenzene | 22.19 | 91 | 808000 | 6.365 | ng | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 2234641 | 22.278 | ng | 92 |
| 68) Bromoform | 22.51 | 173 | 2680 | 0.103 | ng | 86 |
| 69) Styrene | 22.87 | 104 | 94538 | 1.198 | ng | 94 |
| 70) o-Xylene | 23.01 | 91 | 774602 | 7.574 | ng | 94 |
| 71) n-Nonane | 23.27 | 43 | 91132 | 2.043 | ng | 89 |
| 74) Cumene | 23.75 | 105 | 45480 | 0.325 | ng | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 746453 | 11.512 | ng | 92 |
| 76) n-Propylbenzene | 24.38 | 91 | 215996 | 1.332 | ng | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 310855 | 2.411 | ng | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 208341 | 1.980 | ng | 93 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 774596 | 7.118 | ng | 96 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 6633 | 0.096 | ng | 96 |
| 91) d-Limonene | 25.84 | 68 | 1080777 | 28.602 | ng | 83 |
| 95) Naphthalene | 28.05 | 128 | 65223 | 0.472 | ng | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

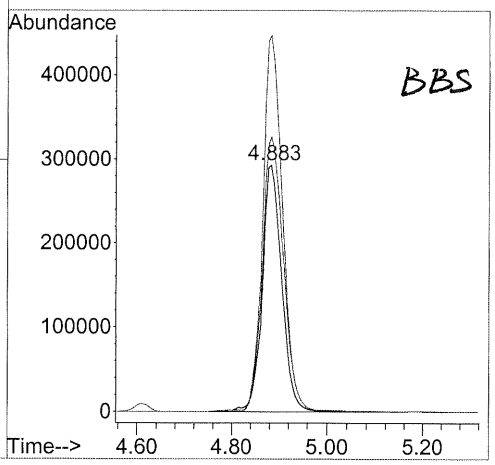
JM 5/19/10

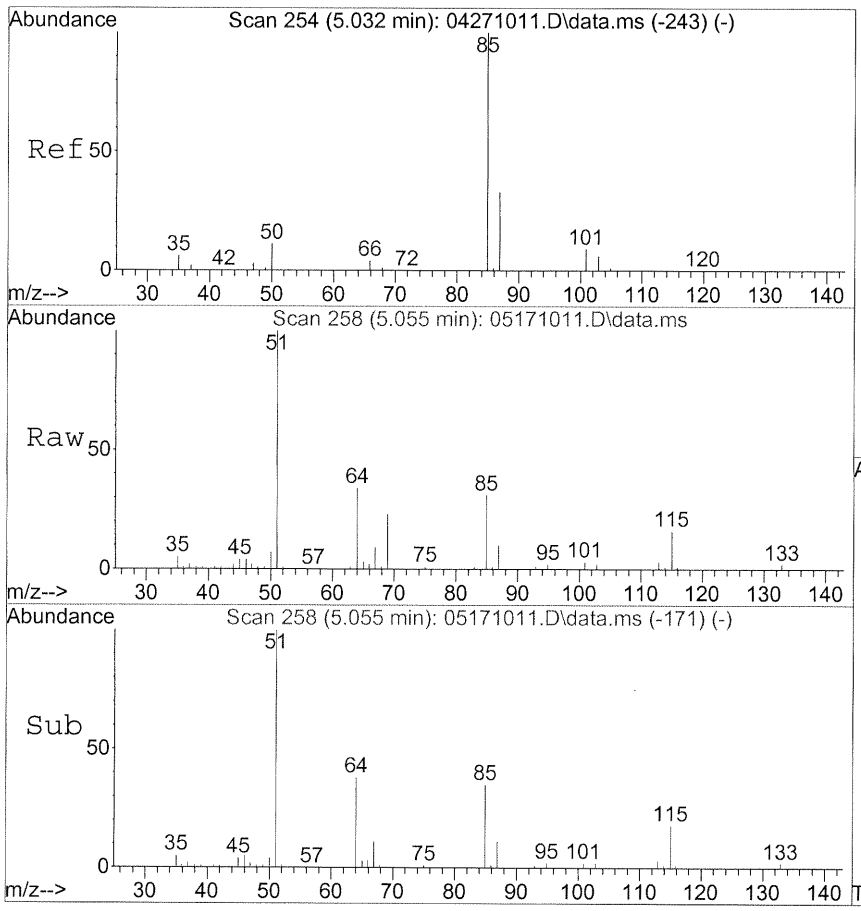



#2
Propene
Concen: 36.45 ng
RT: 4.88 min Scan# 228
Delta R.T. -0.017 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 42 Resp: 838870

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 39 | 121.5 | 92.2 | 132.2 |
| 41 | 155.6 | 133.9 | 173.9 |

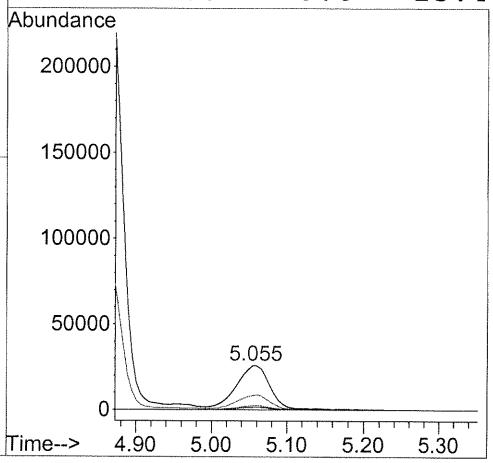



#3
Dichlorodifluoromethane (CFC
Concen: 1.52 ng
RT: 5.05 min Scan# 258
Delta R.T. -0.006 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 85 Resp: 82214

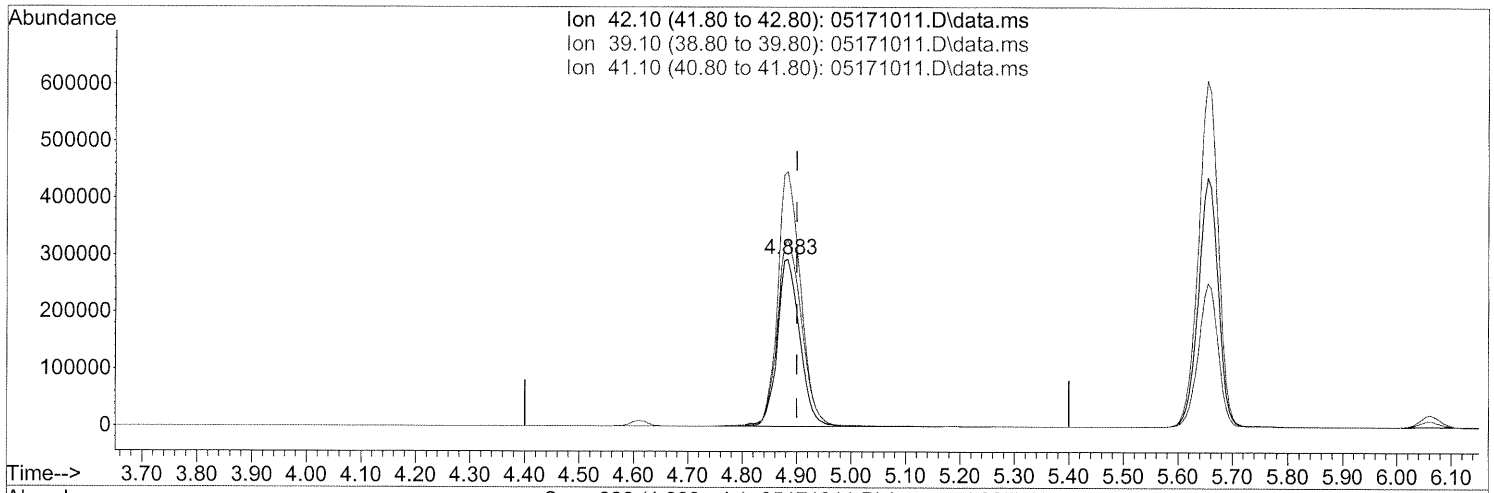
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.4 | 12.0 | 52.0 |
| 101 | 8.0 | 0.0 | 28.5 |
| 103 | 4.8 | 0.0 | 25.4 |

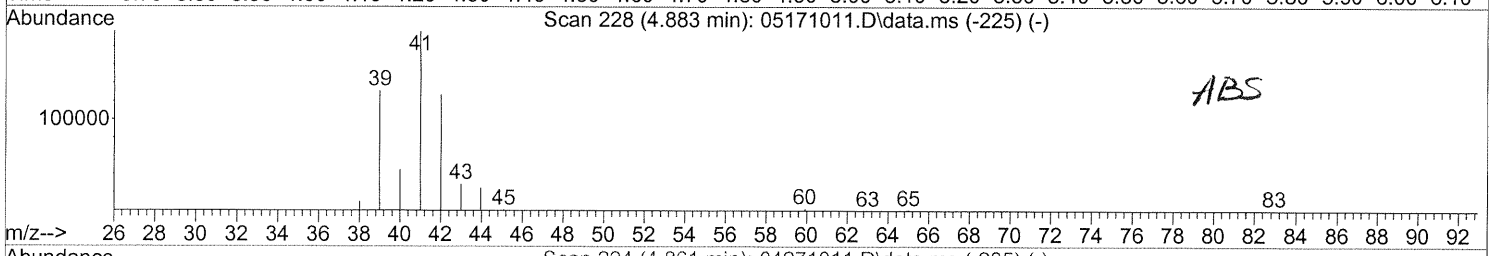


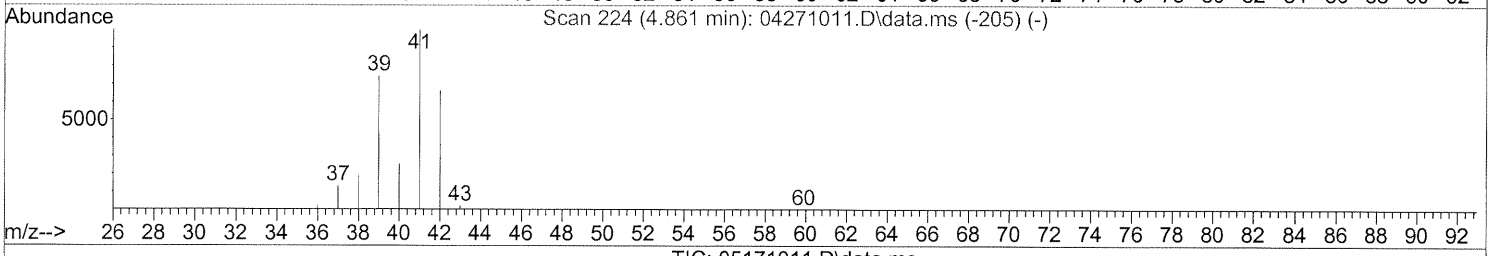
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



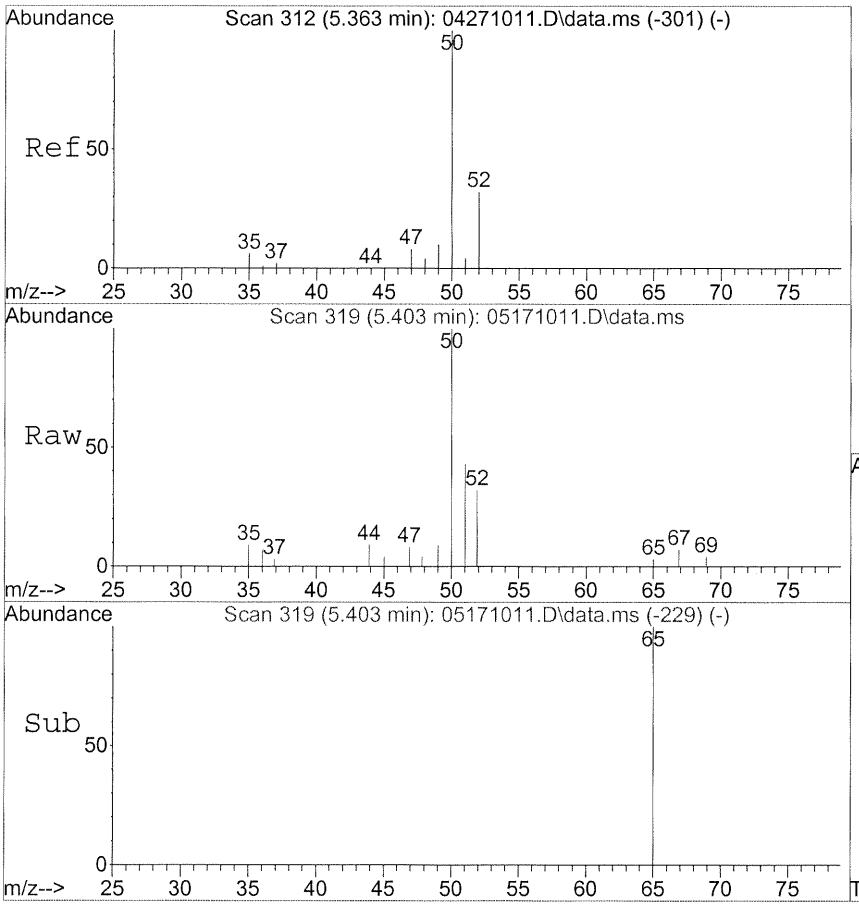

TIC: 05171011.D\data.ms

(2) Propene (T)

4.883min (-0.017) 36.45ng

response 838870

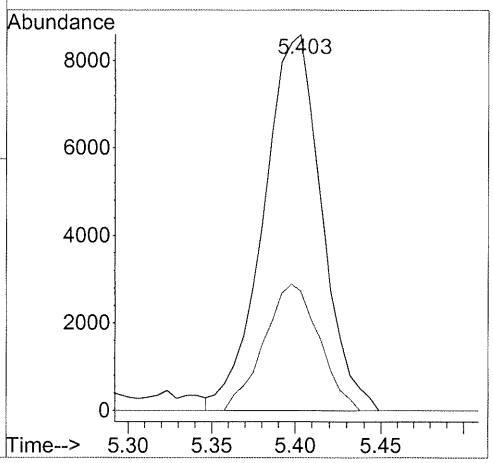
| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 112.20 | 121.49 |
| 41.10 | 153.90 | 155.63 |
| 0.00 | 0.00 | 0.00 |

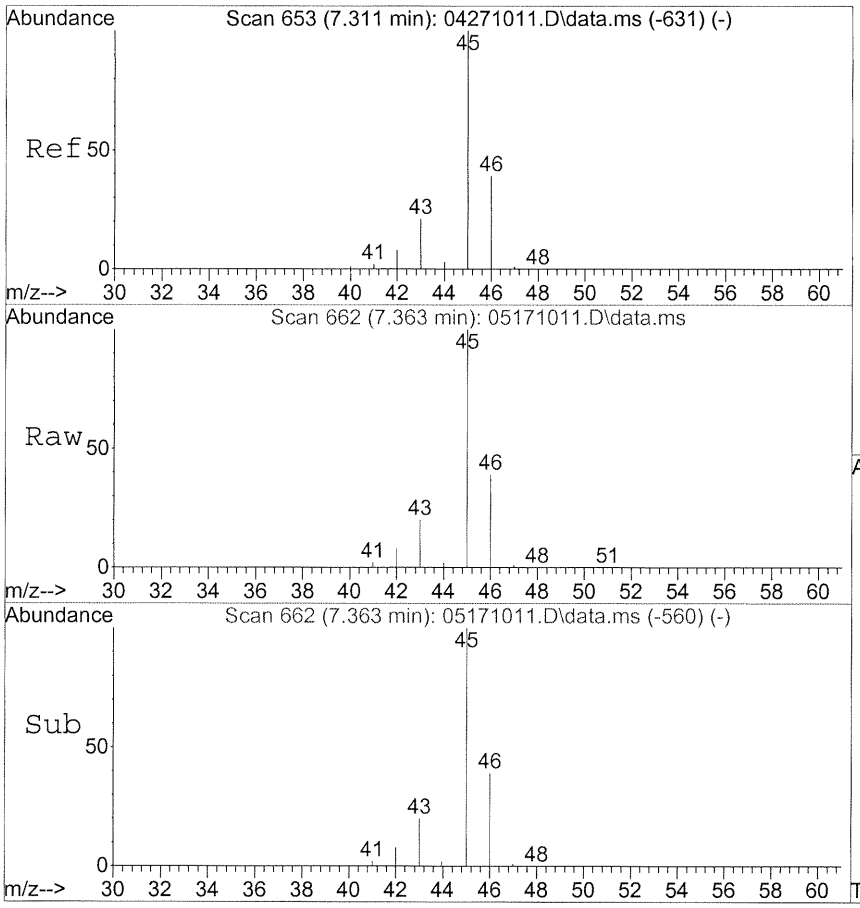



#4
Chloromethane
Concen: 0.62 ng
RT: 5.40 min Scan# 319
Delta R.T. 0.012 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 50 Resp: 20492

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.9 | 12.1 | 52.1 |

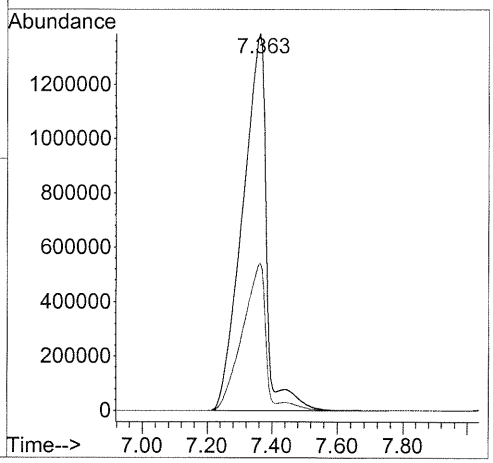


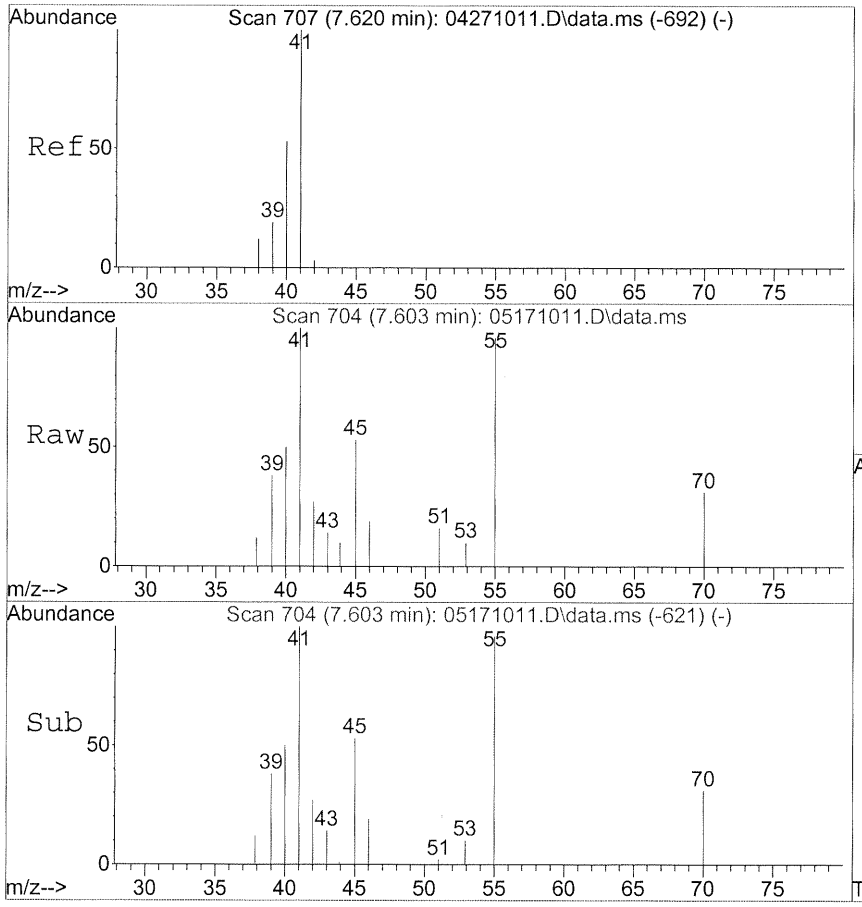




#10
Ethanol
Concen: 507.32 ng
RT: 7.36 min Scan# 662
Delta R.T. 0.080 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 45 Resp: 7110894

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 38.9 | 18.4 | 58.4 |

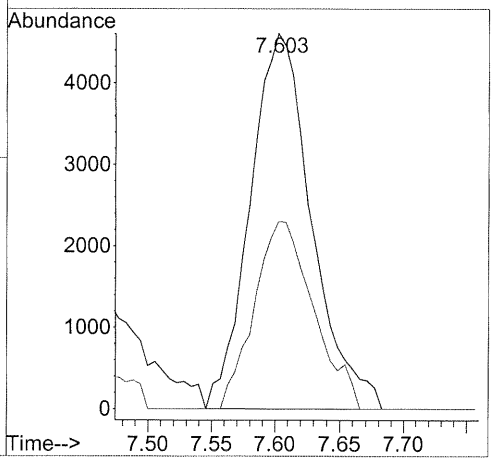


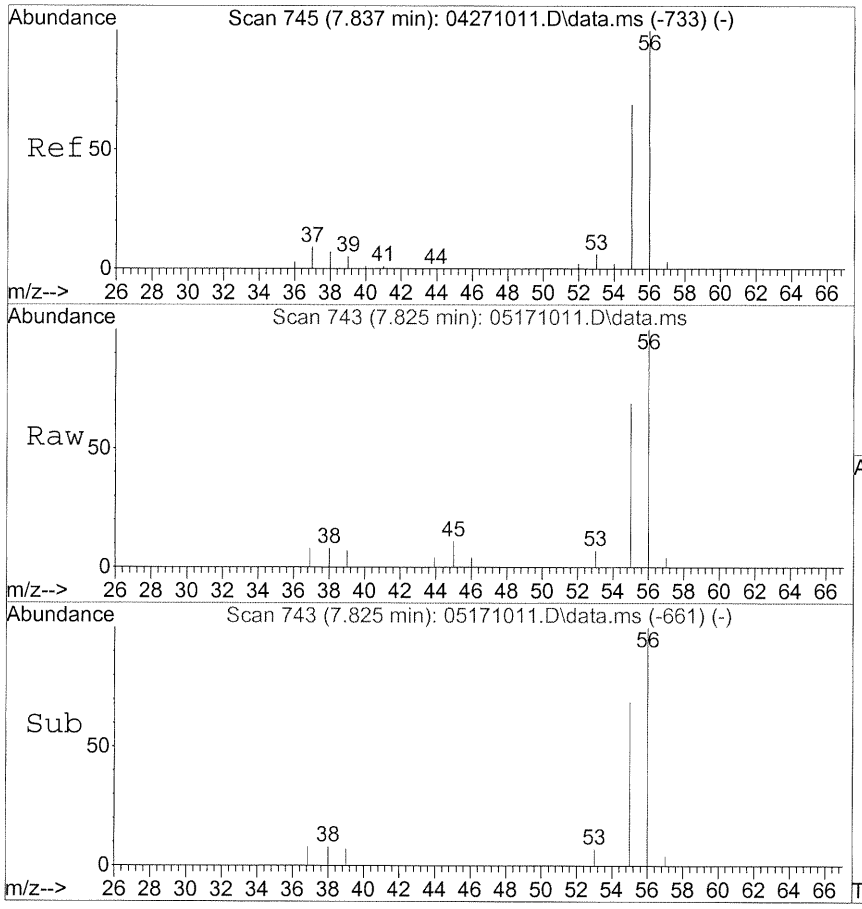



#11
Acetonitrile
Concen: 0.45 ng
RT: 7.60 min Scan# 704
Delta R.T. -0.028 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 41 Resp: 15378

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 40 | 48.1 | 32.7 | 72.7 |

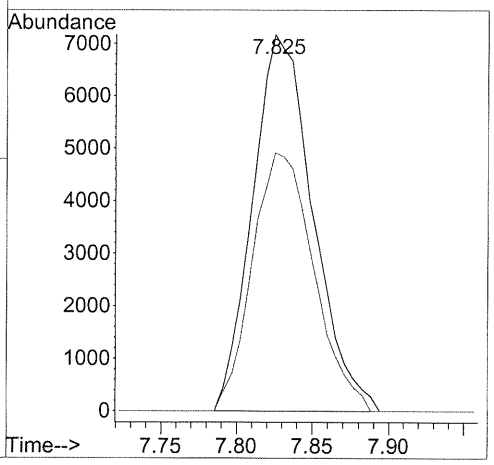


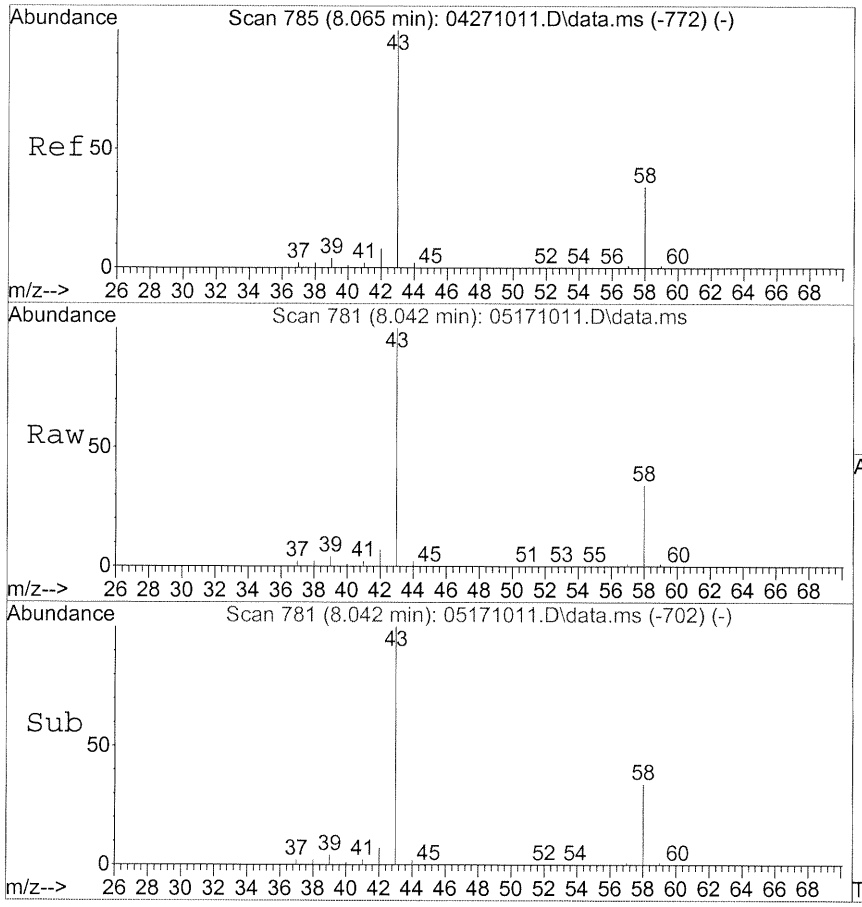




#12
Acrolein
Concen: 1.43 ng
RT: 7.83 min Scan# 743
Delta R.T. -0.034 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 56 Resp: 19761

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 55 | 70.0 | 50.5 | 90.5 |

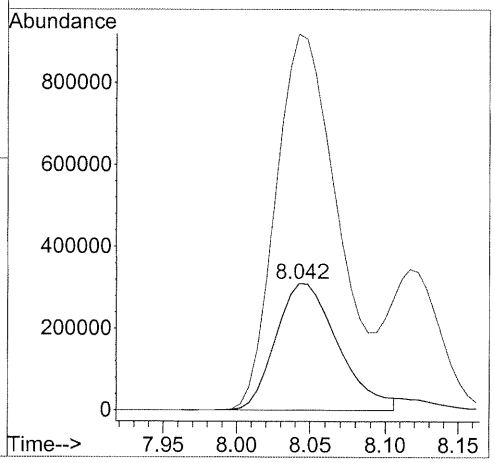


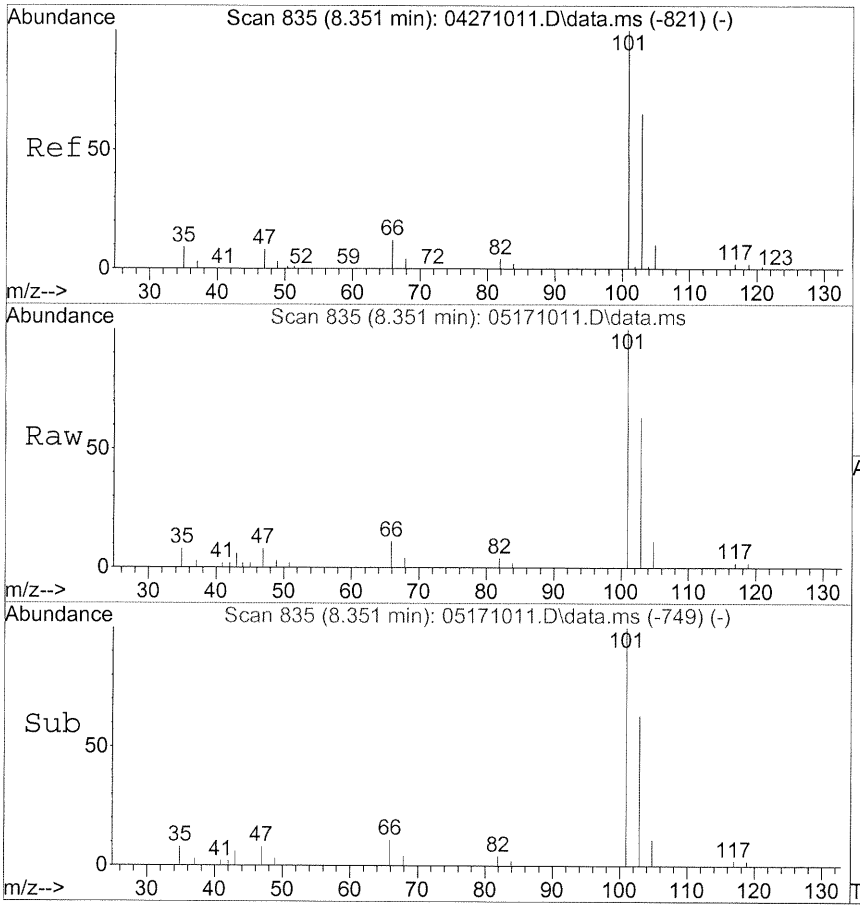



#13
Acetone
Concen: 50.24 ng m
RT: 8.04 min Scan# 781
Delta R.T. -0.051 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 58 Resp: 899881

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 294.7 | 295.0 | 355.0# |

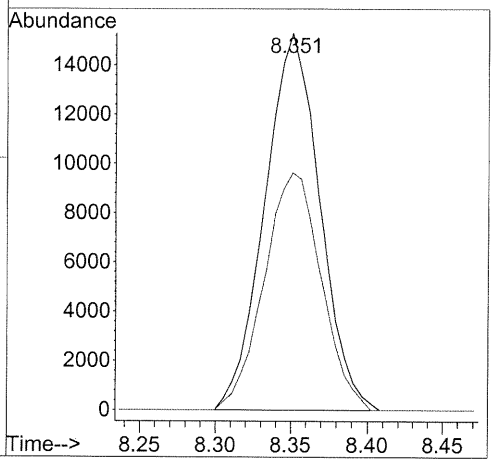


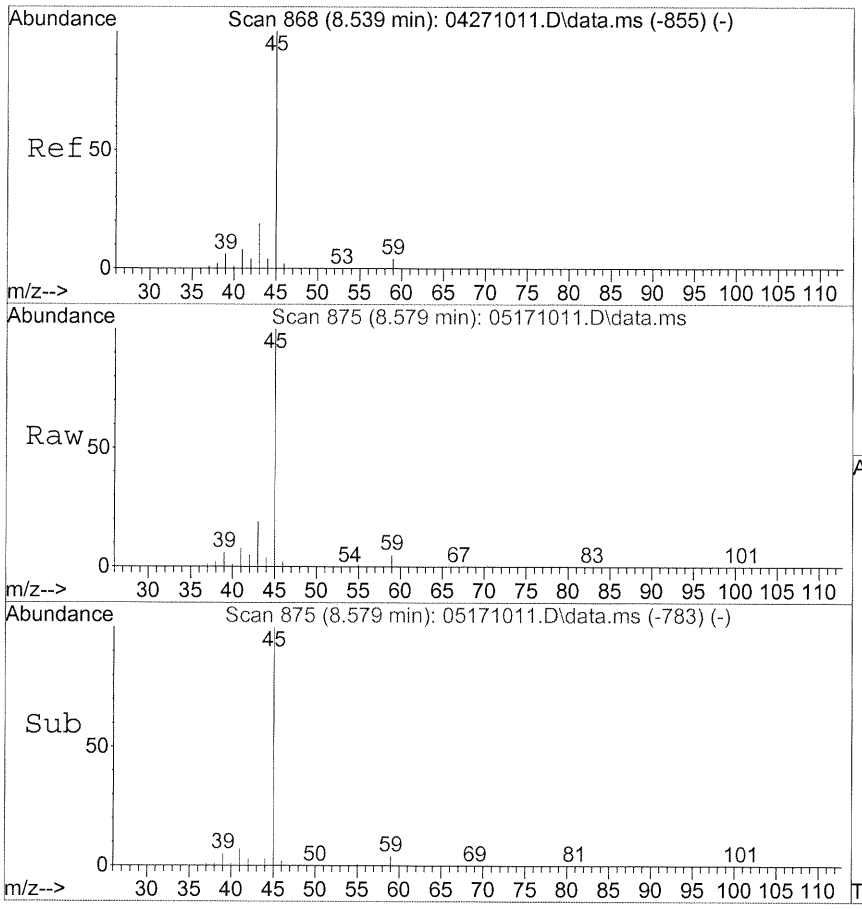




#14
Trichlorofluoromethane
Concen: 0.79 ng
RT: 8.35 min Scan# 835
Delta R.T. -0.011 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:101 Resp: 38703

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 65.2 | 43.8 | 83.8 |

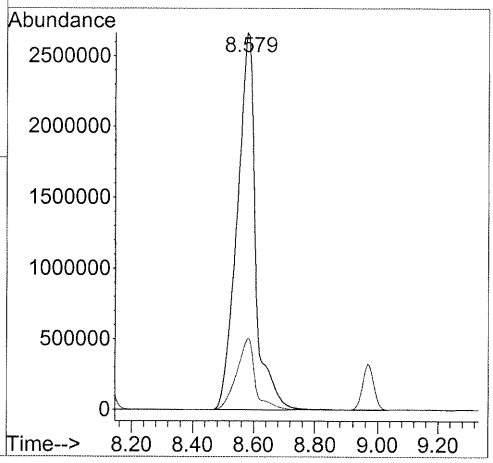


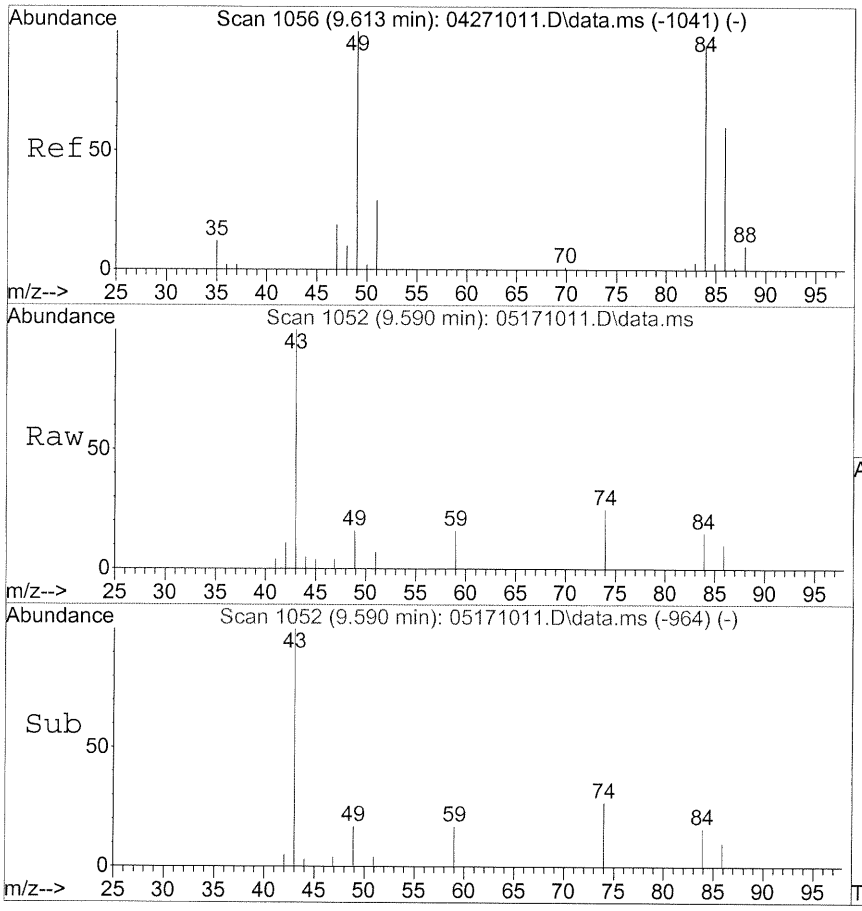



#15
2-Propanol (Isopropanol)
Concen: 216.85 ng
RT: 8.58 min Scan# 875
Delta R.T. 0.023 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 45 Resp:11316129

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 18.9 | 0.0 | 39.2 |

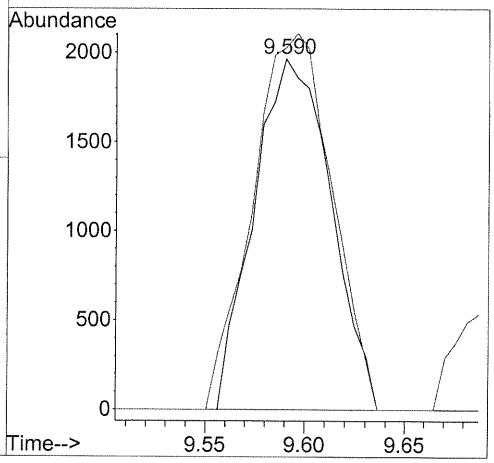


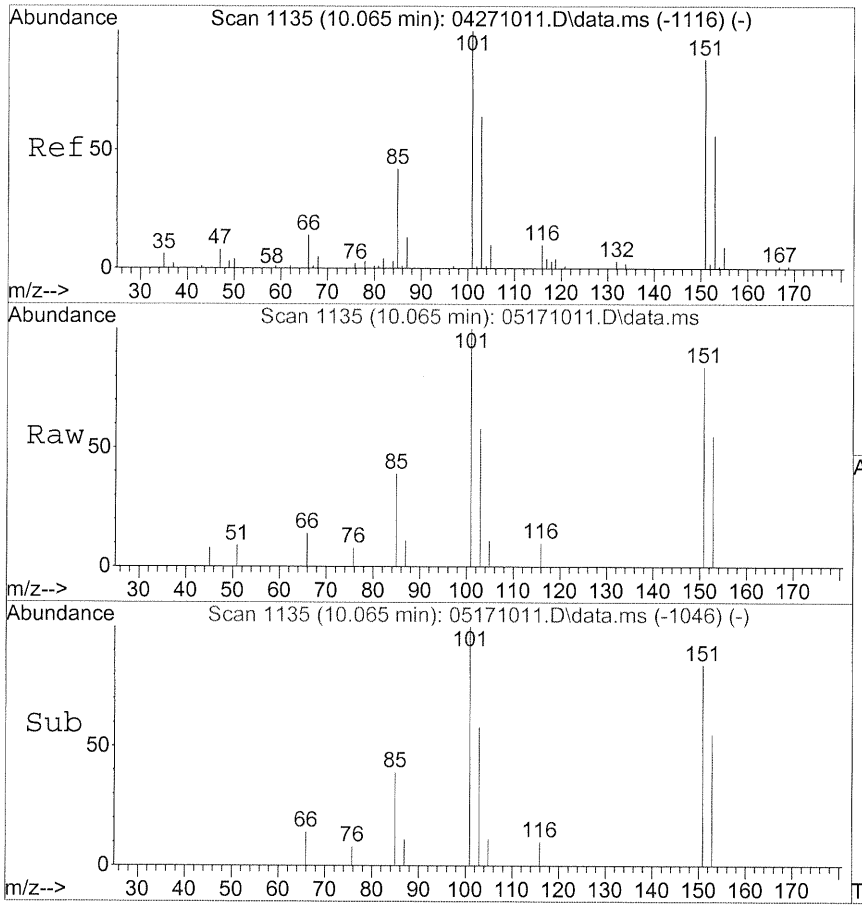




#19
Methylene Chloride
Concen: 0.20 ng
RT: 9.59 min Scan# 1052
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 84 Resp: 5275

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 110.9 | 116.6 | 166.6# |

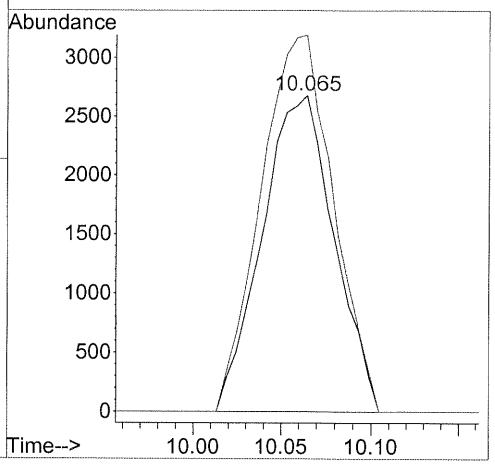


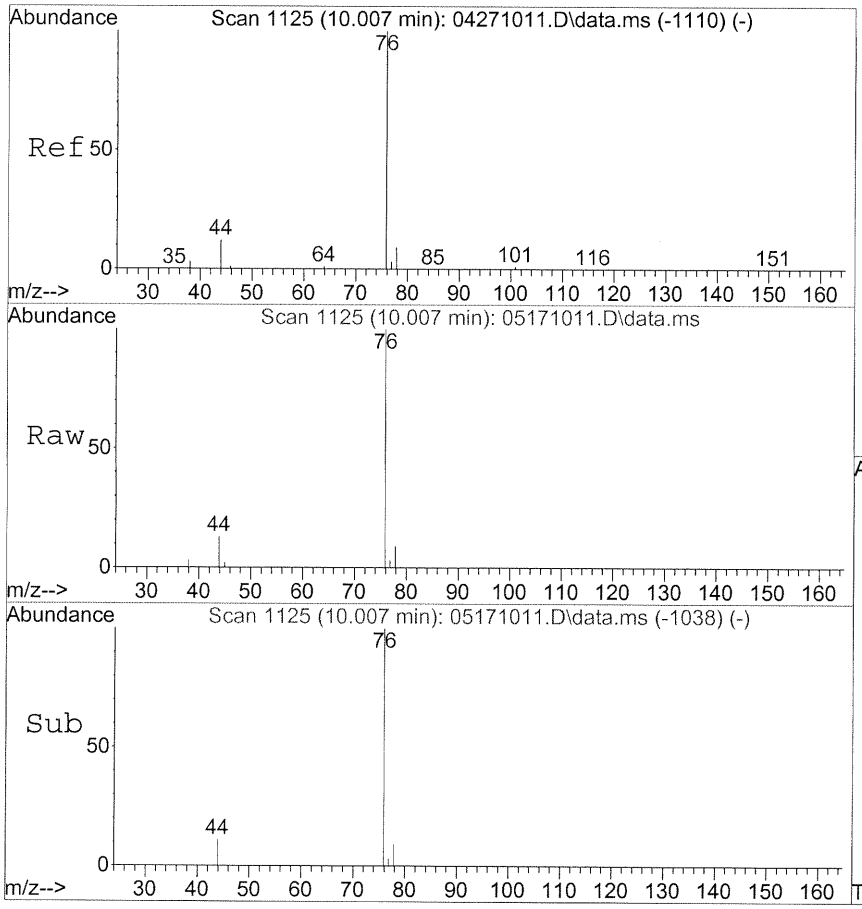



#21
Trichlorotrifluoroethane
Concen: 0.30 ng
RT: 10.06 min Scan# 1135
Delta R.T. 0.006 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:151 Resp: 7489

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 151 | 100 | | |
| 101 | 120.3 | 125.6 | 165.6# |

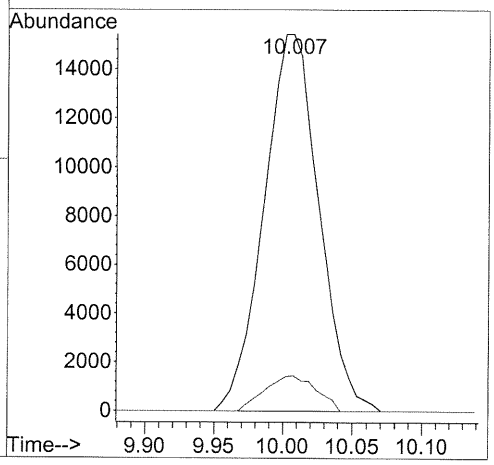


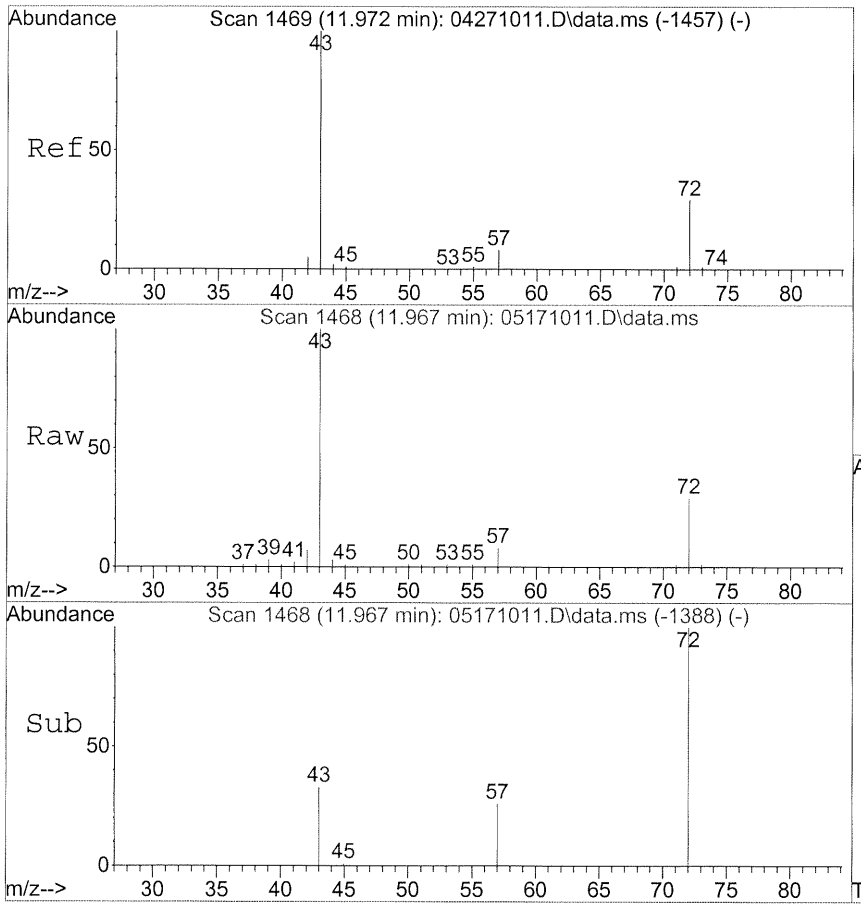




#22
Carbon Disulfide
Concen: 0.49 ng
RT: 10.01 min Scan# 1125
Delta R.T. -0.006 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 76 Resp: 42707

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 8.7 | 0.0 | 29.1 |

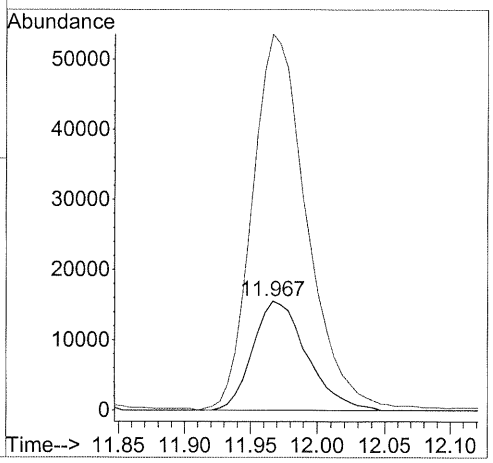


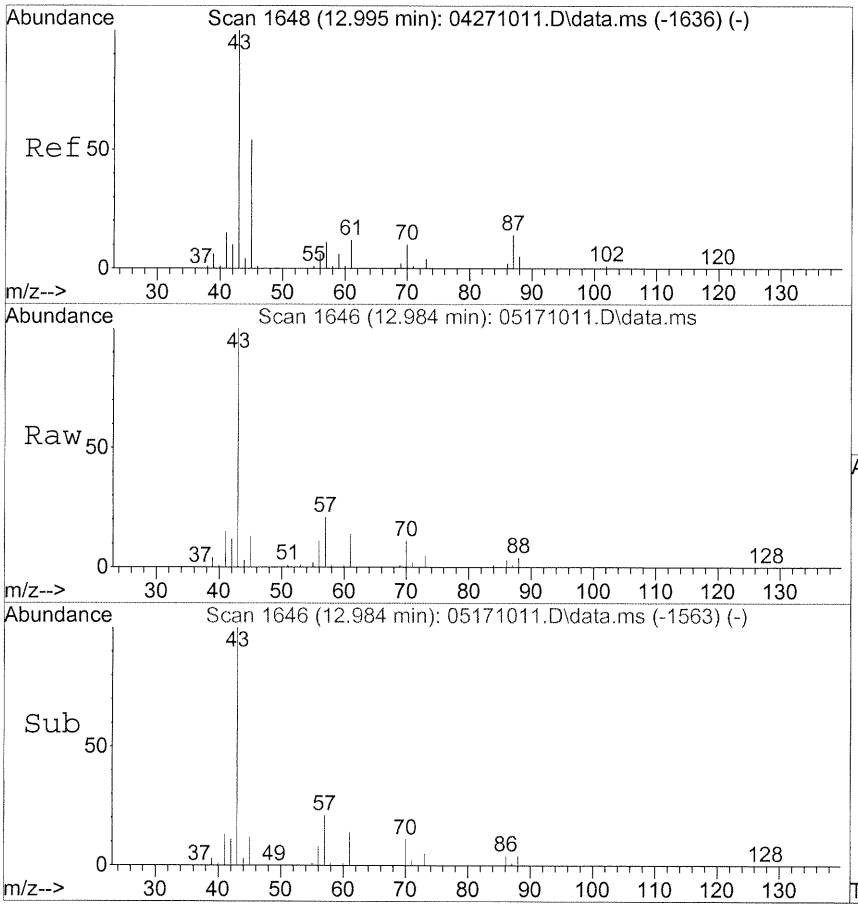



#27
2-Butanone (MEK)
Concen: 2.65 ng
RT: 11.97 min Scan# 1468
Delta R.T. -0.046 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 72 Resp: 43649

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 353.1 | 412.3 | 452.3# |

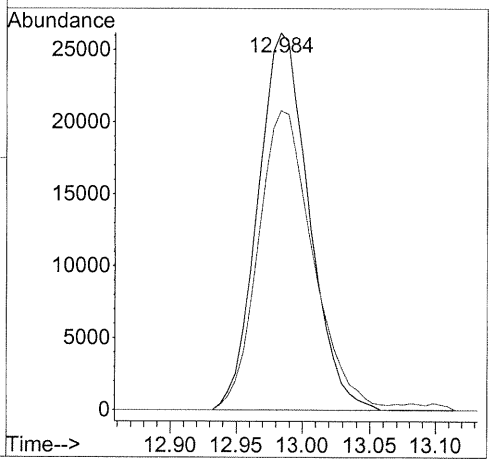


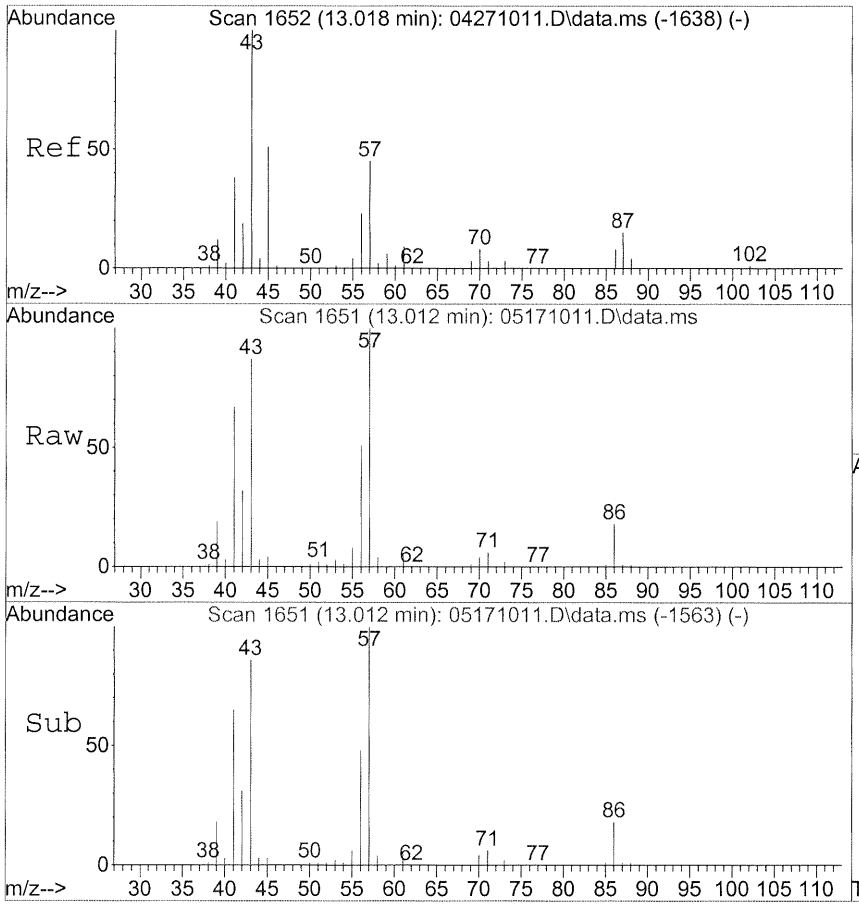




#30
Ethyl Acetate
Concen: 8.03 ng
RT: 12.98 min Scan# 1646
Delta R.T. -0.028 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 61 Resp: 70175

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 70 | 86.3 | 52.2 | 92.2 |

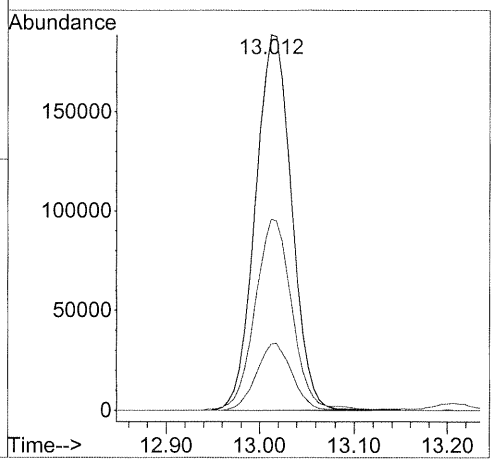


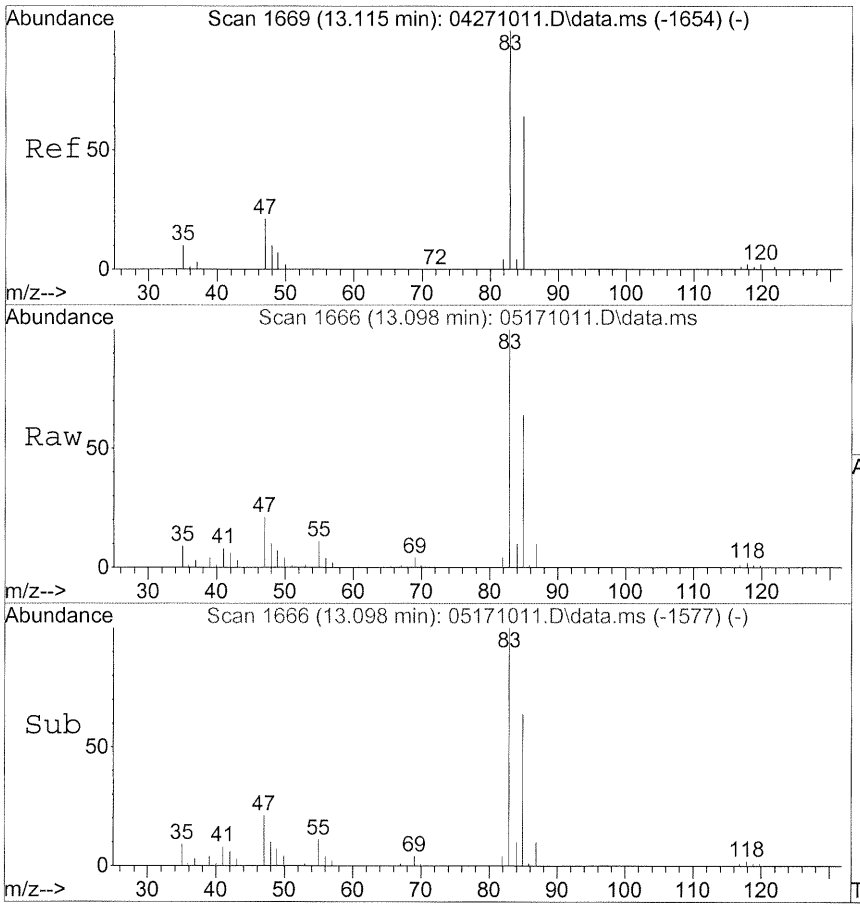



#31
n-Hexane
Concen: 12.21 ng
RT: 13.01 min Scan# 1651
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 57 Resp: 508426

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 51.8 | 40.0 | 60.0 |
| 86 | 17.5 | 11.5 | 17.3# |

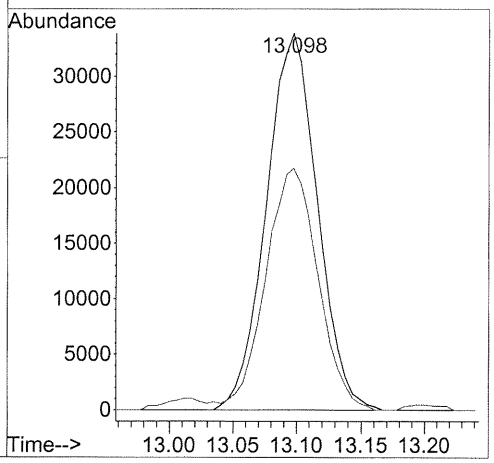


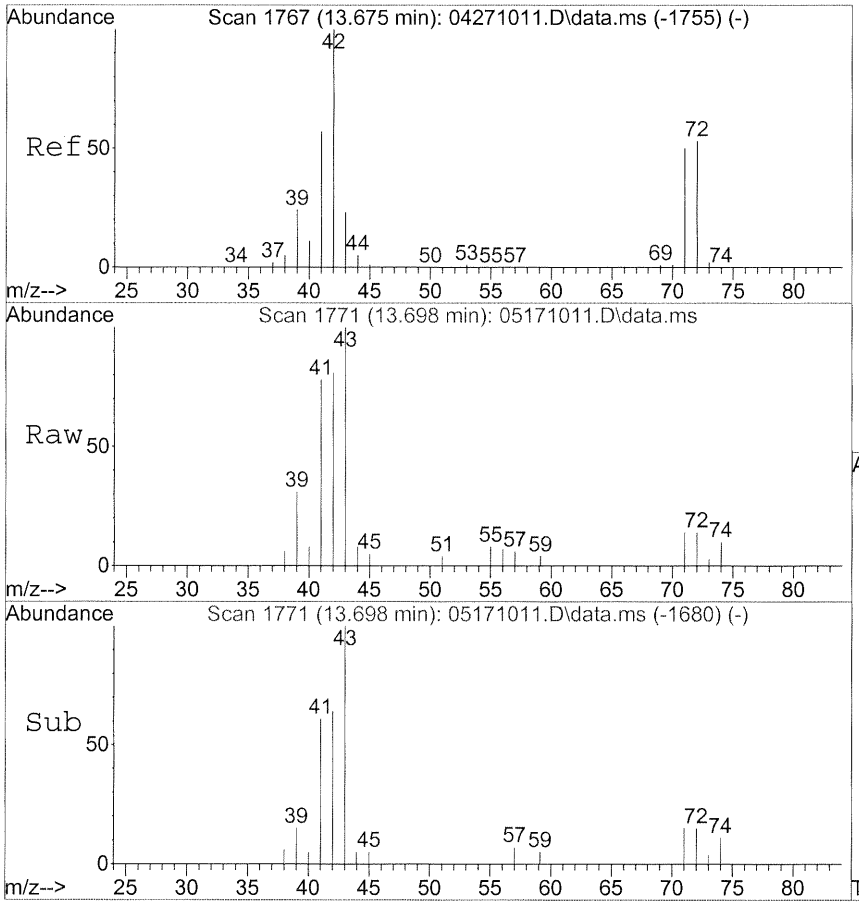




#32
Chloroform
Concen: 2.13 ng
RT: 13.10 min Scan# 1666
Delta R.T. 0.006 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 83 Resp: 94321

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.7 | 44.0 | 84.0 |

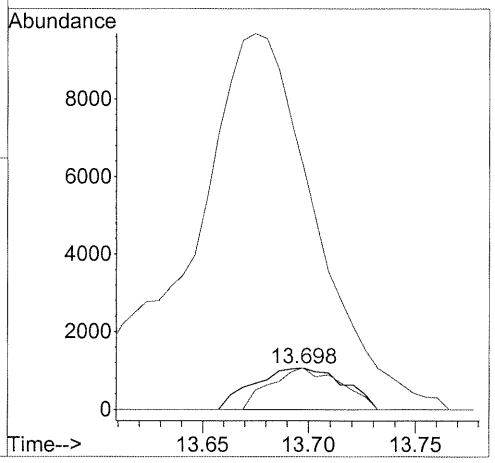


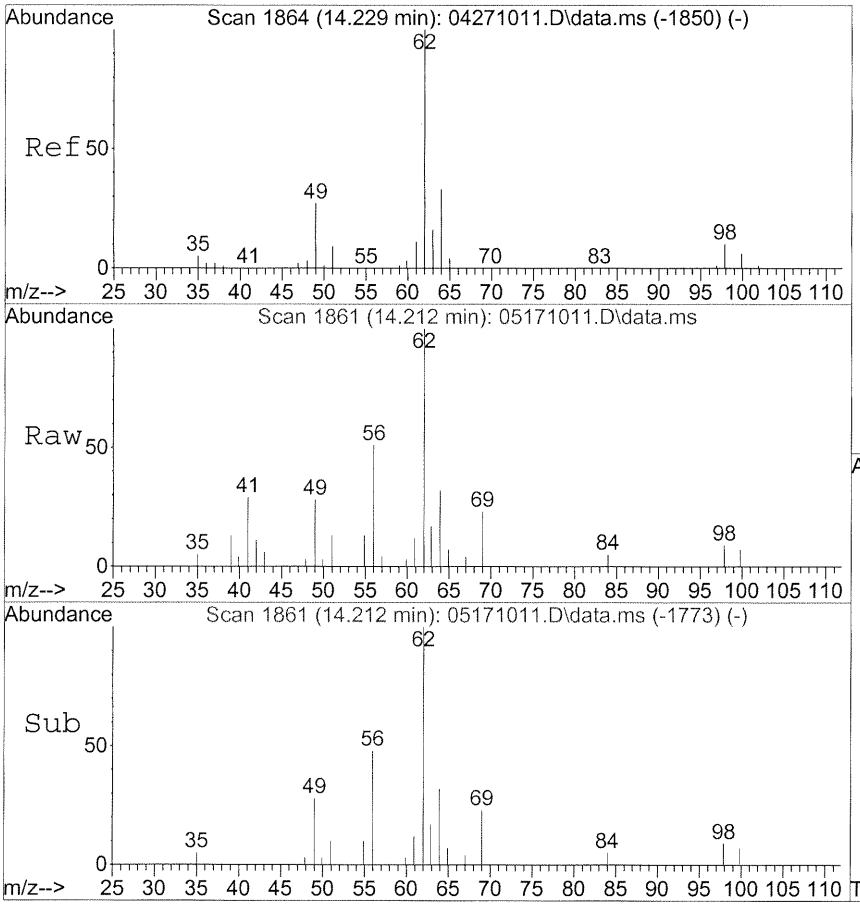



#34
Tetrahydrofuran (THF)
Concen: 0.19 ng
RT: 13.70 min Scan# 1771
Delta R.T. 0.018 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 72 Resp: 3086

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 71 | 78.5 | 76.0 | 116.0 |
| 42 | 0.0 | 231.9 | 271.9# |

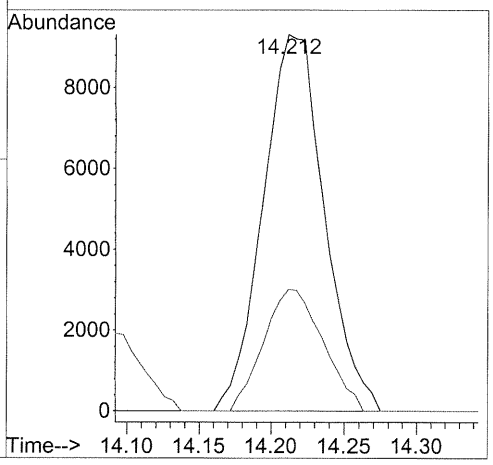


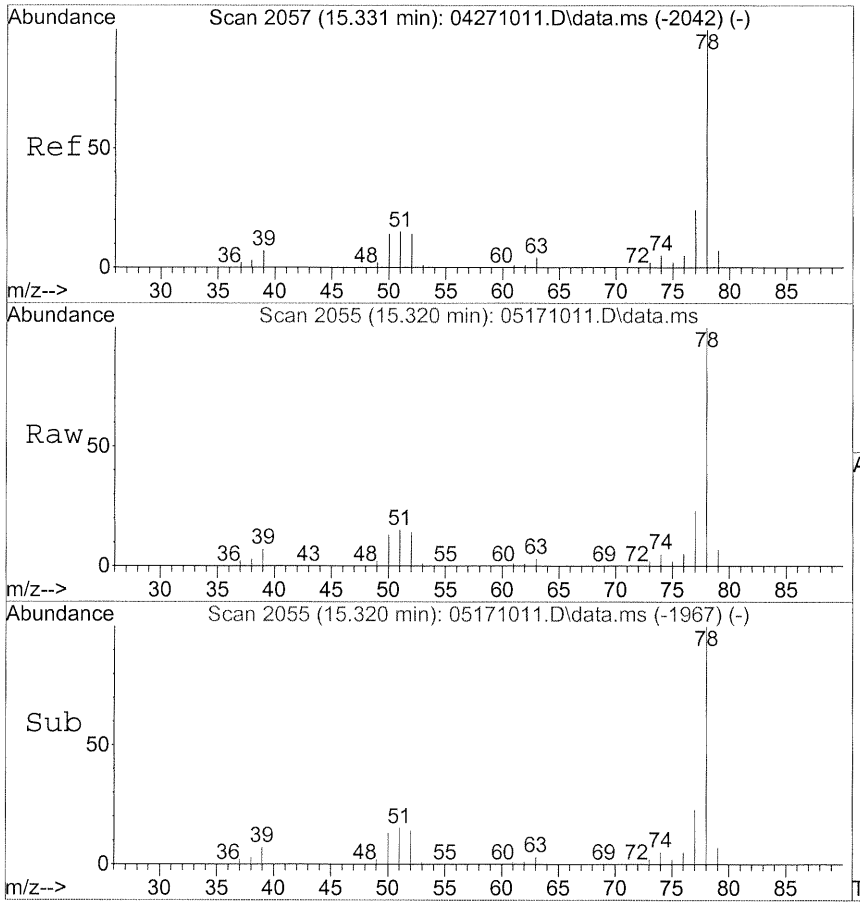




#36
1,2-Dichloroethane
Concen: 0.82 ng
RT: 14.21 min Scan# 1861
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 62 Resp: 27289

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 31.4 | 12.0 | 52.0 |

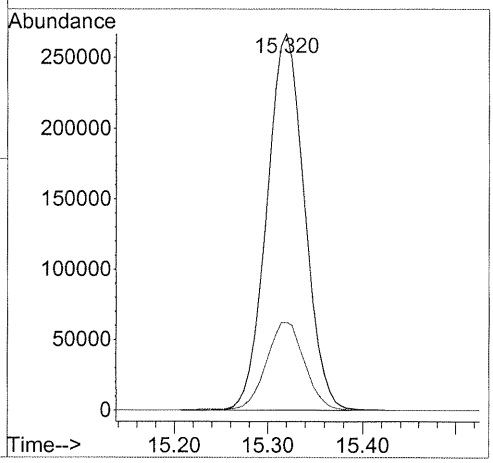


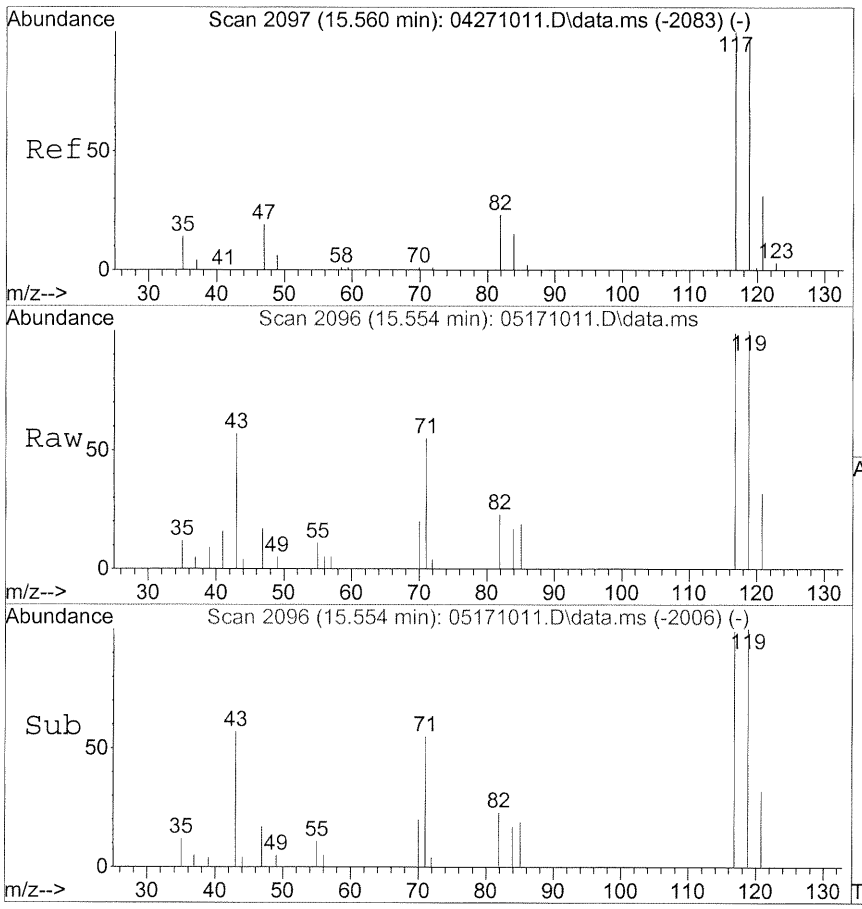



#41
Benzene
Concen: 6.78 ng
RT: 15.32 min Scan# 2055
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 78 Resp: 745603

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.6 | 4.4 | 44.4 |

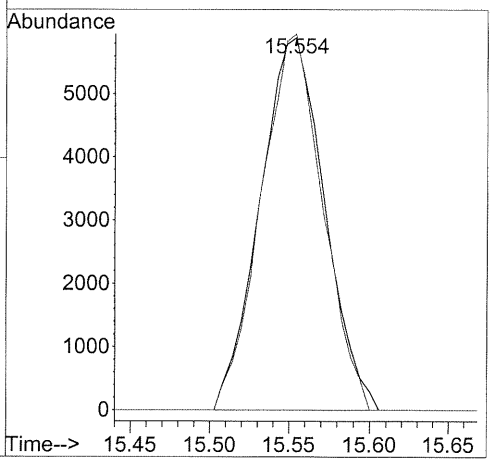


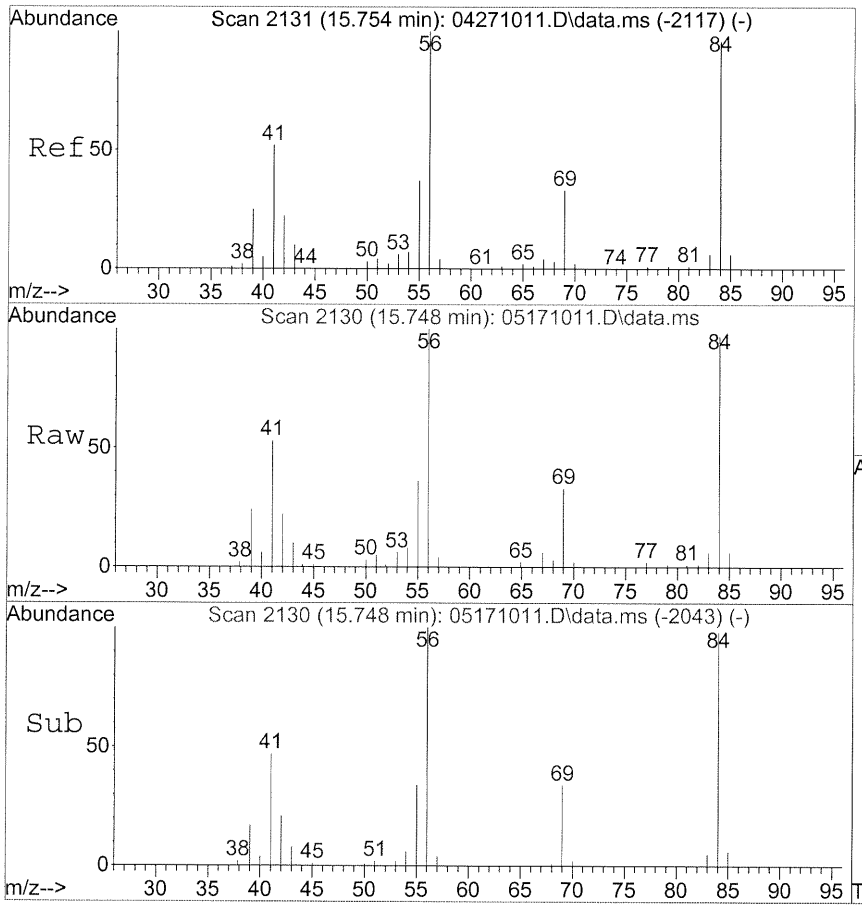




#42
Carbon Tetrachloride
Concen: 0.49 ng
RT: 15.55 min Scan# 2096
Delta R.T. 0.012 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:117 Resp: 16562

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 96.0 | 75.8 | 115.8 |

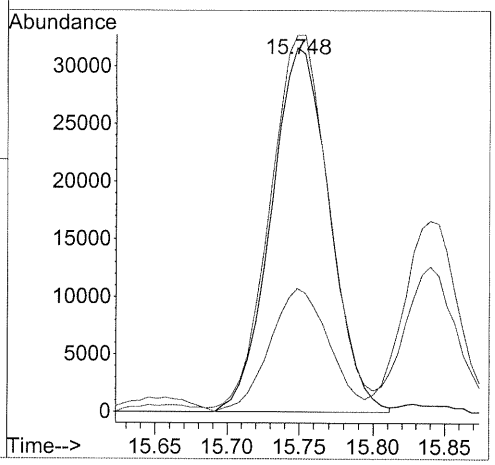


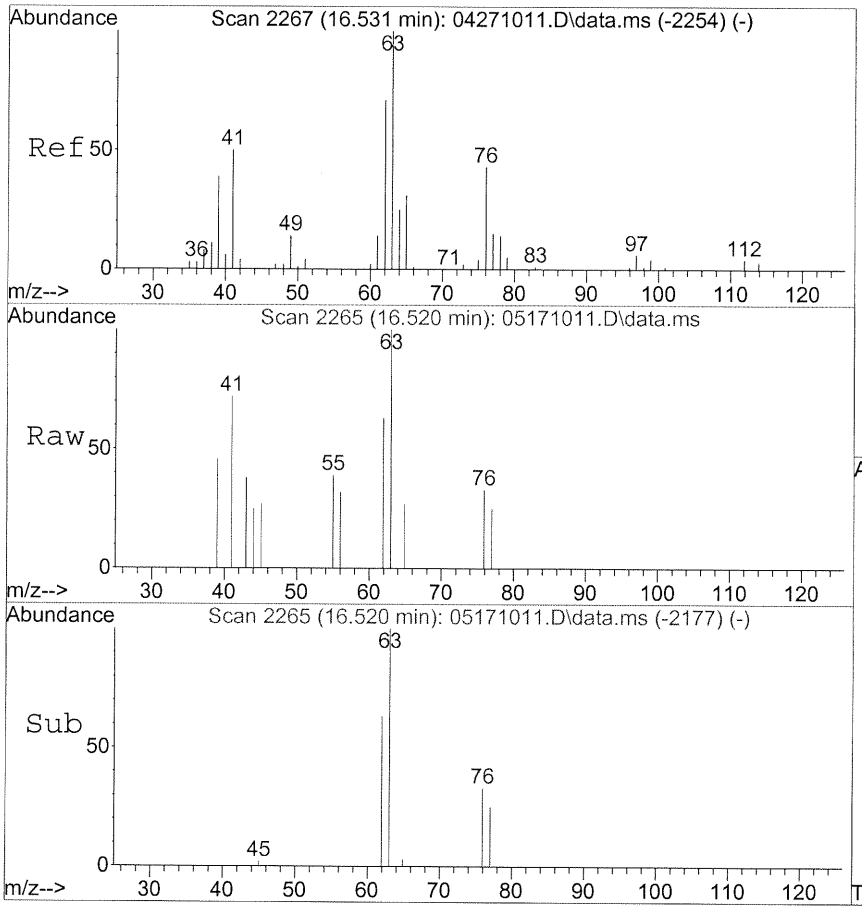



#43
Cyclohexane
Concen: 2.15 ng
RT: 15.75 min Scan# 2130
Delta R.T. -0.006 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 84 Resp: 87861

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 69 | 34.3 | 18.4 | 58.4 |
| 56 | 105.1 | 112.6 | 152.6# |

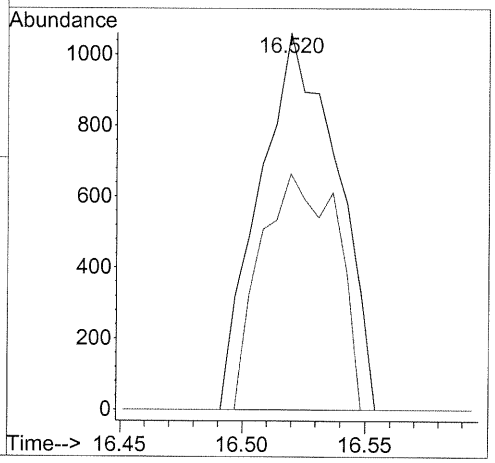


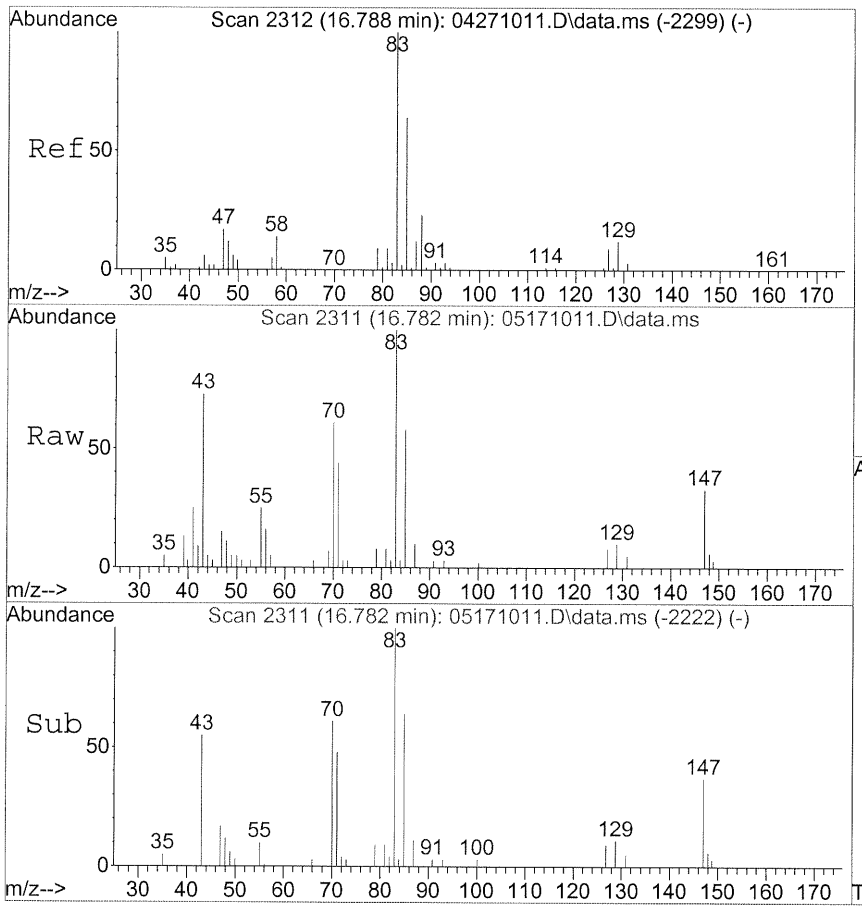




#45
1,2-Dichloropropane
Concen: 0.10 ng
RT: 16.52 min Scan# 2265
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 63 Resp: 2320

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 62 | 61.3 | 52.0 | 92.0 |

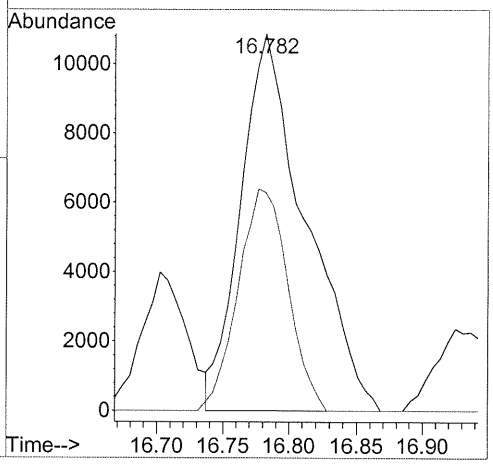


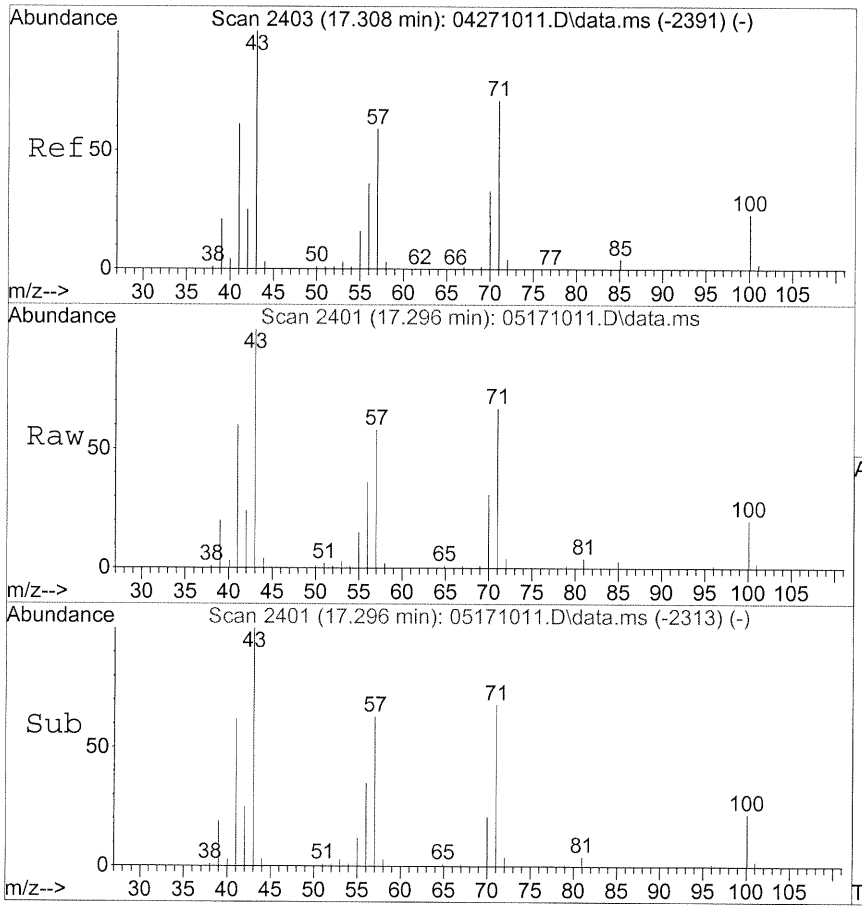



#46
Bromodichloromethane
Concen: 1.12 ng
RT: 16.78 min Scan# 2311
Delta R.T. 0.006 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 83 Resp: 36887

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 45.4 | 42.8 | 82.8 |

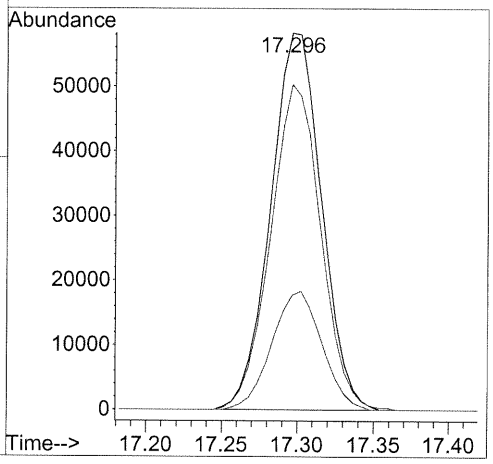


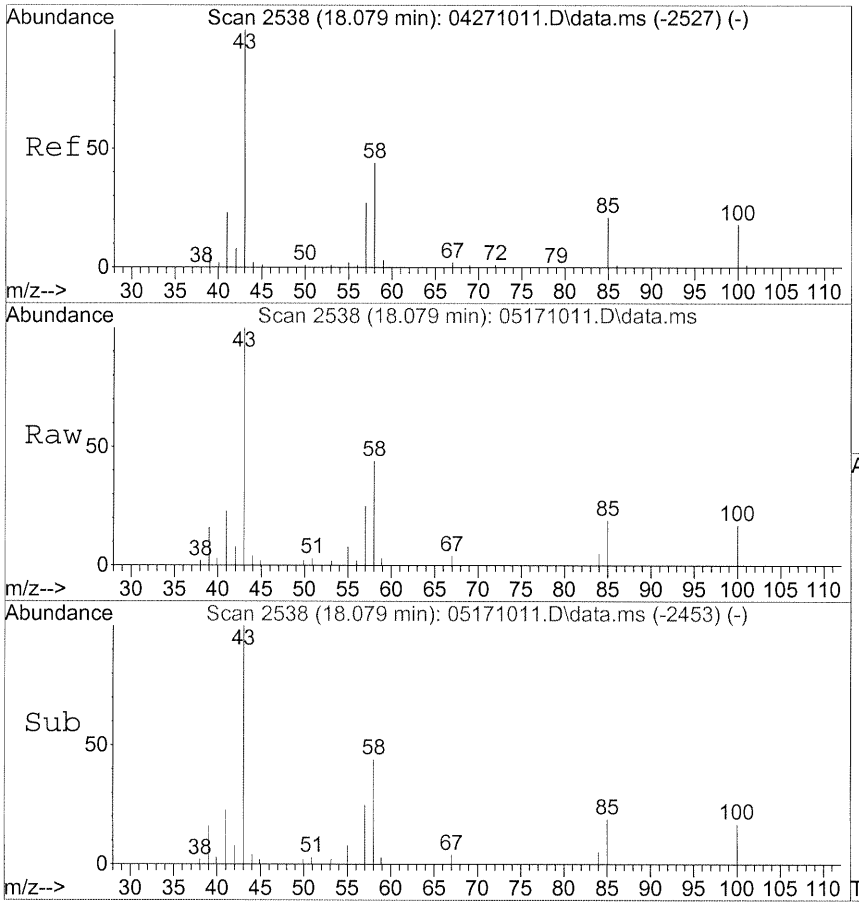




#51
n-Heptane
Concen: 5.19 ng
RT: 17.30 min Scan# 2401
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 71 Resp: 135572

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 71 | 100 | | |
| 57 | 85.2 | 74.9 | 114.9 |
| 100 | 30.9 | 5.0 | 45.0 |

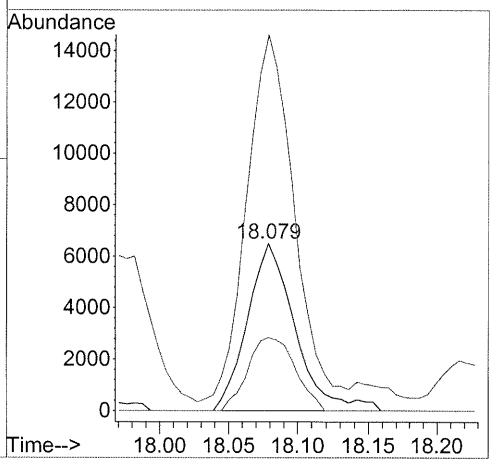


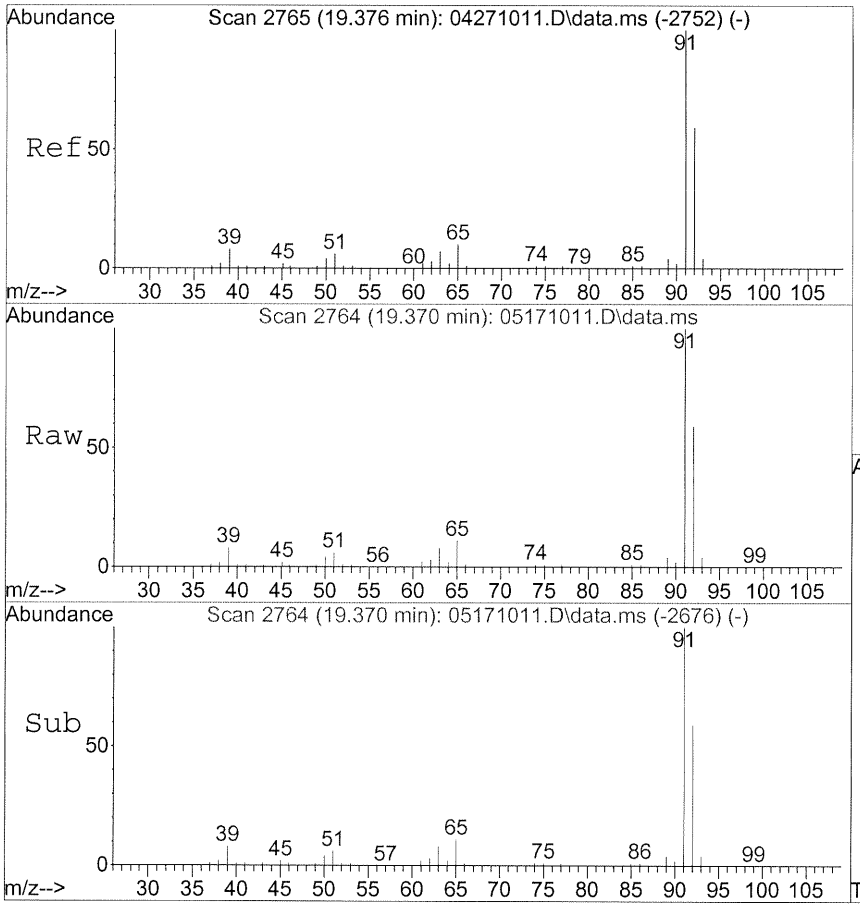



#53
4-Methyl-2-pentanone
Concen: 0.75 ng
RT: 18.08 min Scan# 2538
Delta R.T. -0.017 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 58 Resp: 15582

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 244.5 | 207.1 | 310.7 |
| 85 | 43.4 | 31.4 | 47.2 |

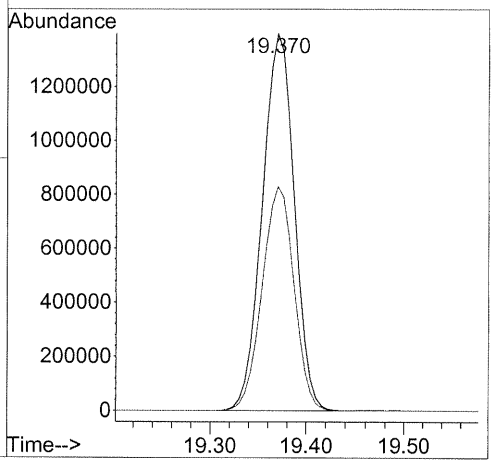


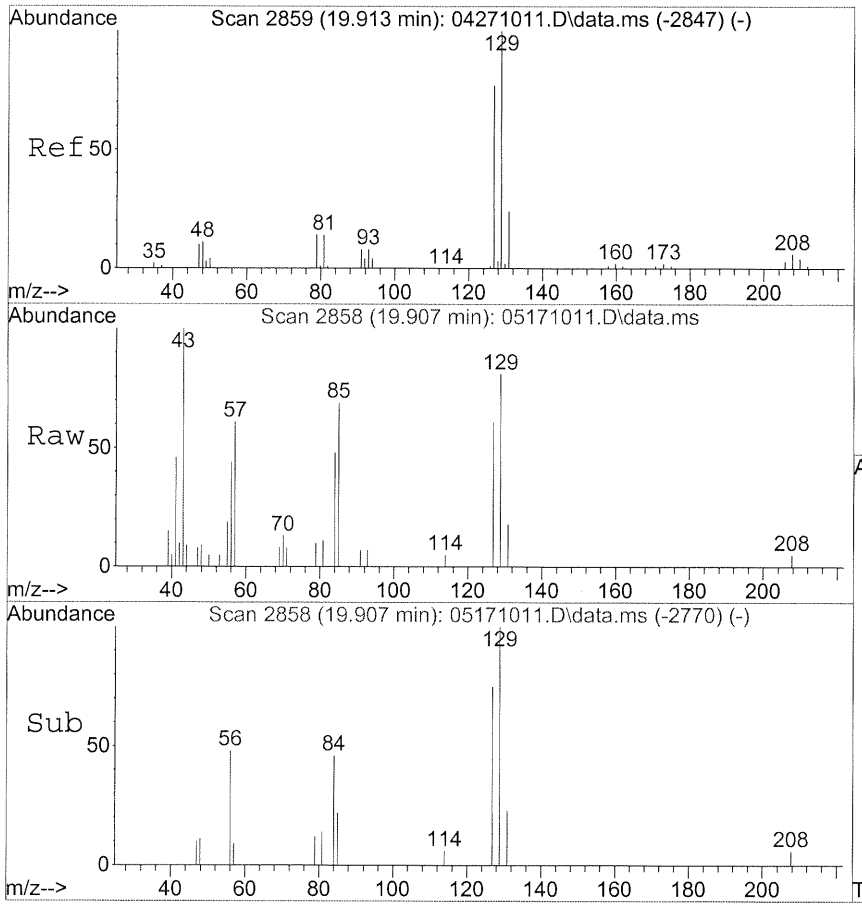




#58
Toluene
Concen: 27.83 ng
RT: 19.37 min Scan# 2764
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 91 Resp: 3223095

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.3 | 37.6 | 77.6 |

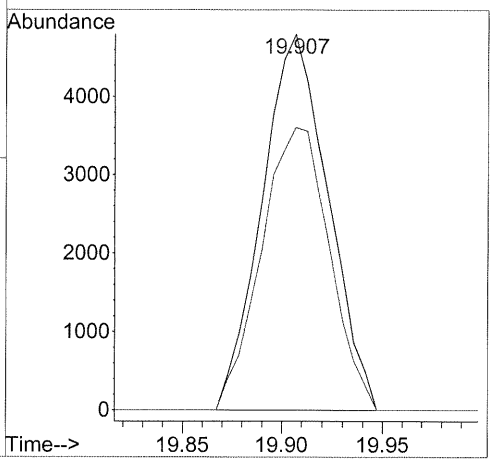


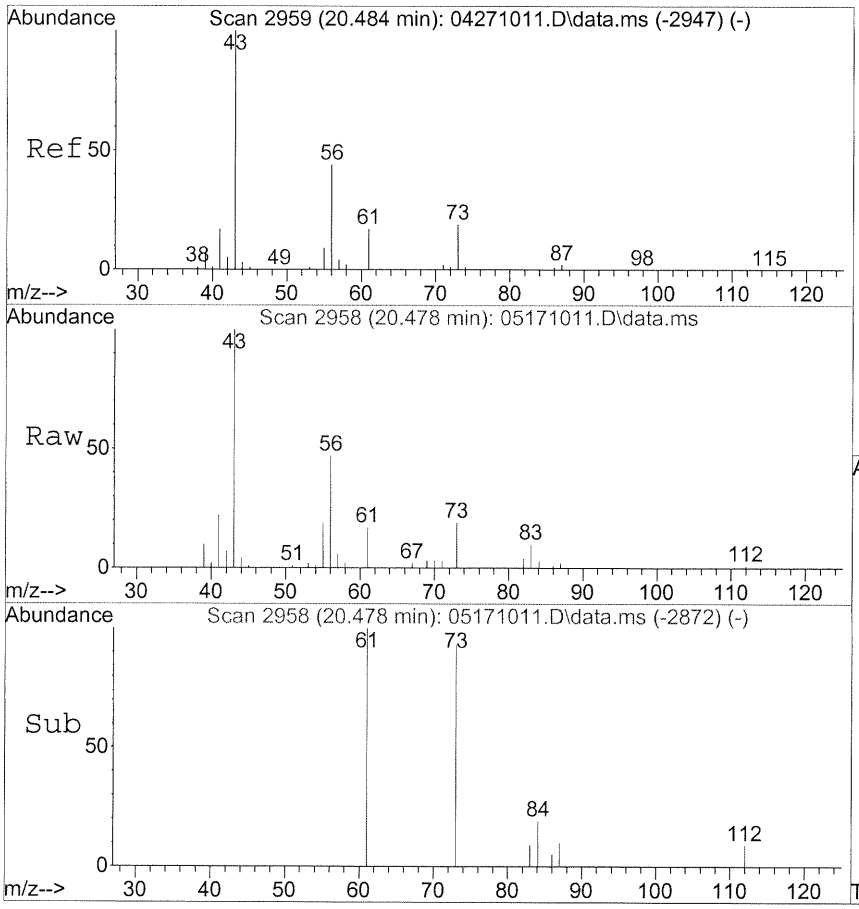



#60
Dibromochloromethane
Concen: 0.40 ng
RT: 19.91 min Scan# 2858
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:129 Resp: 10966

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 127 | 77.4 | 57.2 | 97.2 |

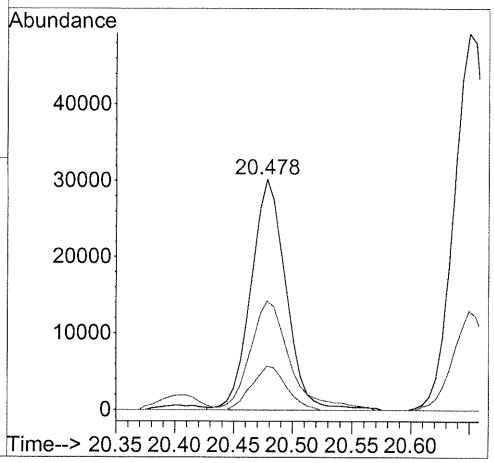


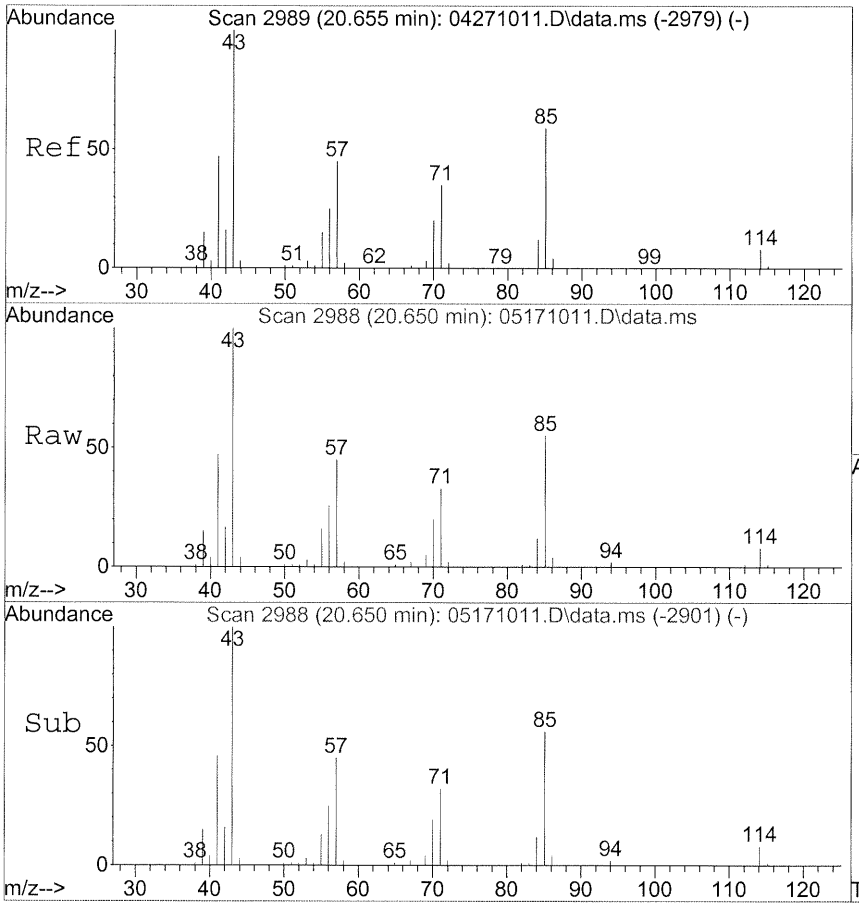




#62
n-Butyl Acetate
Concen: 1.12 ng
RT: 20.48 min Scan# 2958
Delta R.T. -0.011 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 43 Resp: 62423

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 56 | 53.3 | 19.7 | 59.7 |
| 73 | 18.6 | 0.0 | 34.2 |

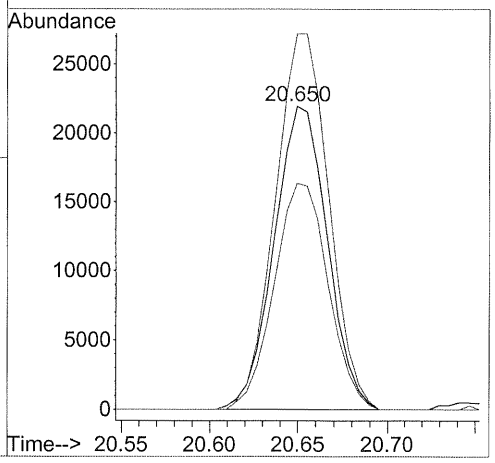


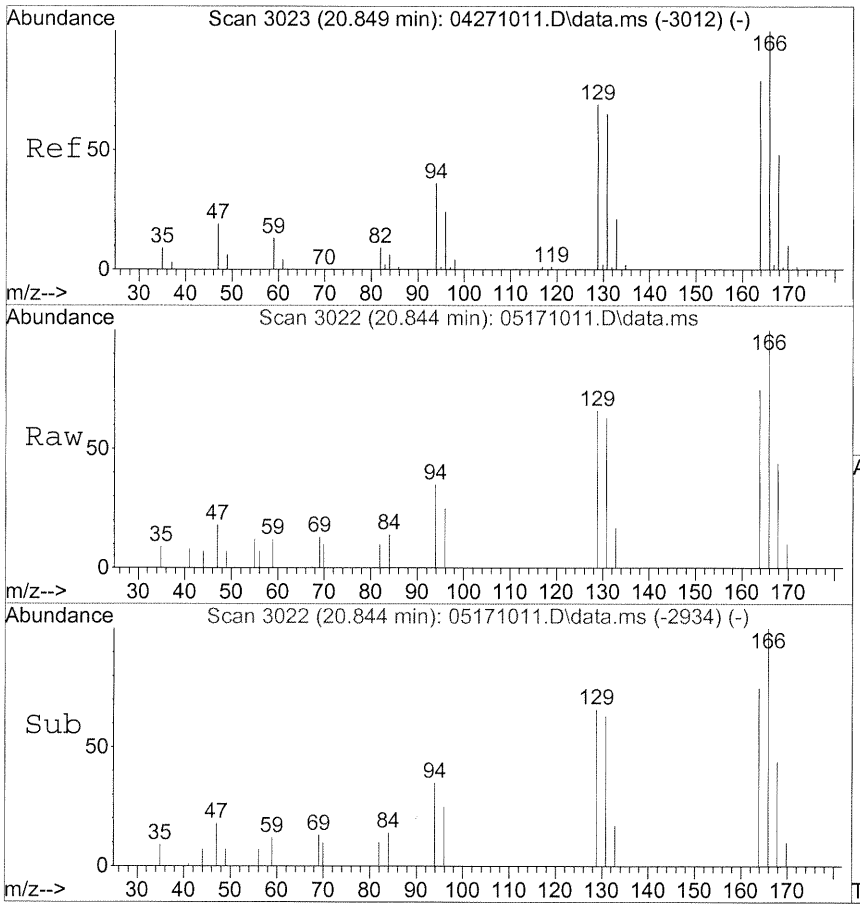



#63
n-Octane
Concen: 2.18 ng
RT: 20.65 min Scan# 2988
Delta R.T. -0.006 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 57 Resp: 45349

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 85 | 124.8 | 81.8 | 122.8# |
| 71 | 75.6 | 55.0 | 82.6 |

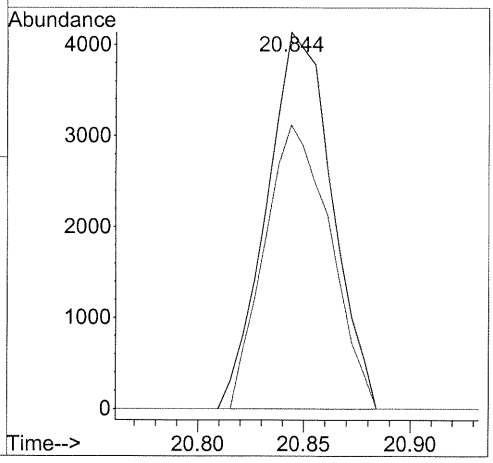


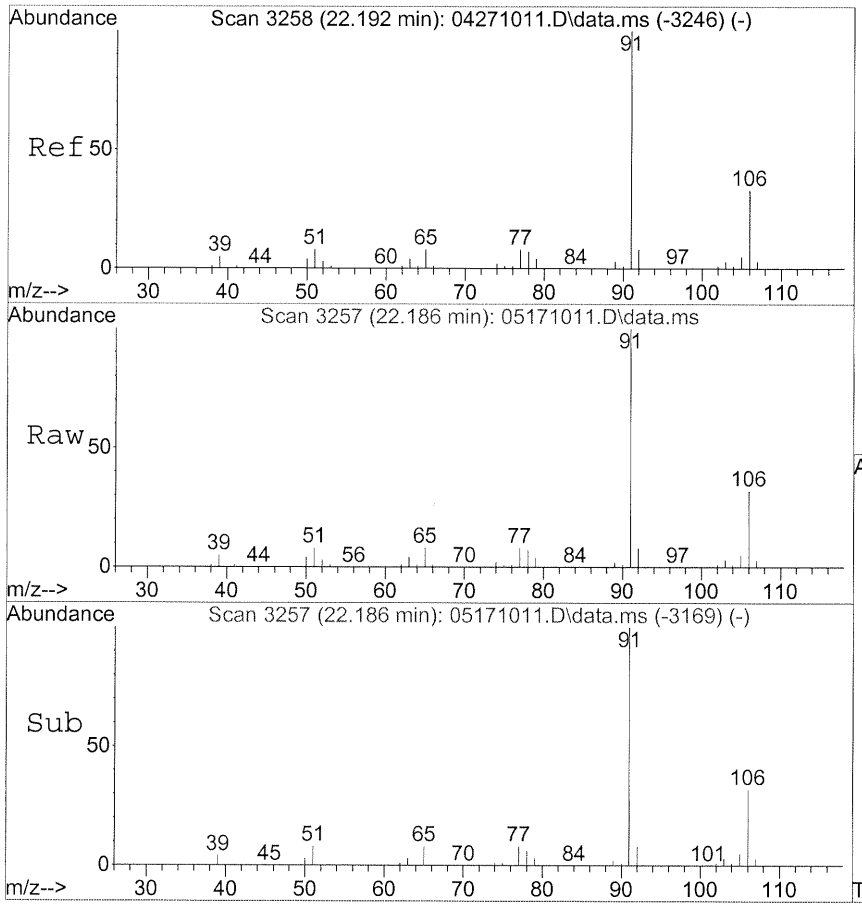




#64
Tetrachloroethene
Concen: 0.24 ng
RT: 20.84 min Scan# 3022
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:166 Resp: 8856

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 75.9 | 58.4 | 98.4 |

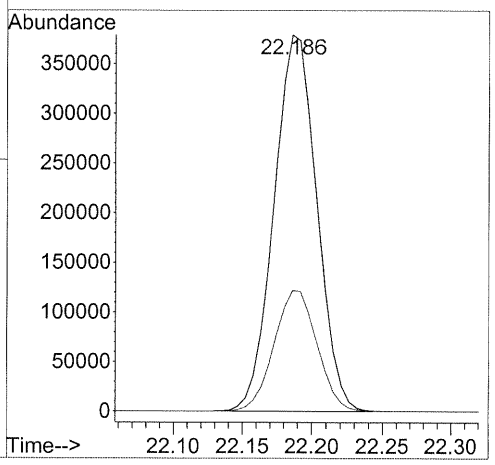


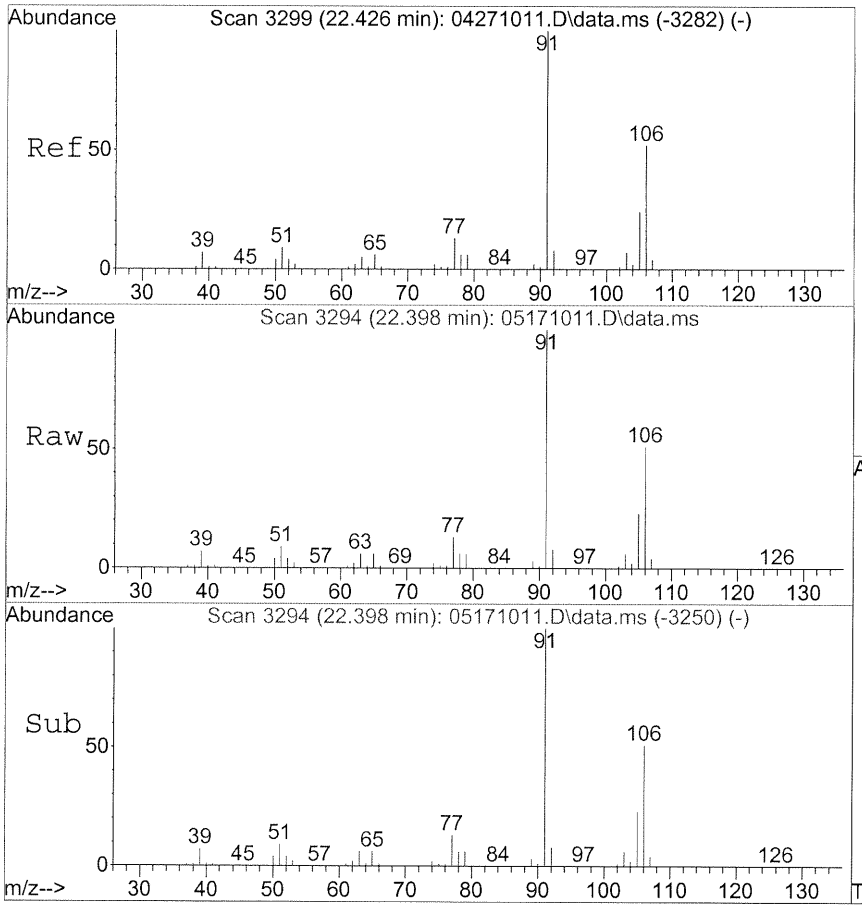



#66
Ethylbenzene
Concen: 6.36 ng
RT: 22.19 min Scan# 3257
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 91 Resp: 808000

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 32.2 | 9.8 | 49.8 |

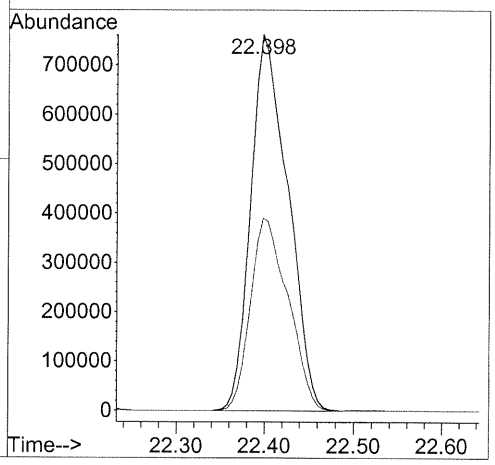


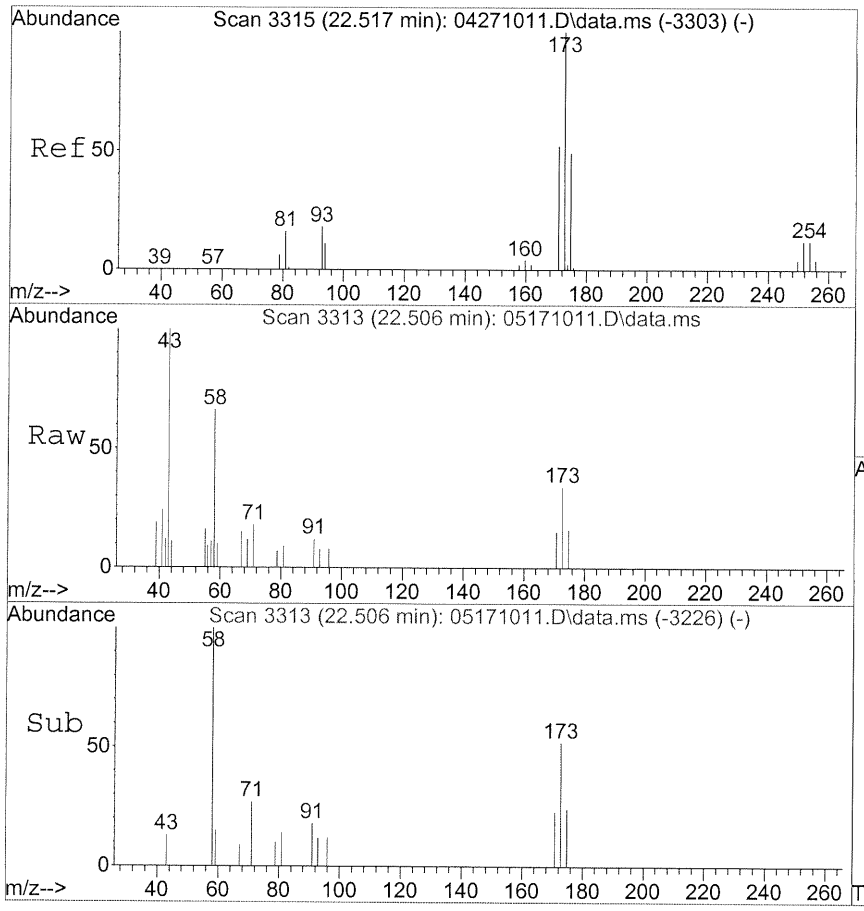




#67
m- & p-Xylenes
Concen: 22.28 ng
RT: 22.40 min Scan# 3294
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 91 Resp: 2234641

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 51.8 | 26.8 | 66.8 |

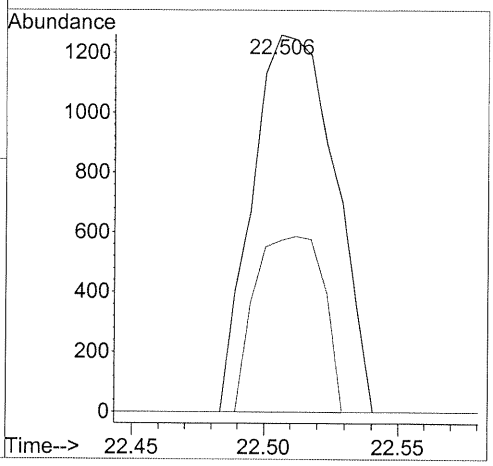


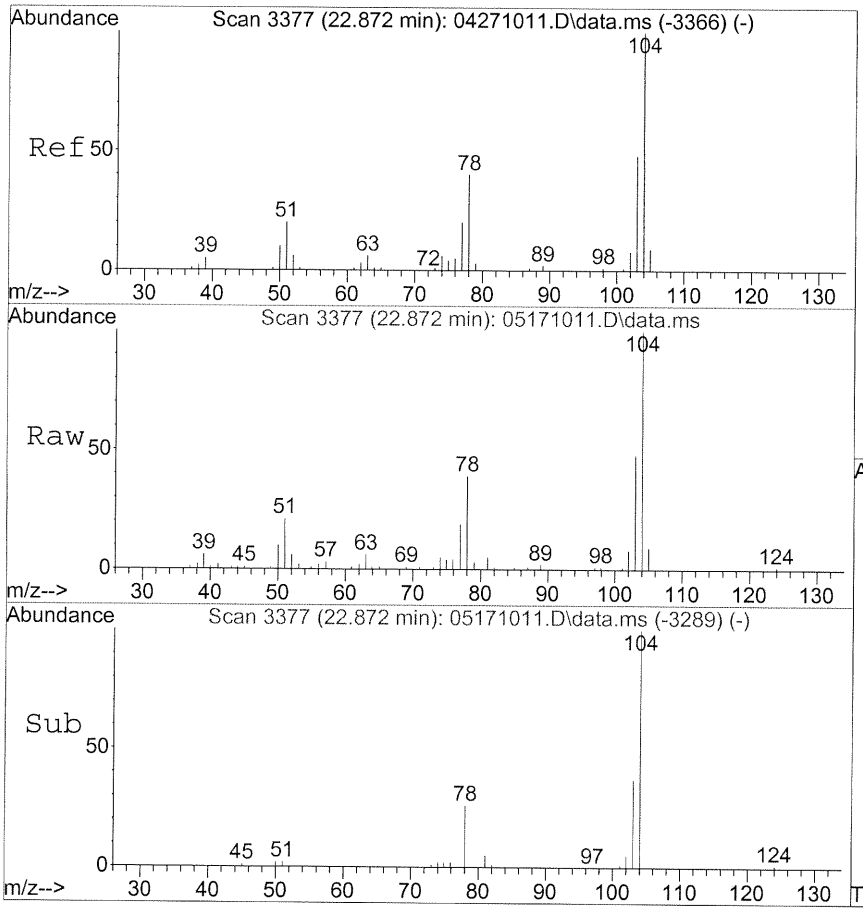



#68
Bromoform
Concen: 0.10 ng
RT: 22.51 min Scan# 3313
Delta R.T. -0.006 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:173 Resp: 2680

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 38.9 | 28.5 | 68.5 |

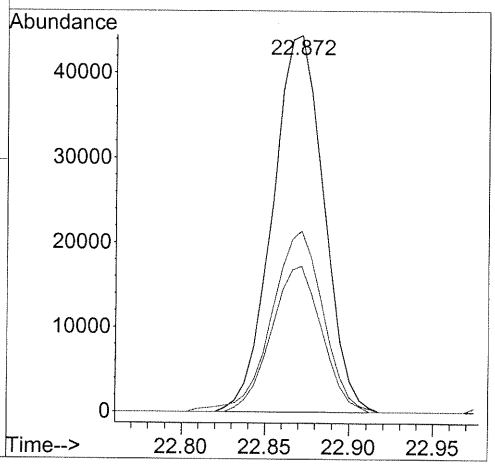


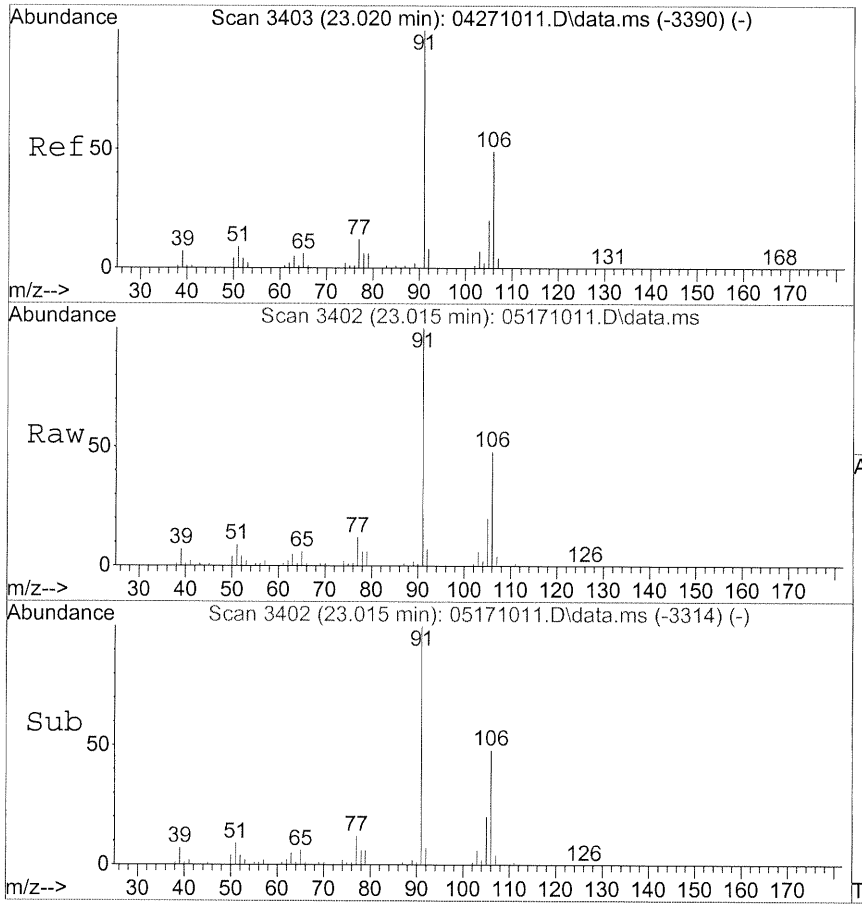




#69
Styrene
Concen: 1.20 ng
RT: 22.87 min Scan# 3377
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:104 Resp: 94538

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 38.0 | 26.1 | 66.1 |
| 103 | 48.2 | 28.7 | 68.7 |

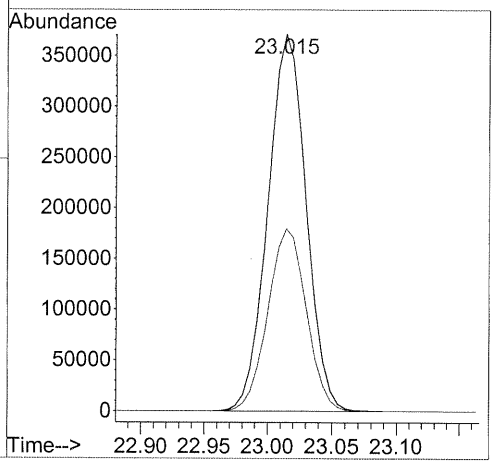


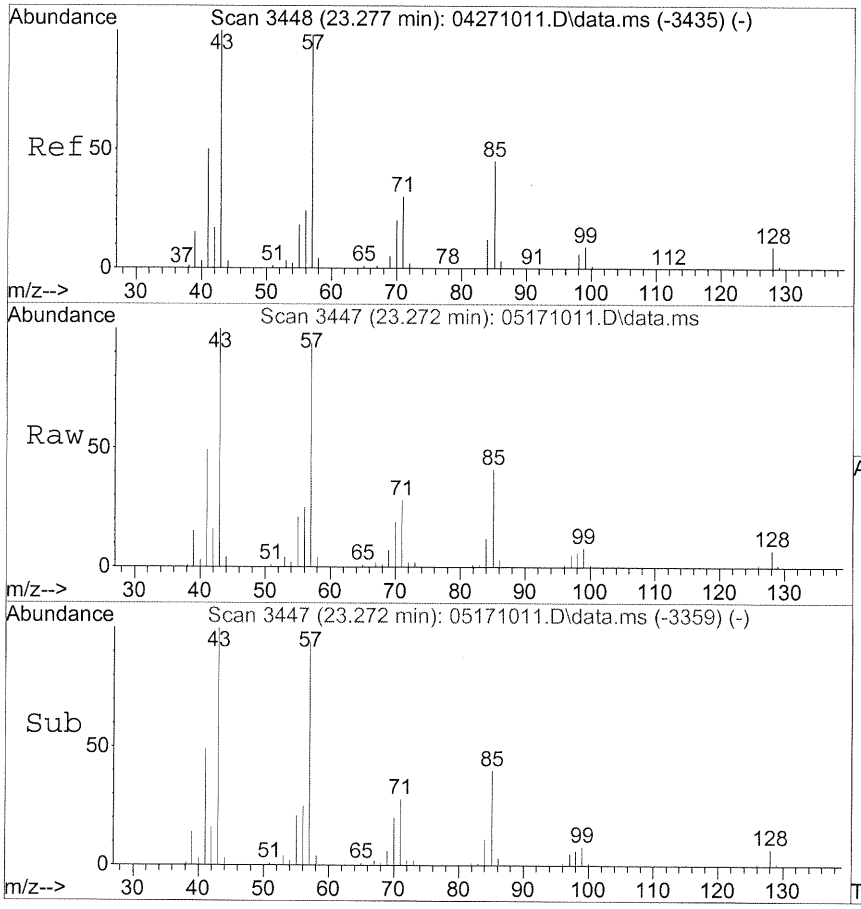



#70
o-Xylene
Concen: 7.57 ng
RT: 23.01 min Scan# 3402
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 91 Resp: 774602

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 48.6 | 24.4 | 64.4 |

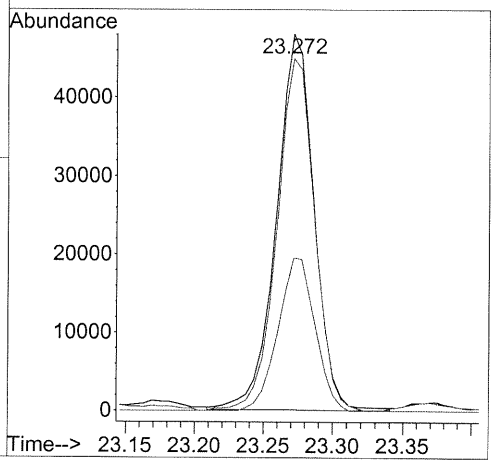


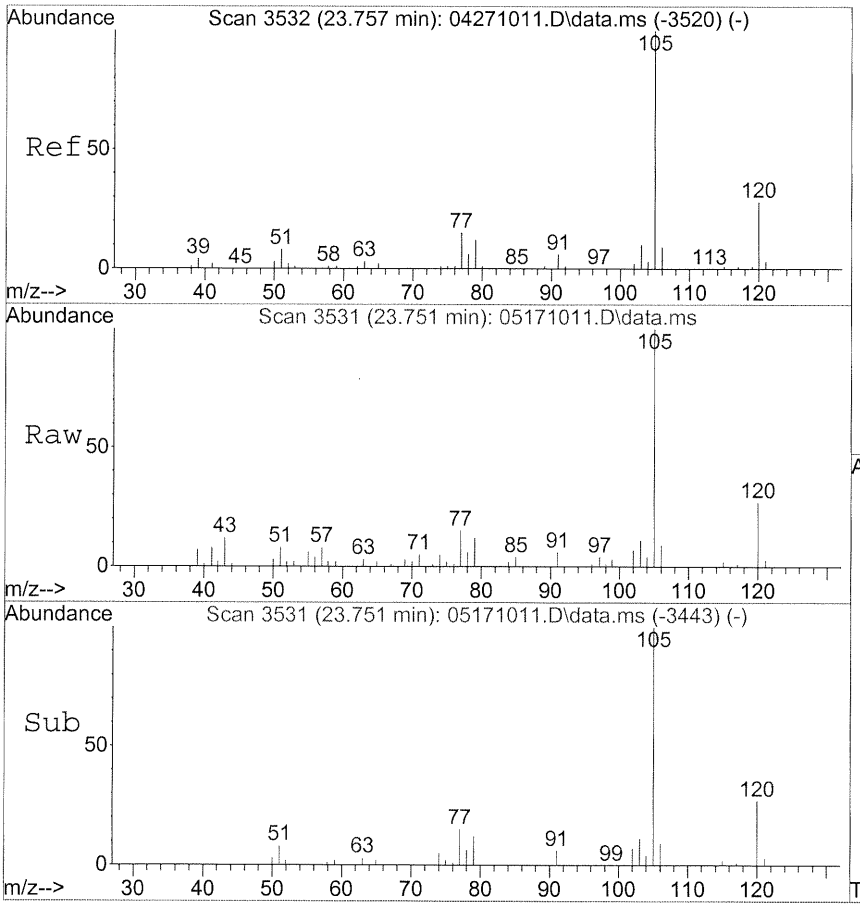




#71
n-Nonane
Concen: 2.04 ng
RT: 23.27 min Scan# 3447
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 43 Resp: 91132

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 93.0 | 65.6 | 105.6 |
| 85 | 39.9 | 9.9 | 49.9 |

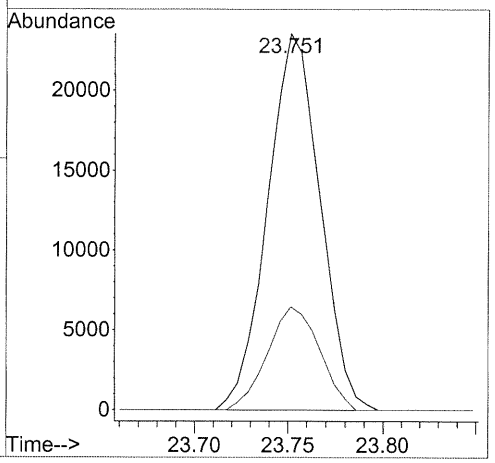


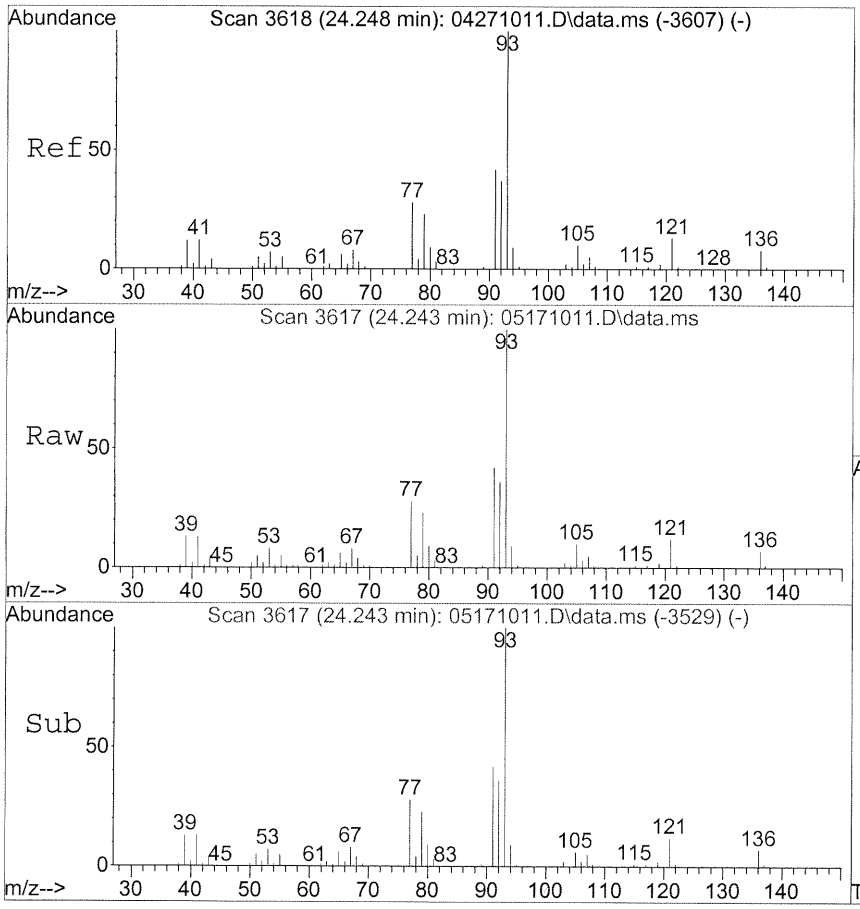



#74
Cumene
Concen: 0.33 ng
RT: 23.75 min Scan# 3531
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:105 Resp: 45480

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.1 | 5.2 | 45.2 |

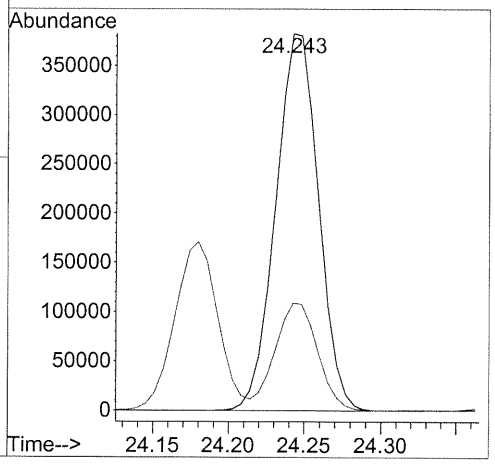


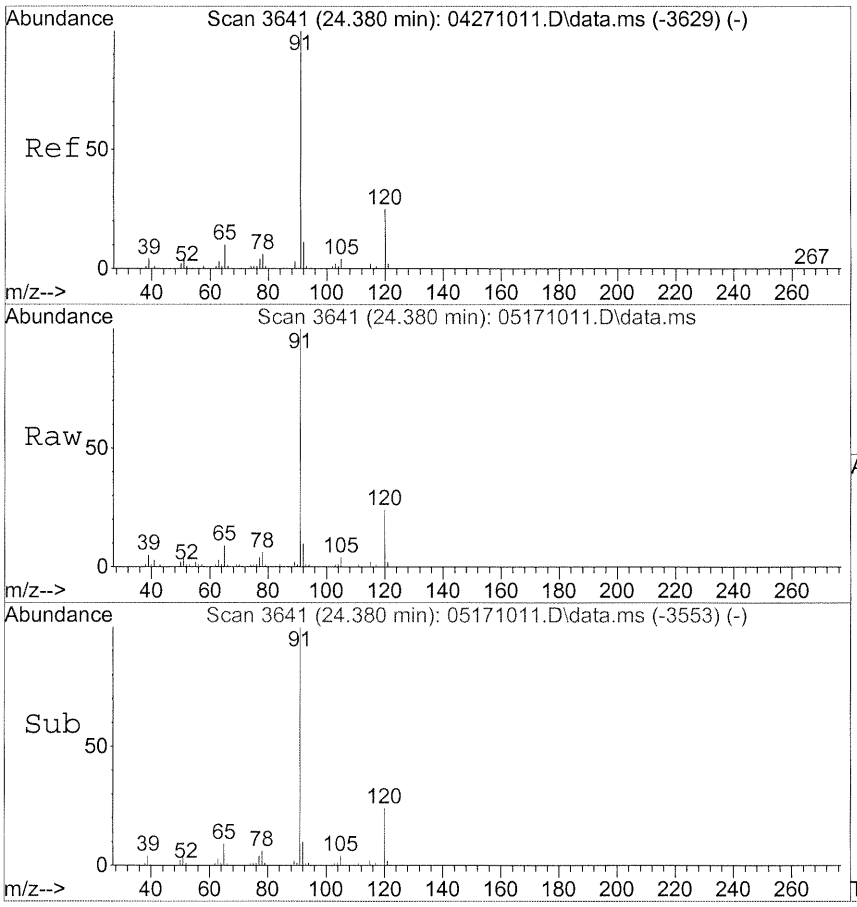




#75
alpha-Pinene
Concen: 11.51 ng
RT: 24.24 min Scan# 3617
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 93 Resp: 746453

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 93 | 100 | | |
| 77 | 28.1 | 12.3 | 52.3 |

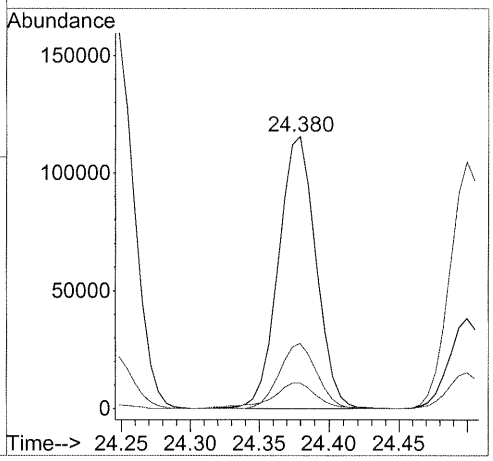


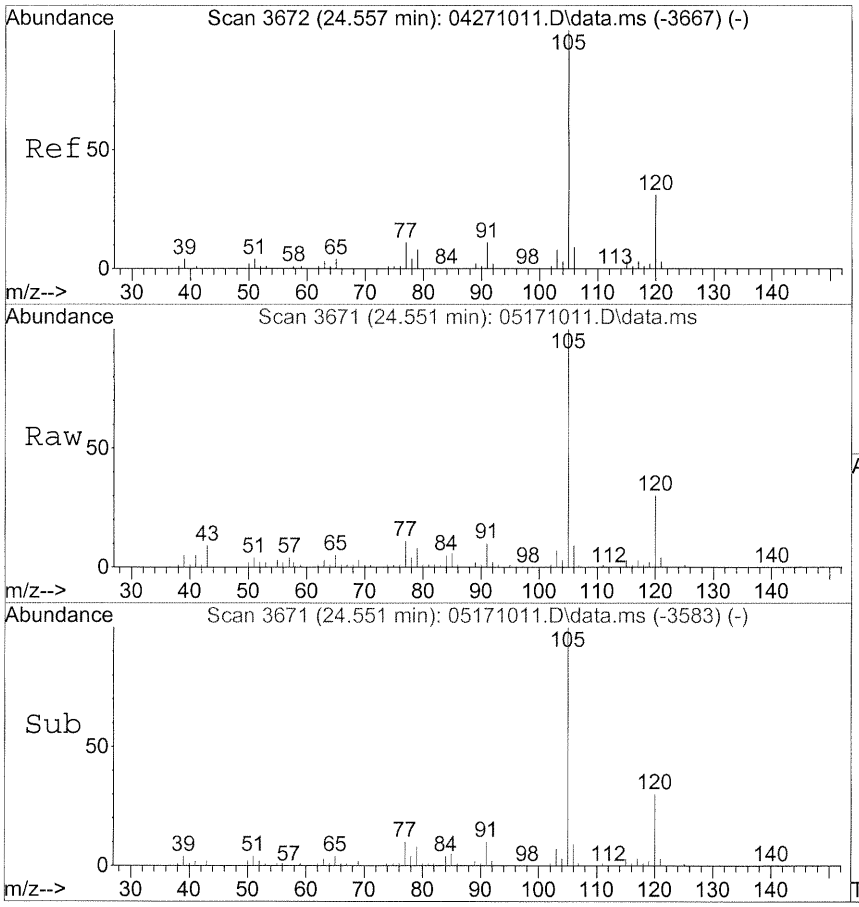



#76
n-Propylbenzene
Concen: 1.33 ng
RT: 24.38 min Scan# 3641
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 91 Resp: 215996

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 23.7 | 0.9 | 40.9 |
| 65 | 11.2 | 0.0 | 31.2 |

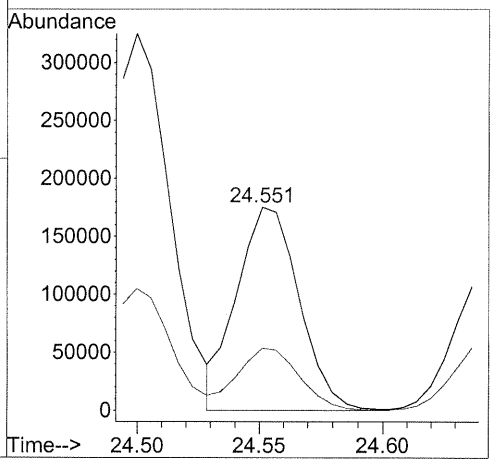


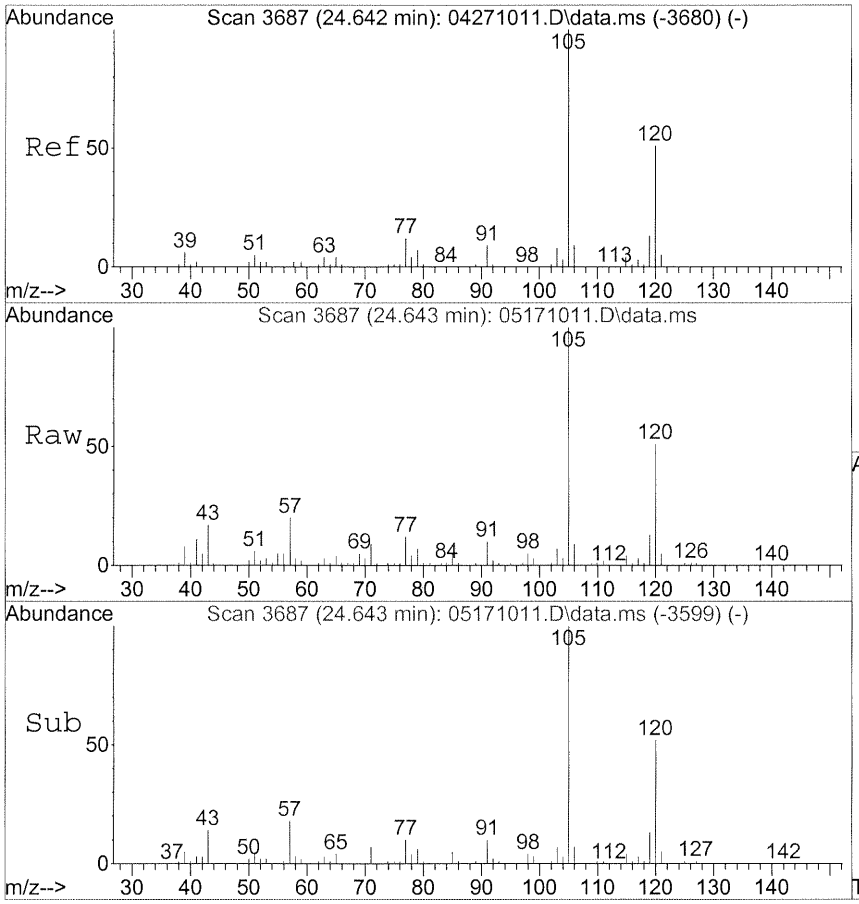




#78
4-Ethyltoluene
Concen: 2.41 ng
RT: 24.55 min Scan# 3671
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:105 Resp: 310855

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.2 | 8.2 | 48.2 |

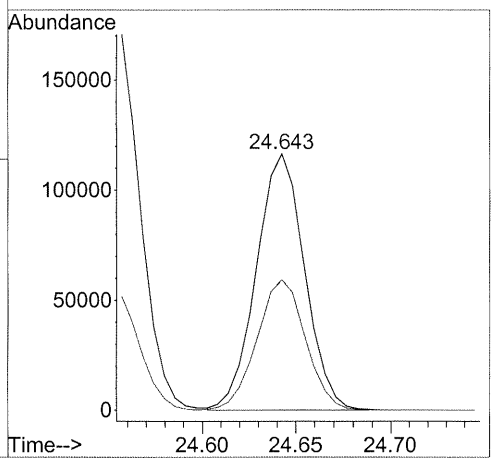


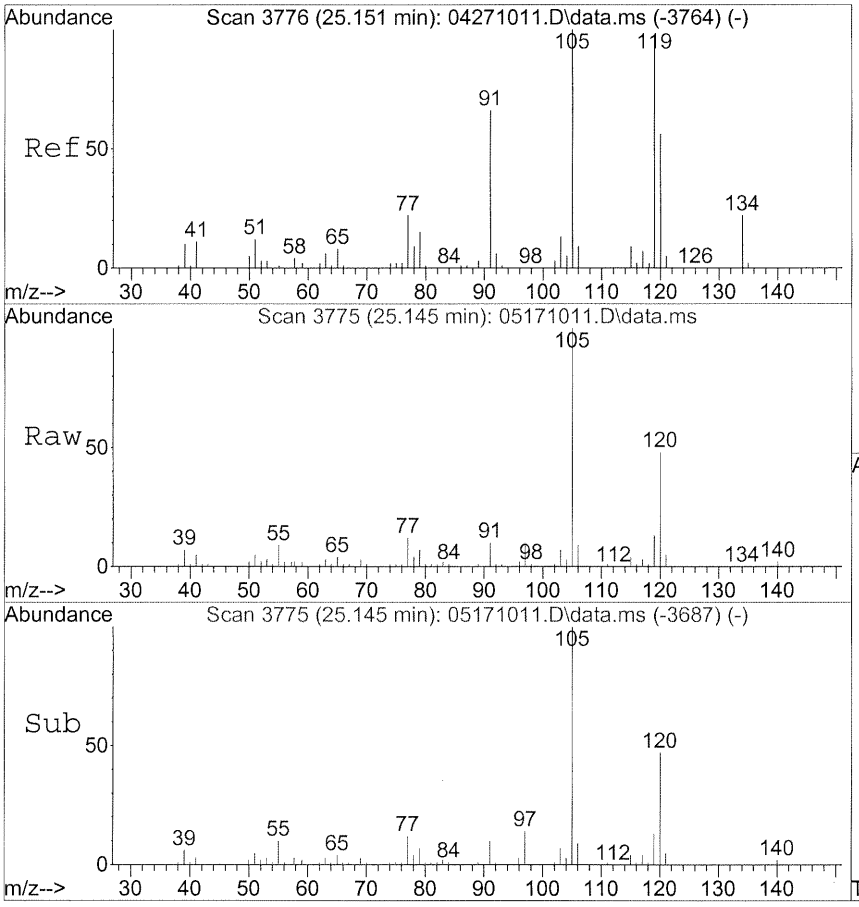



#79
1,3,5-Trimethylbenzene
Concen: 1.98 ng
RT: 24.64 min Scan# 3687
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:105 Resp: 208341

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 51.0 | 26.2 | 66.2 |

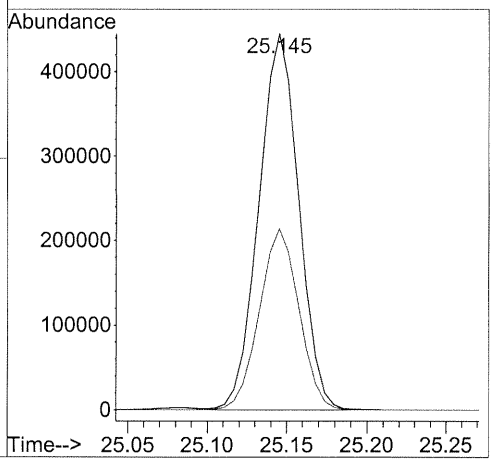


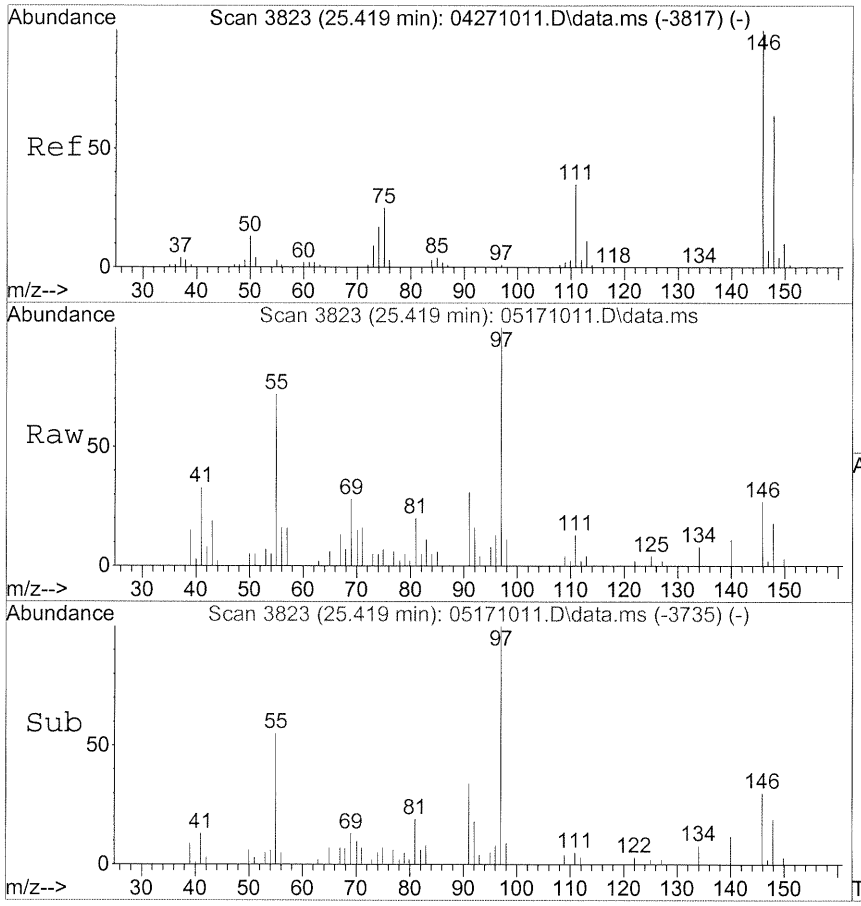




#82
1,2,4-Trimethylbenzene
Concen: 7.12 ng
RT: 25.15 min Scan# 3775
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:105 Resp: 774596

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 47.7 | 30.1 | 70.1 |

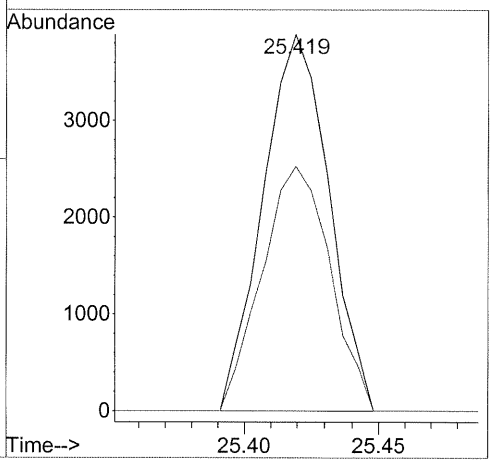


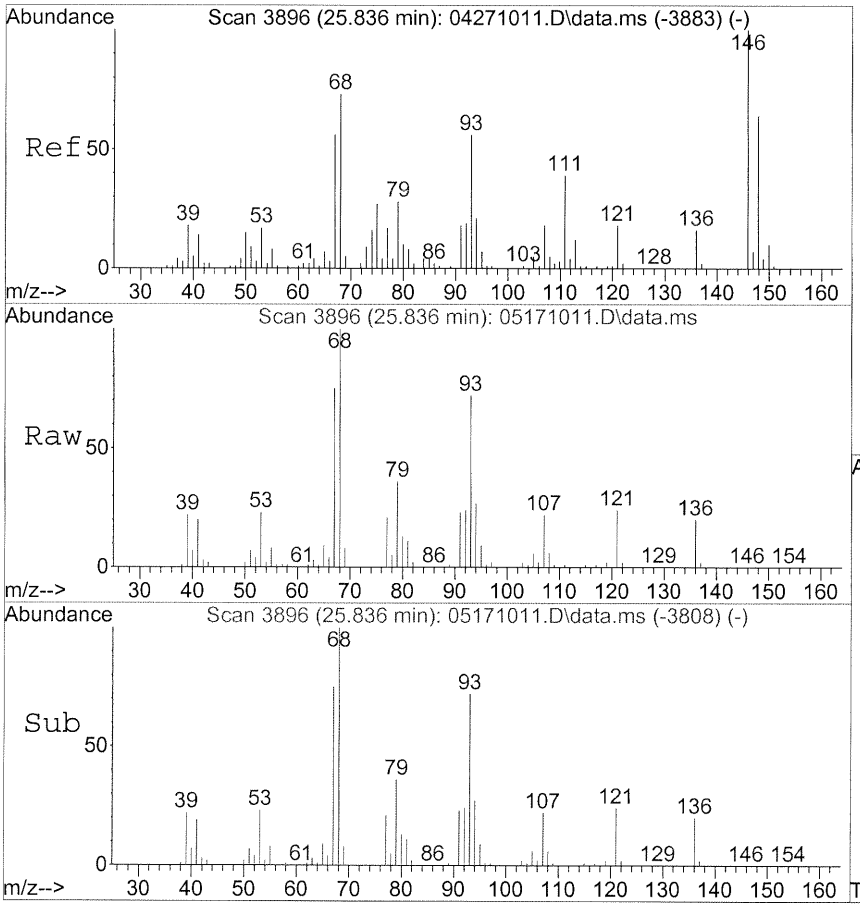



#86
1,4-Dichlorobenzene
Concen: 0.10 ng
RT: 25.42 min Scan# 3823
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:146 Resp: 6633

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 148 | 67.0 | 43.8 | 83.8 |

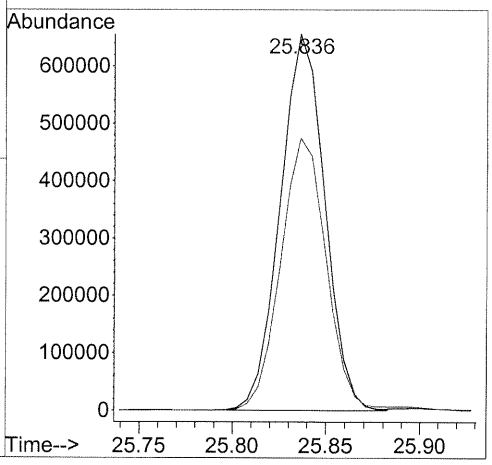


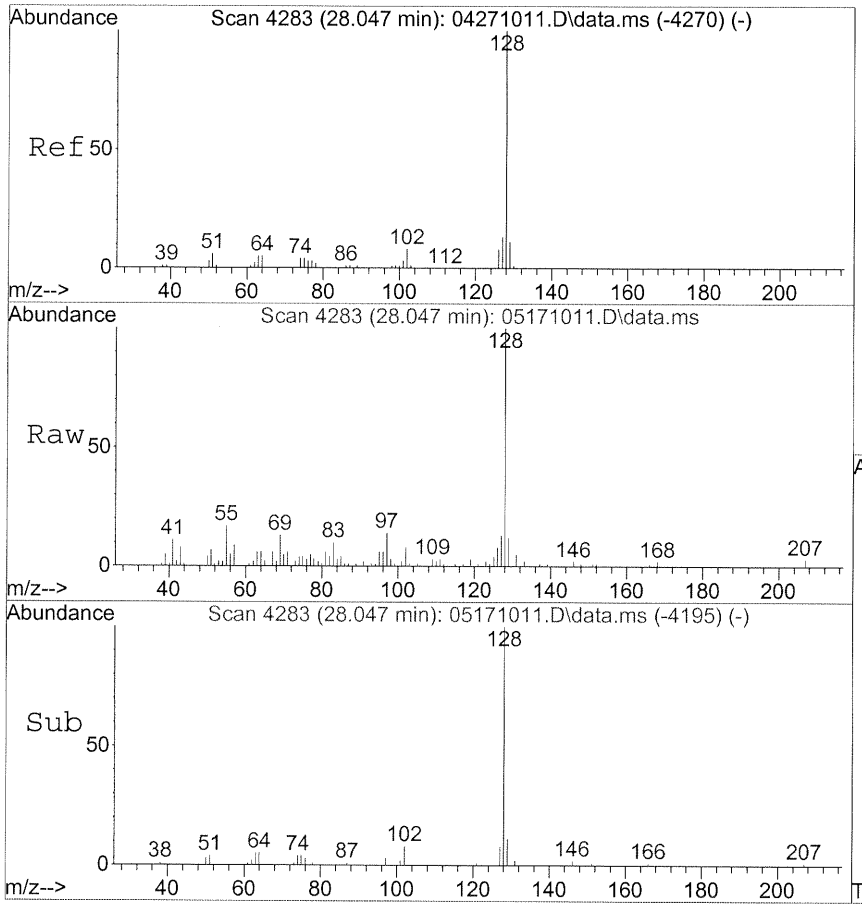




#91
d-Limonene
Concen: 28.60 ng
RT: 25.84 min Scan# 3896
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion: 68 Resp: 1080777

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 68 | 100 | | |
| 93 | 75.0 | 42.0 | 82.0 |

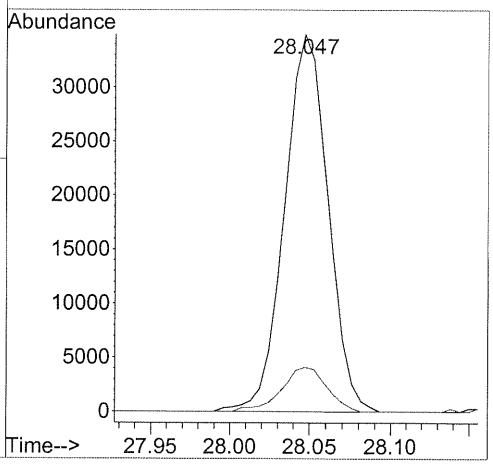





#95
Naphthalene
Concen: 0.47 ng
RT: 28.05 min Scan# 4283
Delta R.T. 0.000 min
Lab File: 05171011.D
Acq: 17 May 2010 18:18

Tgt Ion:128 Resp: 65223

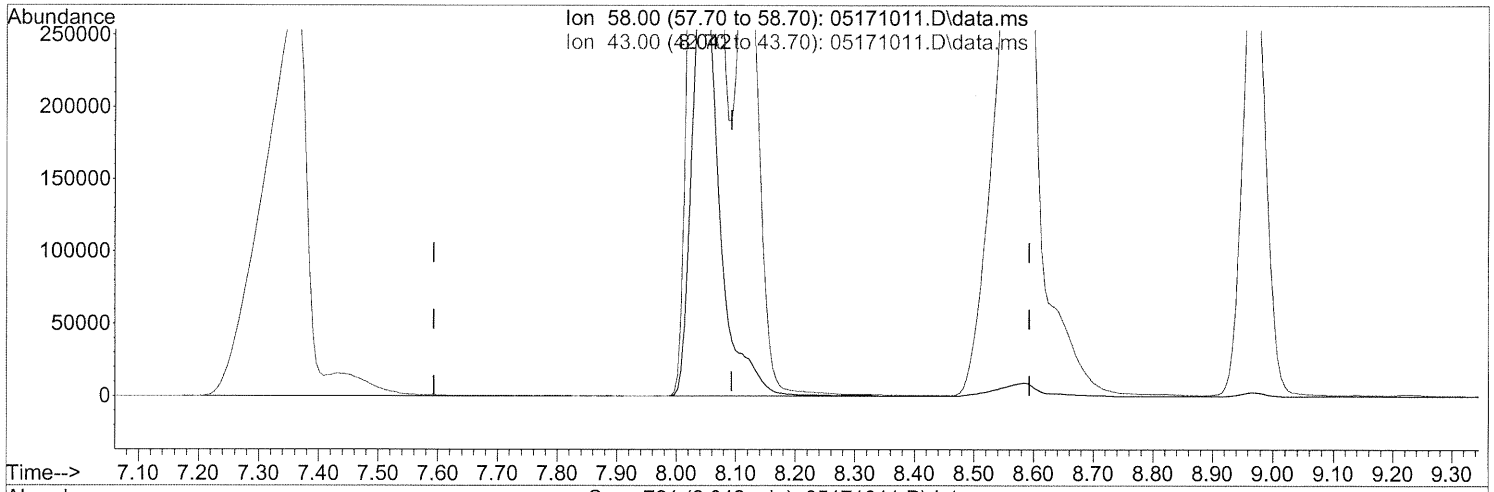
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 129 | 12.2 | 0.0 | 31.1 |

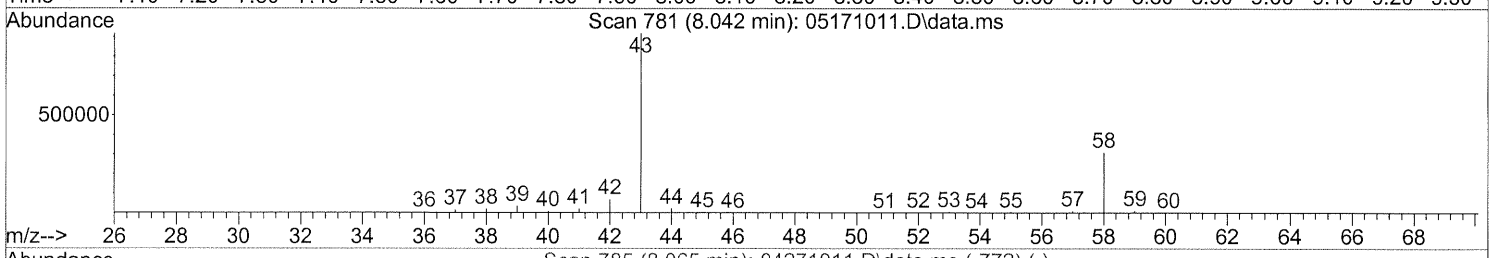


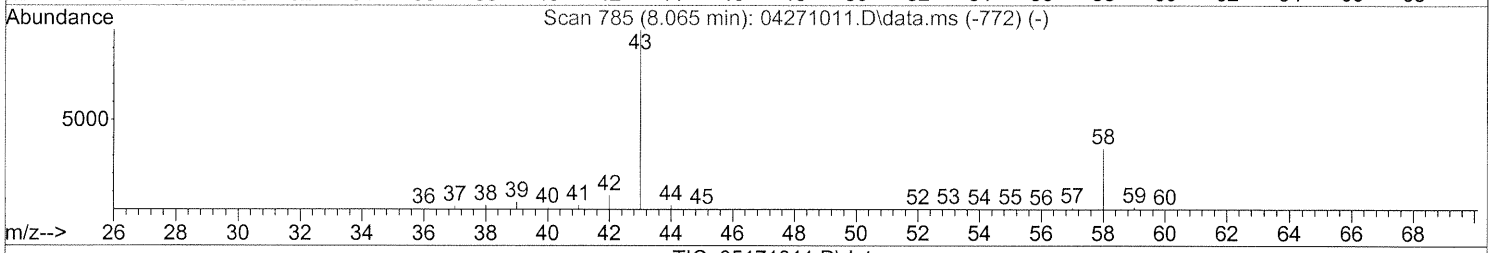
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171011.D\data.ms

(13) Acetone (T)

8.042min (-0.051) 53.69ng

response 961673

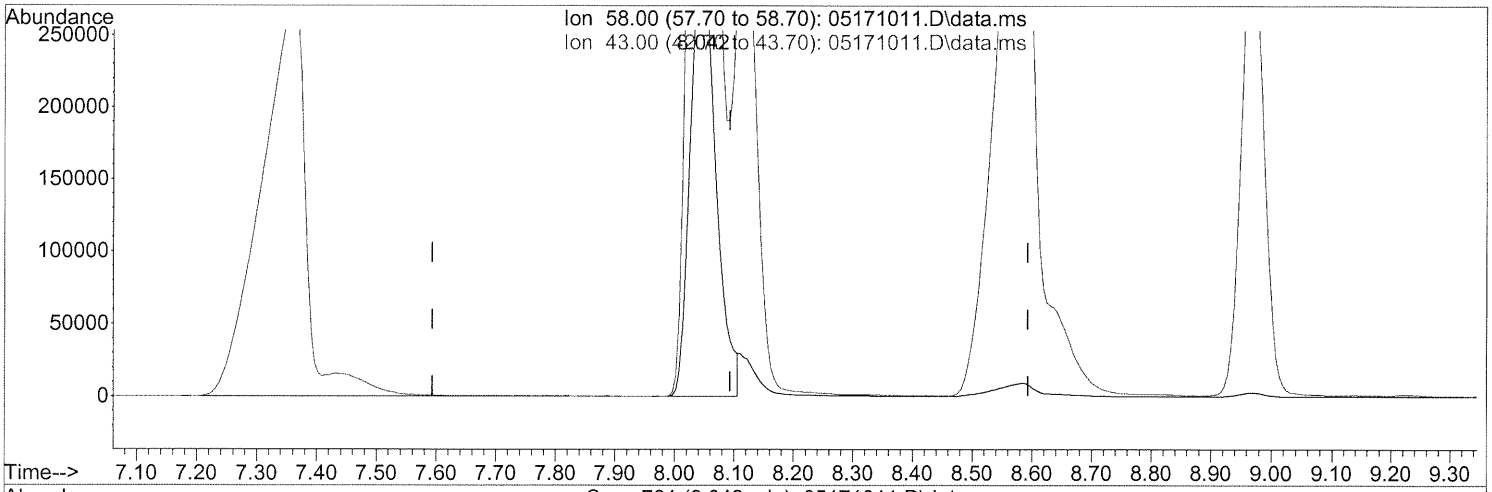
SH

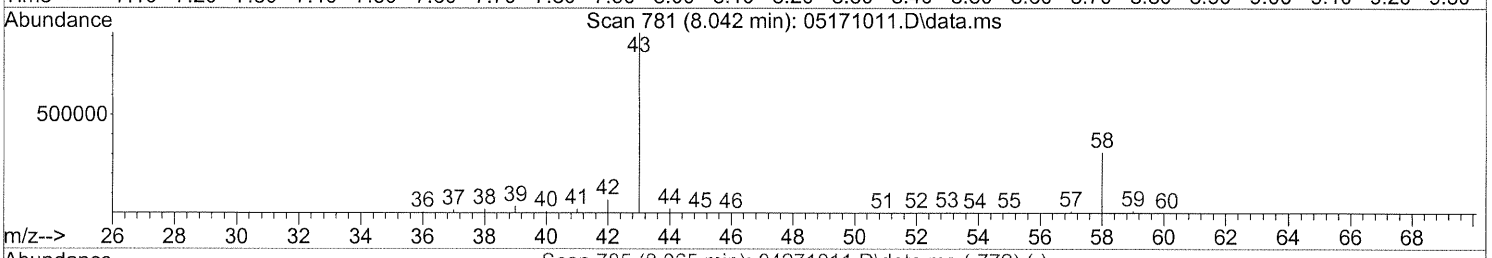
| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 275.80# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

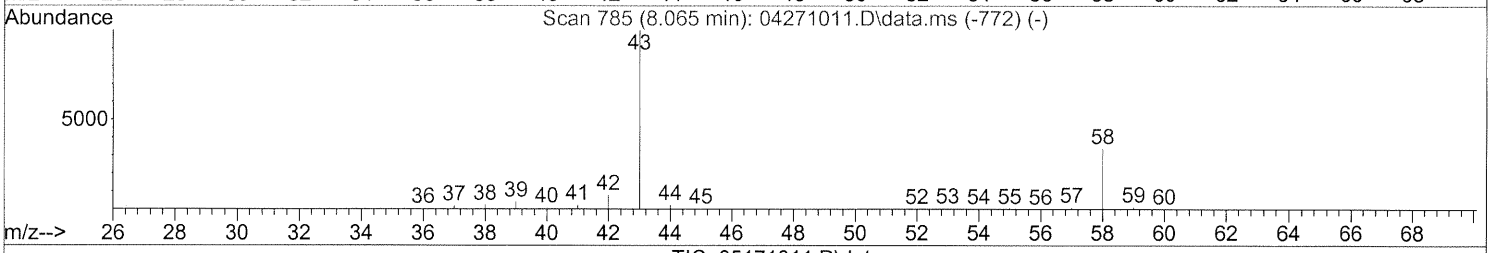
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171011.D\data.ms

(13) Acetone (T)

8.042min (-0.051) 50.24ng m

response 899881

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 294.74# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SH → IC

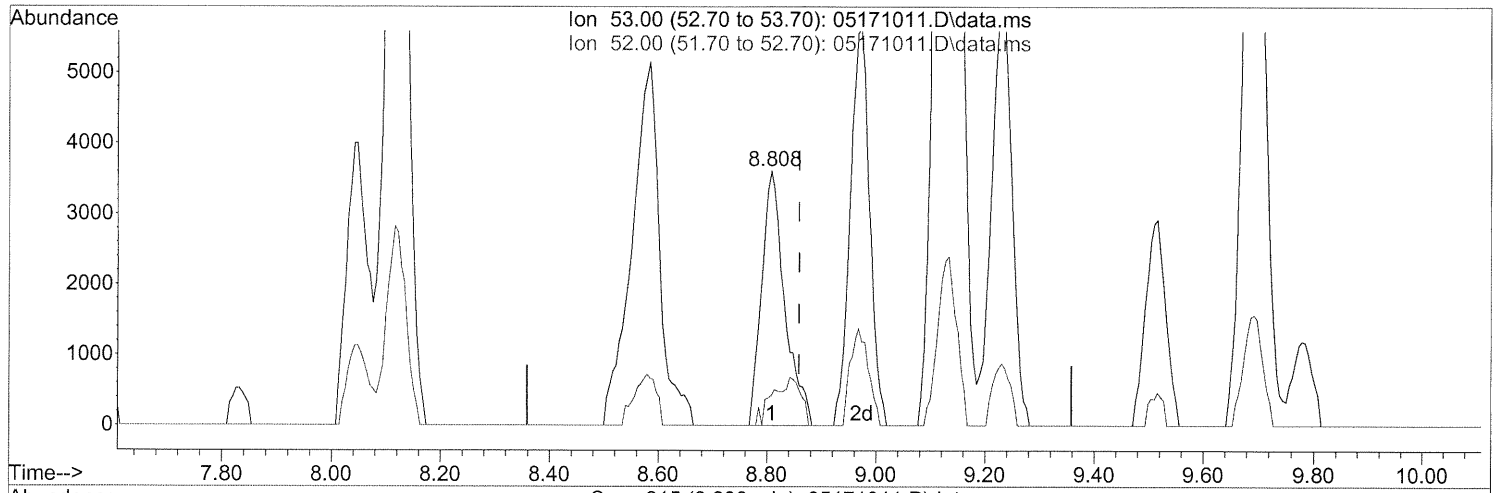
5/19/10

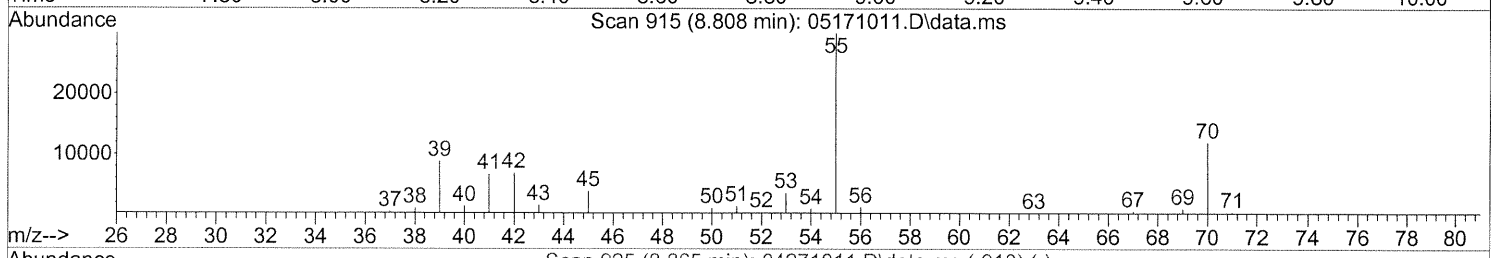
5/20/10

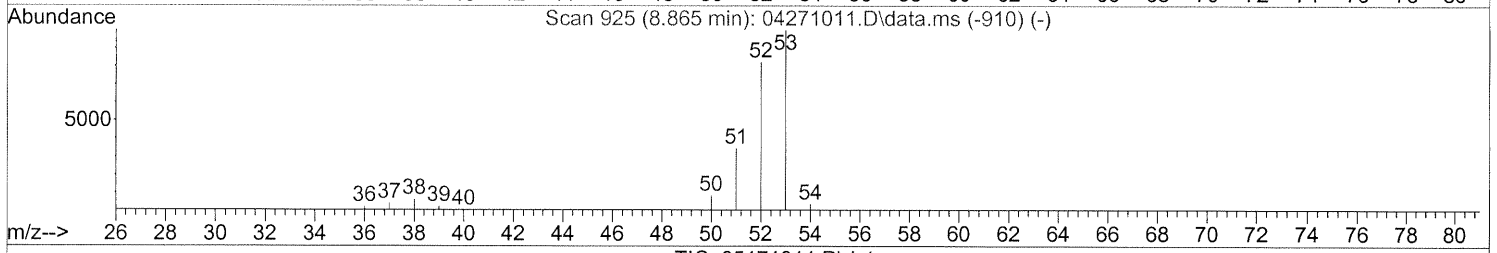
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171011.D\data.ms

(16) Acrylonitrile (T)

8.808min (-0.051) 0.39ng

response 10608

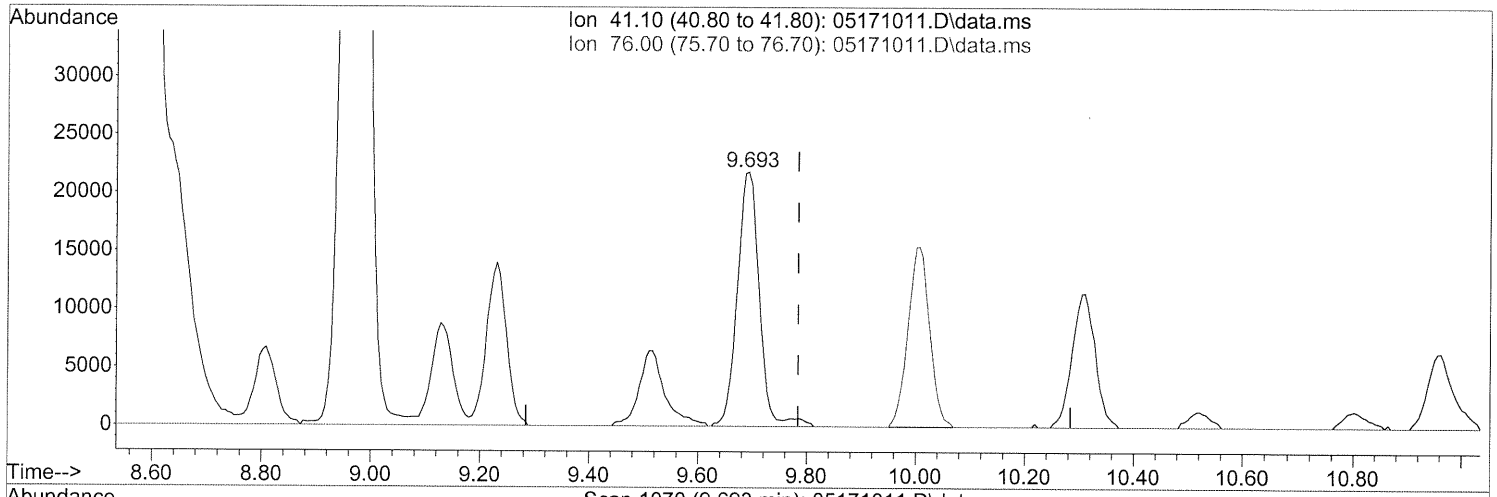
| Ion | Exp% | Act% |
|---|---|---|
| 53.00 | 100 | 100 |
| 52.00 | 84.10 | 10.92# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

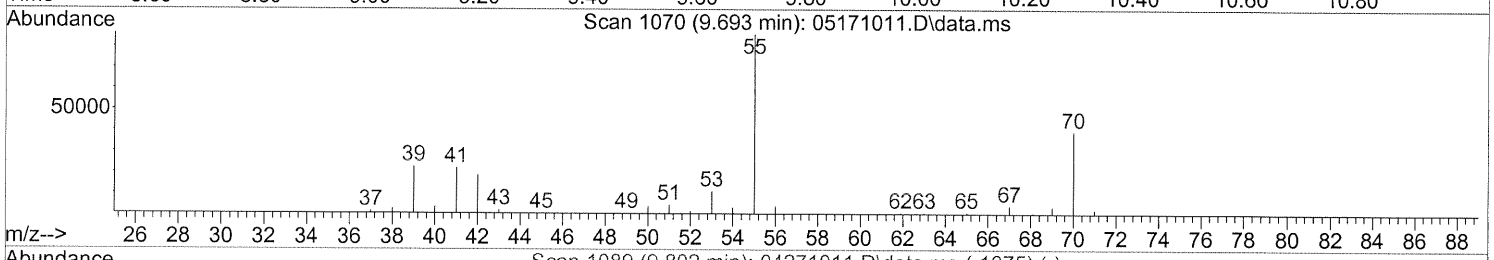
TP

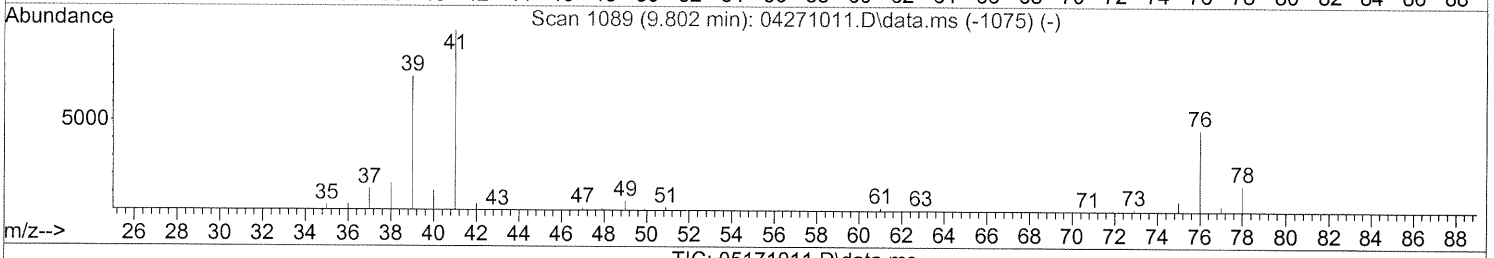
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171011.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.693min (-0.091) 2.26ng

response 61454

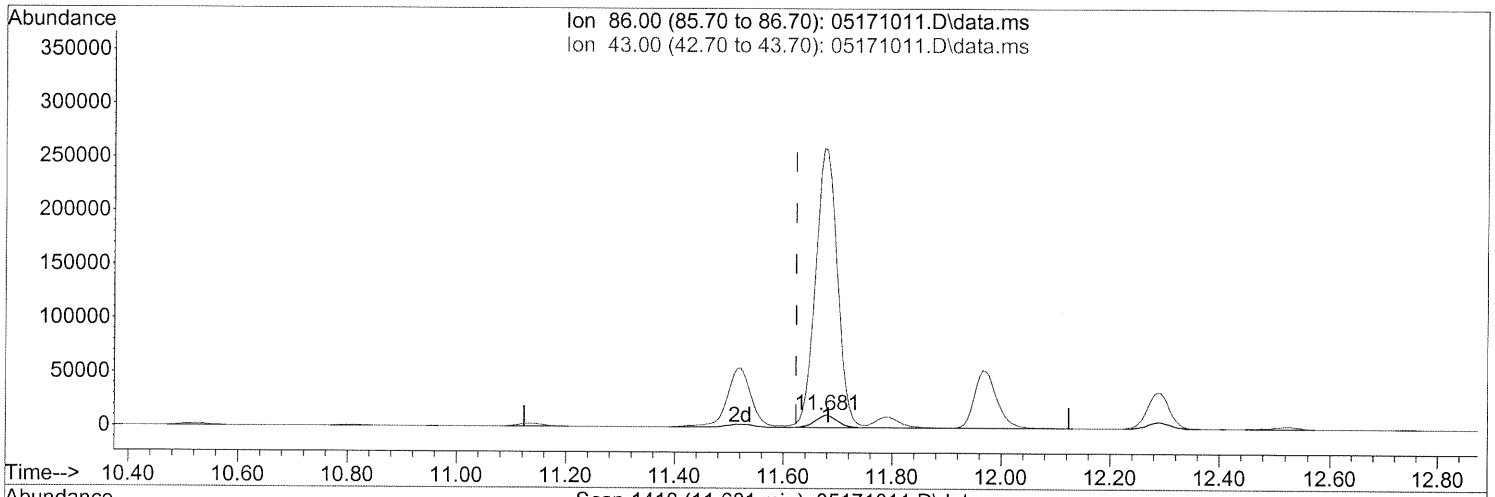
#P

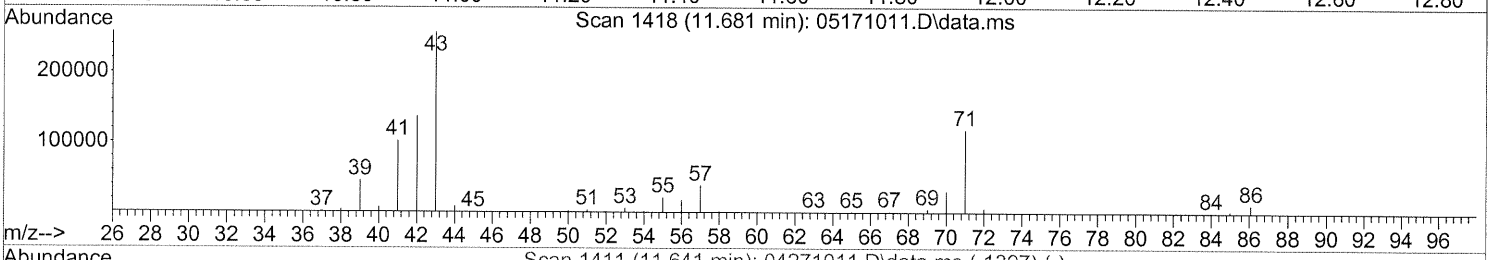
| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 76.00 | 32.80 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

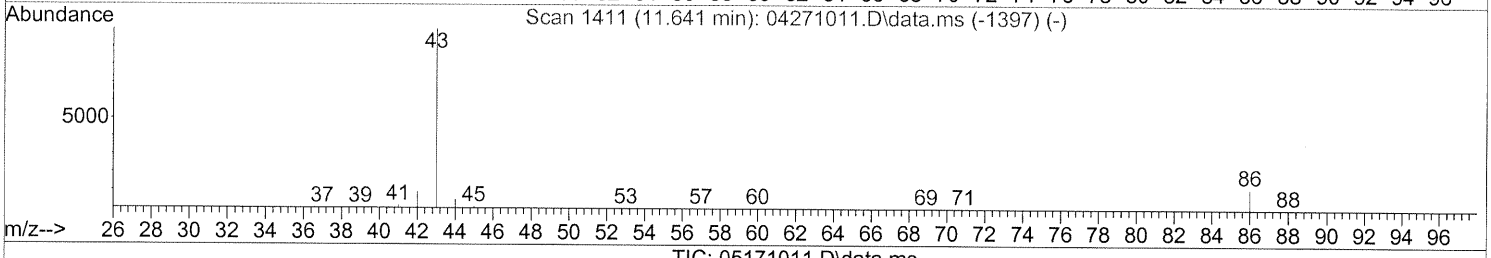
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171011.D\data.ms

(26) Vinyl Acetate (T)

11.681min (+0.057) 4.93ng

response 30754

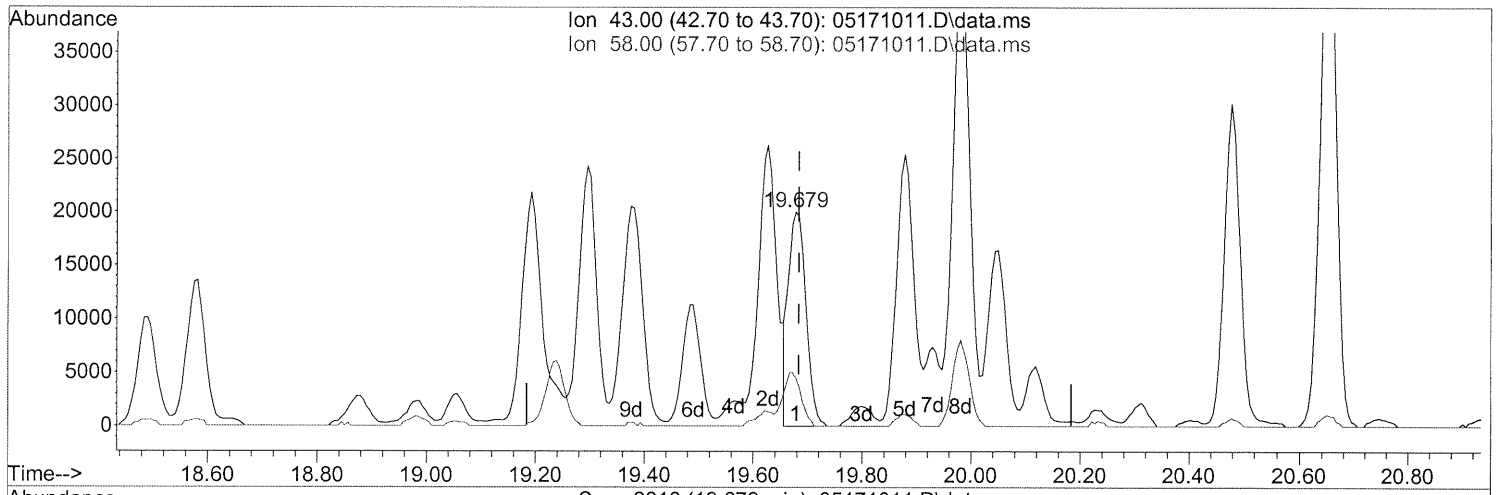
| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 43.00 | 1305.50 | 2343.72# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

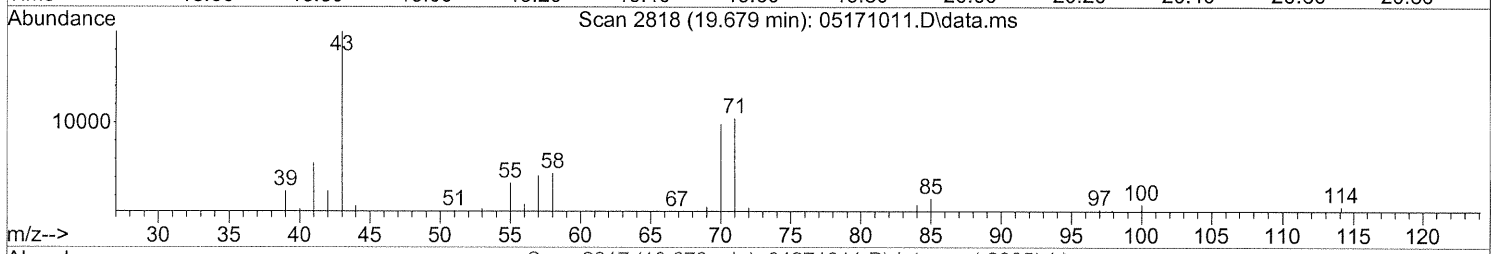
TP

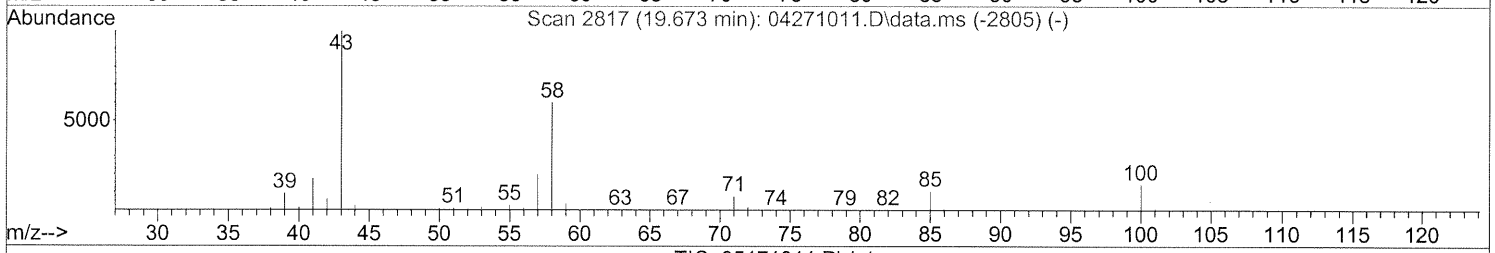
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171011.D\data.ms

(59) 2-Hexanone (T)

19.679min (-0.006) 0.91ng

response 44777

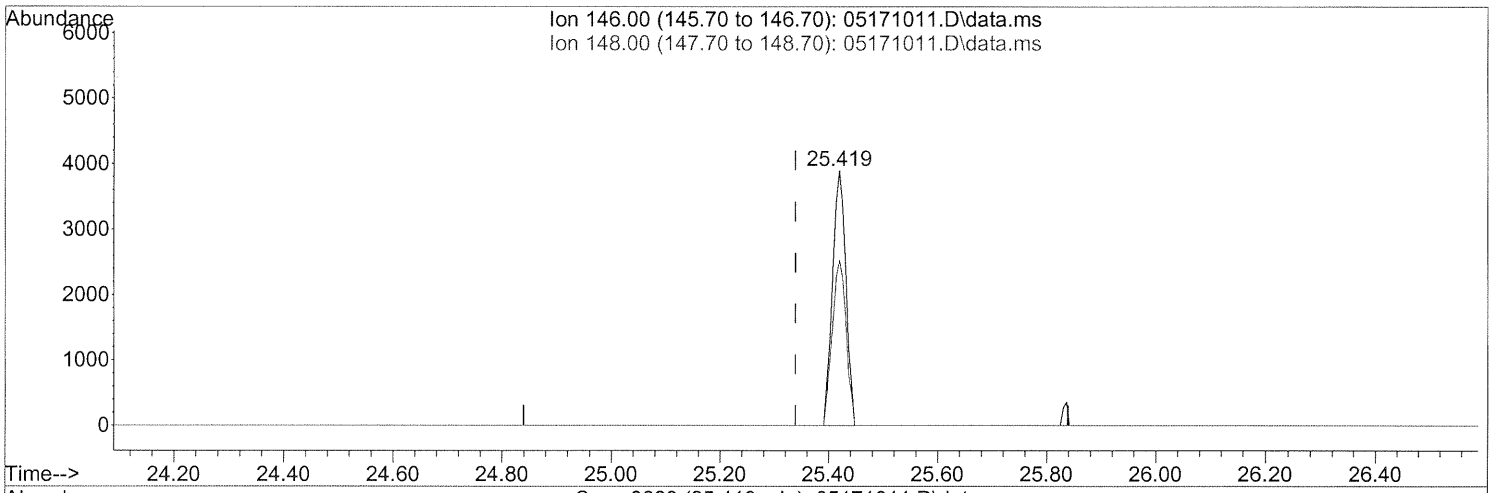
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 58.00 | 53.30 | 25.62# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

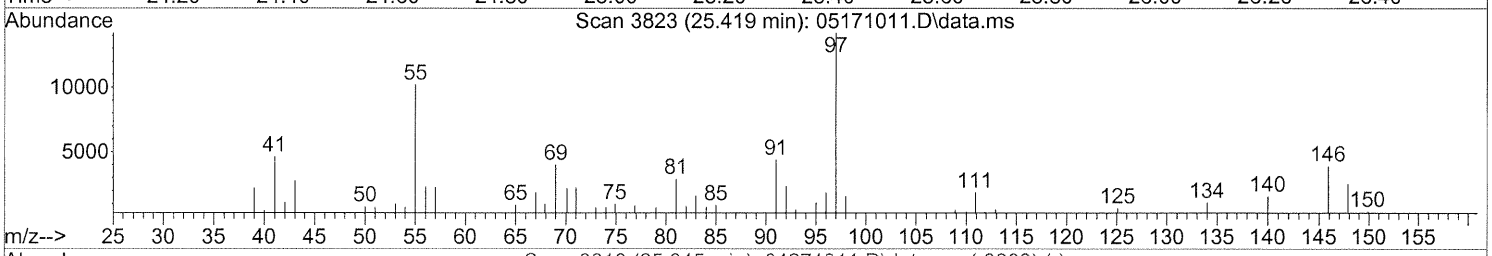
FP

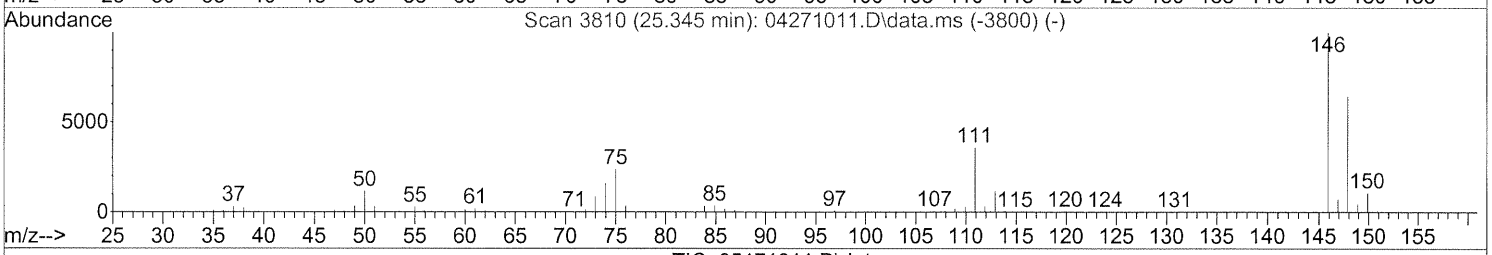
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171011.D\data.ms

(85) 1,3-Dichlorobenzene (T)

25.419min (+0.080) 0.10ng

response 6633

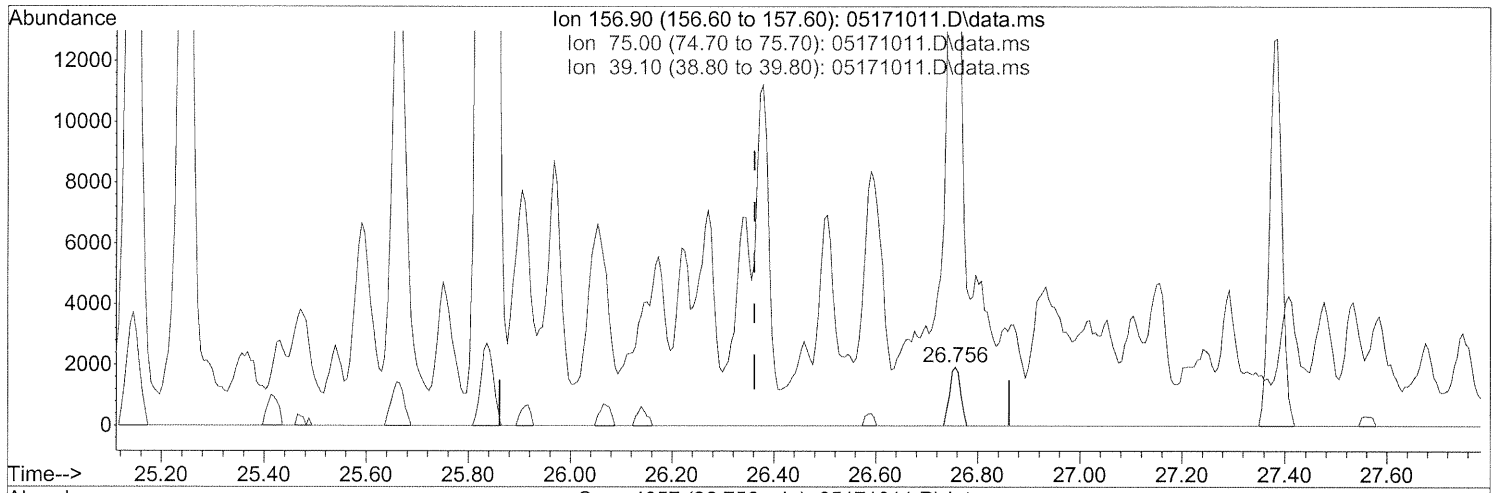
FP

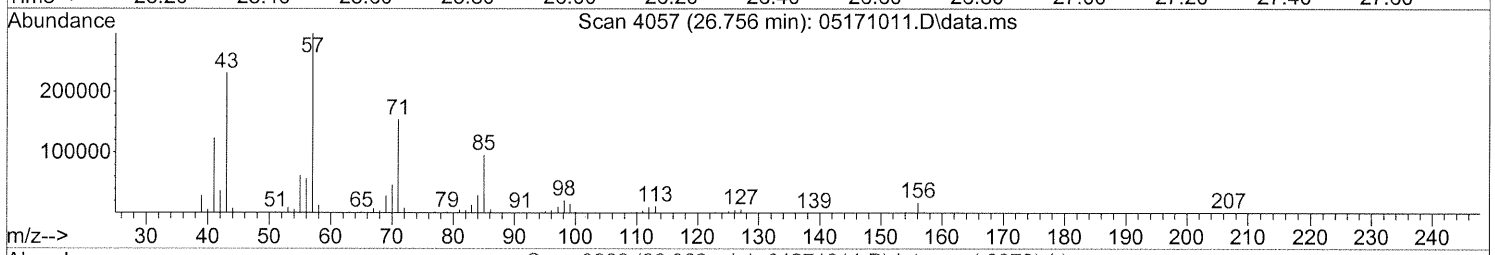
| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 63.70 | 67.01 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

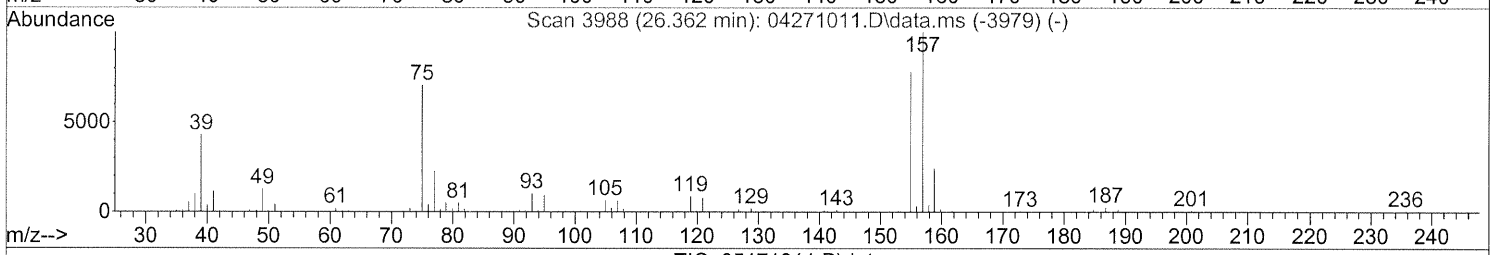
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171011.D\data.ms

(92) 1,2-Dibromo-3-Chloropropane (T)

26.756min (+0.394) 0.14ng

response 2888

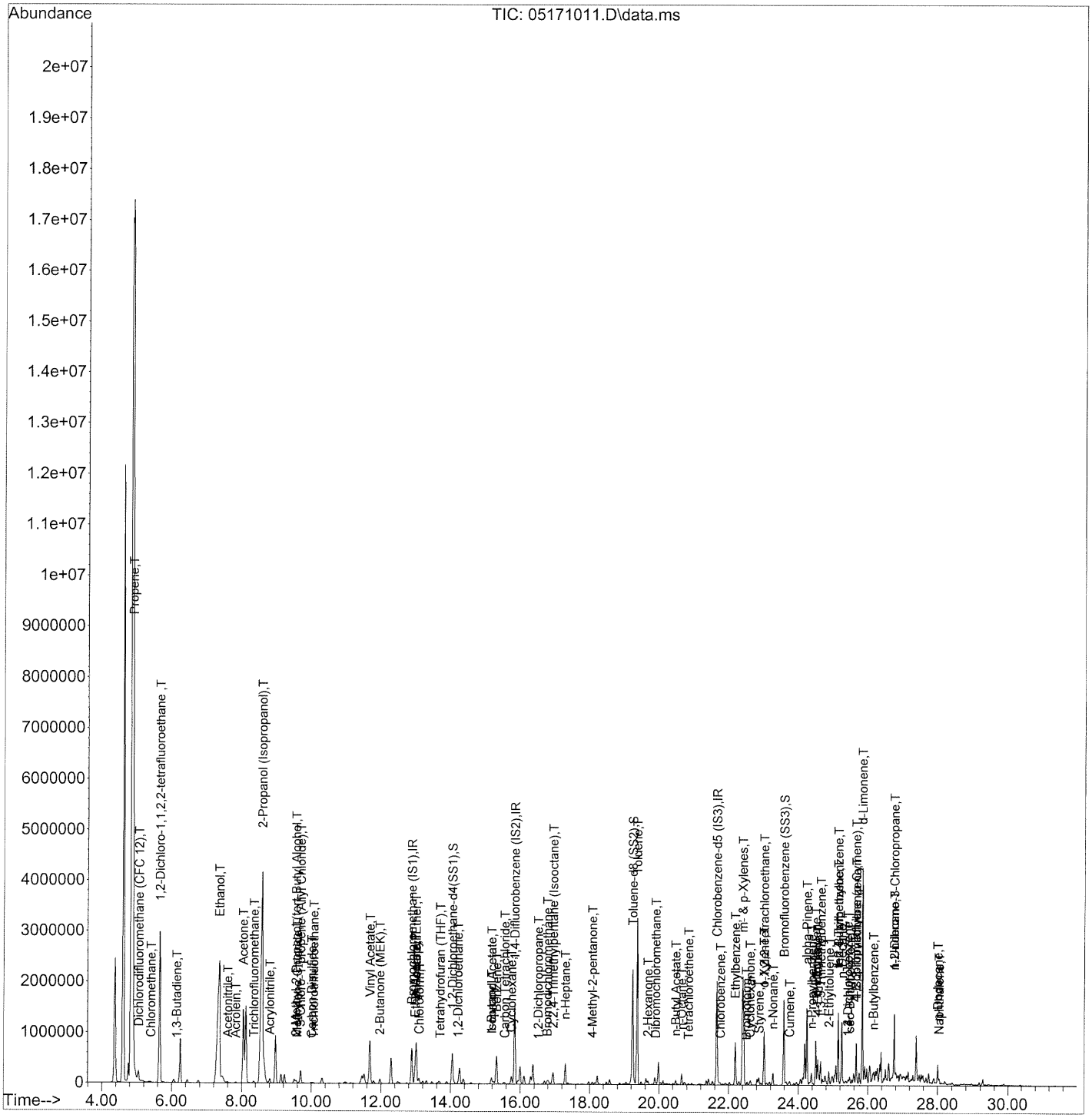
FP

| Ion | Exp% | Act% |
|---|---|---|
| 156.90 | 100 | 100 |
| 75.00 | 110.30 | 0.00# |
| 39.10 | 79.90 | 1579.50# |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171011.D
Acq On : 17 May 2010 18:18
Operator : LM
Sample : P1001650-002 (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 406195 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1930296 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 814276 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 601912 | 24.552 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.20% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 2031751 | 24.739 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.96% | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 677152 | 23.539 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.16% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 838870 | 36.453 | ng | | 96 |
| 3) Dichlorodifluoromethan... | 5.05 | 85 | 82214 | 1.519 | ng | | 99 |
| 4) Chloromethane | 5.40 | 50 | 20492 | 0.625 | ng | | 100 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.65 | 135 | 1588 | 0.051 | ng | | 65 |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 6.14 | 54 | 2068 | 0.077 | ng | | 94 |
| 8) Bromomethane | 6.64 | 94 | 516 | N.D. | | | |
| 9) Chloroethane | 6.98 | 64 | 424 | N.D. | | | |
| 10) Ethanol | 7.36 | 45 | 7110894 | 507.319 | ng | | 99 |
| 11) Acetonitrile | 7.60 | 41 | 15378 | 0.453 | ng | | 94 |
| 12) Acrolein | 7.83 | 56 | 19761 | 1.430 | ng | | 99 |
| 13) Acetone | 8.04 | 58 | 961673 | 53.691 | ng | # | 76 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 38703 | 0.786 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.58 | 45 | 11316129 | 216.845 | ng | | 99 |
| 16) Acrylonitrile | 8.81 | 53 | 10608 | 0.389 | ng | # | 19 |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.56 | 59 | 19736 | 0.320 | ng | # | 1 |
| 19) Methylene Chloride | 9.59 | 84 | 5275 | 0.196 | ng | # | 75 |
| 20) 3-Chloro-1-propene (Al... | 9.69 | 41 | 61454 | 2.258 | ng | # | 42 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 7489 | 0.303 | ng | # | 80 |
| 22) Carbon Disulfide | 10.01 | 76 | 42707 | 0.491 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 24) 1,1-Dichloroethane | 11.46 | 63 | 906 | N.D. | | | |
| 25) Methyl tert-Butyl Ether | 11.50 | 73 | 2098 | N.D. | | | |
| 26) Vinyl Acetate | 11.68 | 86 | 30754 | 4.934 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 43649 | 2.653 | ng | # | 68 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 13.01 | 87 | 7785 | 0.346 | ng | # | 1 |
| 30) Ethyl Acetate | 12.98 | 61 | 70175 | 8.032 | ng | | 83 |
| 31) n-Hexane | 13.01 | 57 | 508426 | 12.209 | ng | # | 96 |

Quantitation Report (Not Reviewed)

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Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.10 | 83 | 94321 | 2.131 ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.70 | 72 | 3086 | 0.193 ng | # | 1 |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 27289 | 0.822 ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 610 | N.D. | | |
| 39) Isopropyl Acetate | 15.18 | 61 | 2924 | 0.197 ng | # | 1 |
| 40) 1-Butanol | 15.17 | 56 | 104455 | 4.487 ng | | 82 |
| 41) Benzene | 15.32 | 78 | 745603 | 6.785 ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 16562 | 0.491 ng | | 100 |
| 43) Cyclohexane | 15.75 | 84 | 87861 | 2.147 ng | # | 80 |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | | |
| 45) 1,2-Dichloropropane | 16.52 | 63 | 2320 | 0.097 ng | | 87 |
| 46) Bromodichloromethane | 16.78 | 83 | 36887 | 1.118 ng | | 78 |
| 47) Trichloroethene | 16.85 | 130 | 286 | N.D. | | |
| 48) 1,4-Dioxane | 16.83 | 88 | 1004 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 255748 | 2.534 ng | | 95 |
| 50) Methyl Methacrylate | 17.11 | 100 | 193 | N.D. | | |
| 51) n-Heptane | 17.30 | 71 | 135572 | 5.186 ng | | 90 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 15582 | 0.749 ng | | 92 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 18.87 | 97 | 850 | N.D. | | |
| 58) Toluene | 19.37 | 91 | 3223095 | 27.827 ng | | 98 |
| 59) 2-Hexanone | 19.68 | 43 | 44777 | 0.913 ng | # | 61 |
| 60) Dibromochloromethane | 19.91 | 129 | 10966 | 0.396 ng | | 100 |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.48 | 43 | 62423 | 1.115 ng | | 81 |
| 63) n-Octane | 20.65 | 57 | 45349 | 2.182 ng | # | 83 |
| 64) Tetrachloroethene | 20.84 | 166 | 8856 | 0.245 ng | | 97 |
| 65) Chlorobenzene | 21.76 | 112 | 6837 | 0.089 ng | # | 43 |
| 66) Ethylbenzene | 22.19 | 91 | 808000 | 6.365 ng | | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 2234641 | 22.278 ng | | 92 |
| 68) Bromoform | 22.51 | 173 | 2680 | 0.103 ng | | 86 |
| 69) Styrene | 22.87 | 104 | 94538 | 1.198 ng | | 94 |
| 70) o-Xylene | 23.01 | 91 | 774602 | 7.574 ng | | 94 |
| 71) n-Nonane | 23.27 | 43 | 91132 | 2.043 ng | | 89 |
| 72) 1,1,2,2-Tetrachloroethane | 23.01 | 83 | 2235 | 0.052 ng | # | 31 |
| 74) Cumene | 23.75 | 105 | 45480 | 0.325 ng | | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 746453 | 11.512 ng | | 92 |
| 76) n-Propylbenzene | 24.38 | 91 | 215996 | 1.332 ng | | 96 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 592250 | 4.628 ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 310855 | 2.411 ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 208341 | 1.980 ng | | 93 |

Quantitation Report (Not Reviewed)

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Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

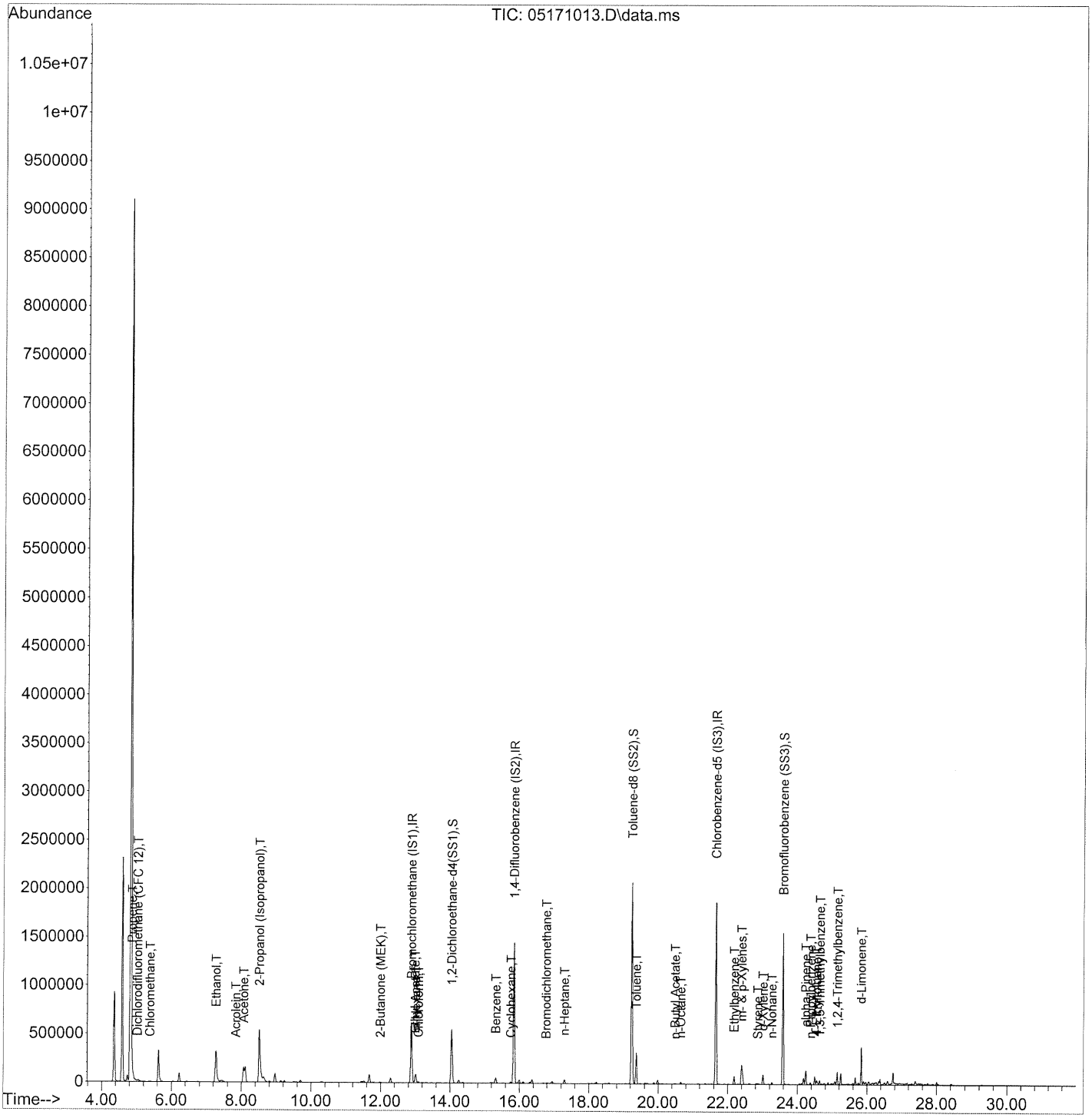
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 2371 | N.D. | | |
| 81) 2-Ethyltoluene | 24.88 | 105 | 190377 | 1.434 ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 774596 | 7.118 ng | | 96 |
| 83) n-Decane | 25.25 | 57 | 443899 | 8.951 ng | | 86 |
| 84) Benzyl Chloride | 25.31 | 91 | 897 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.42 | 146 | 6633 | 0.100 ng | | 96 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 6633 | 0.096 ng | | 96 |
| 87) sec-Butylbenzene | 25.48 | 105 | 14435 | 0.098 ng | | 81 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 214170 | 1.524 ng | | 93 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 159642 | 1.456 ng | | 90 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 214 | N.D. | | |
| 91) d-Limonene | 25.84 | 68 | 1080777 | 28.602 ng | | 83 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.76 | 157 | 2888 | 0.142 ng | # | 1 |
| 93) n-Undecane | 26.76 | 57 | 472540 | 9.623 ng | | 78 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 781 | N.D. | | |
| 95) Naphthalene | 28.05 | 128 | 65223 | 0.472 ng | | 97 |
| 96) n-Dodecane | 28.01 | 57 | 122241 | 2.401 ng | | 93 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.61 | 55 | 26005 | 0.783 ng | # | 70 |
| 99) tert-Butylbenzene | 25.15 | 119 | 97885 | 0.870 ng | # | 57 |
| 100) n-Butylbenzene | 26.16 | 91 | 45287 | 0.404 ng | # | 35 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:30:23 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:30:23 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 367948 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1767896 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 743221 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 554027 | 24.948 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.80% | | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1857432 | 24.779 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.12% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 617533 | 23.519 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 94.08% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 67997 | 3.262 | ng | | 96 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 8639 | 0.176 | ng | # | 92 |
| 4) Chloromethane | 5.38 | 50 | 5195 | 0.175 | ng | | 98 |
| 10) Ethanol | 7.28 | 45 | 653216m | 51.447 | ng | | |
| 12) Acrolein | 7.84 | 56 | 1620 | 0.129 | ng | | 97 |
| 13) Acetone | 8.07 | 58 | 89264 | 5.502 | ng | # | 75 |
| 15) 2-Propanol (Isopropanol) | 8.52 | 45 | 1261076 | 26.677 | ng | | 100 |
| 27) 2-Butanone (MEK) | 11.99 | 72 | 4197 | 0.282 | ng | # | 83 |
| 30) Ethyl Acetate | 12.99 | 61 | 6205 | 0.784 | ng | | 87 |
| 31) n-Hexane | 13.01 | 57 | 47100 | 1.249 | ng | # | 97 |
| 32) Chloroform | 13.09 | 83 | 8770 | 0.219 | ng | | 96 |
| 41) Benzene | 15.32 | 78 | 71213 | 0.708 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 7981 | 0.213 | ng | # | 82 |
| 46) Bromodichloromethane | 16.78 | 83 | 3261 | 0.108 | ng | | 77 |
| 51) n-Heptane | 17.30 | 71 | 12735 | 0.532 | ng | | 88 |
| 58) Toluene | 19.37 | 91 | 314217 | 2.972 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 5227 | 0.102 | ng | | 89 |
| 63) n-Octane | 20.65 | 57 | 4153 | 0.219 | ng | | 86 |
| 66) Ethylbenzene | 22.19 | 91 | 74741 | 0.645 | ng | | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 210457 | 2.299 | ng | | 93 |
| 69) Styrene | 22.87 | 104 | 8362 | 0.116 | ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 72251 | 0.774 | ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 8058 | 0.198 | ng | | 90 |
| 75) alpha-Pinene | 24.24 | 93 | 68302 | 1.154 | ng | | 95 |
| 76) n-Propylbenzene | 24.38 | 91 | 20216 | 0.137 | ng | | 94 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 29053 | 0.247 | ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 19629 | 0.204 | ng | | 93 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 70390 | 0.709 | ng | | 97 |
| 91) d-Limonene | 25.84 | 68 | 93609 | 2.714 | ng | | 83 |



5/19/10

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Misc :
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|---|---|---|---|---|---|---|

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
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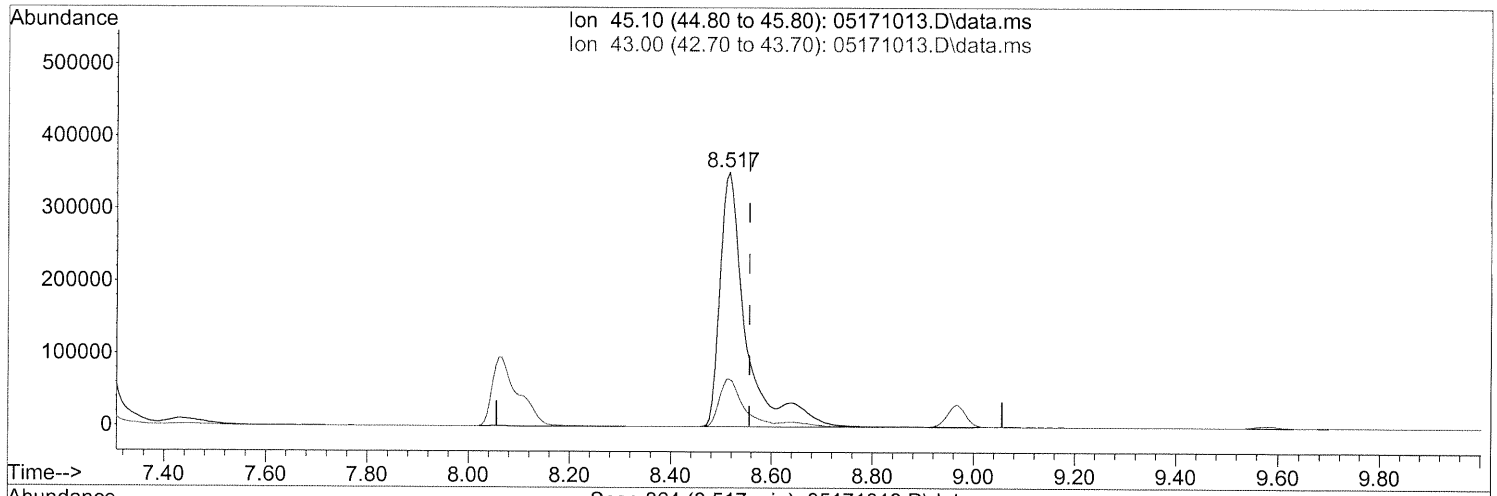
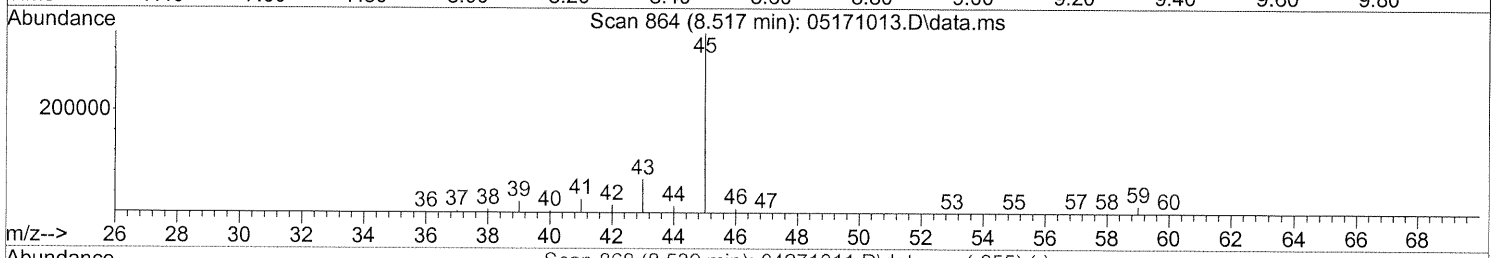
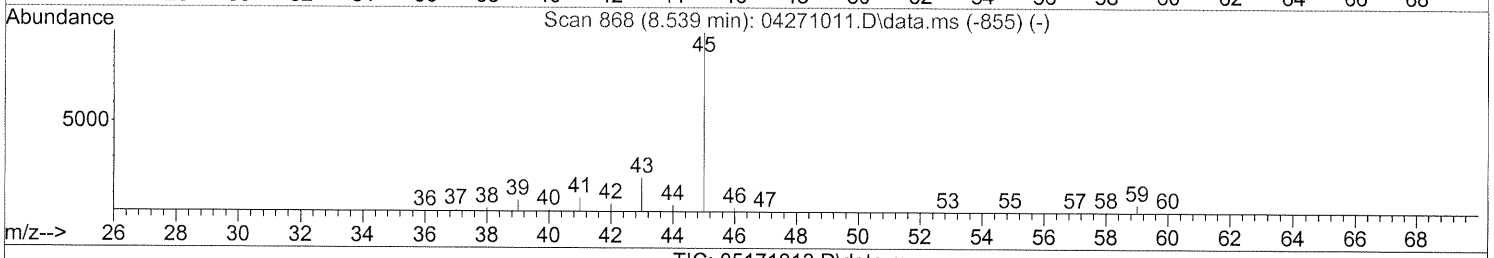
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171013.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.517min (-0.040) 26.68ng

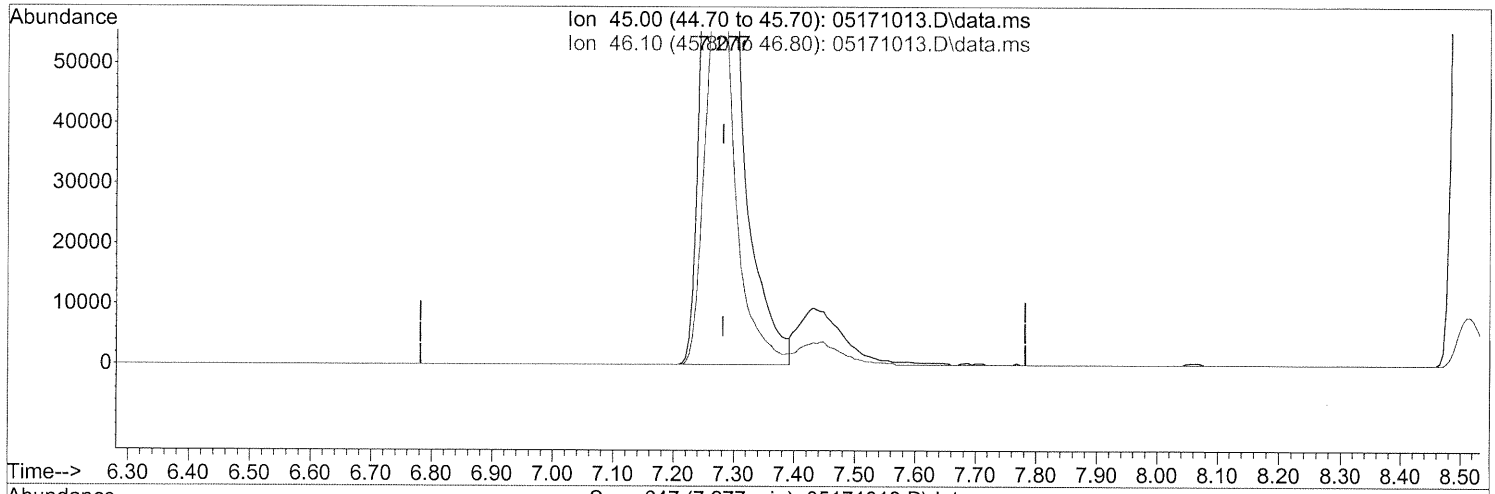
response 1261076

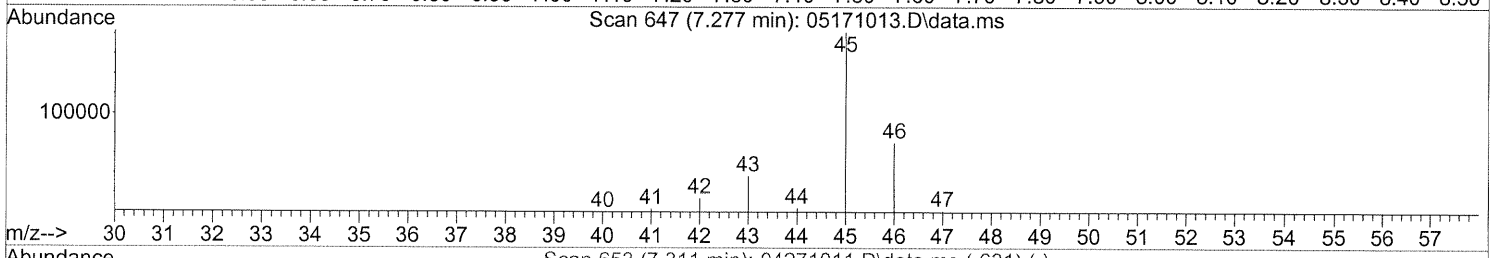
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 19.18 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

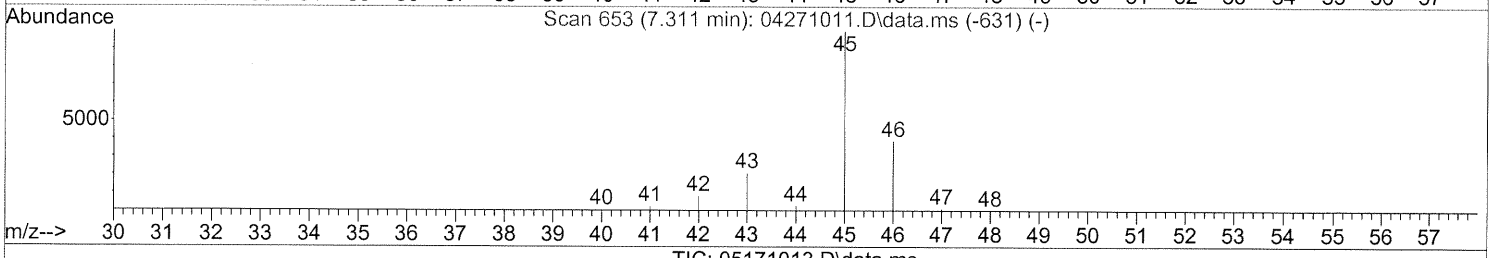
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171013.D\data.ms

(10) Ethanol (T)

7.277min (-0.006) 47.51ng

response 603269

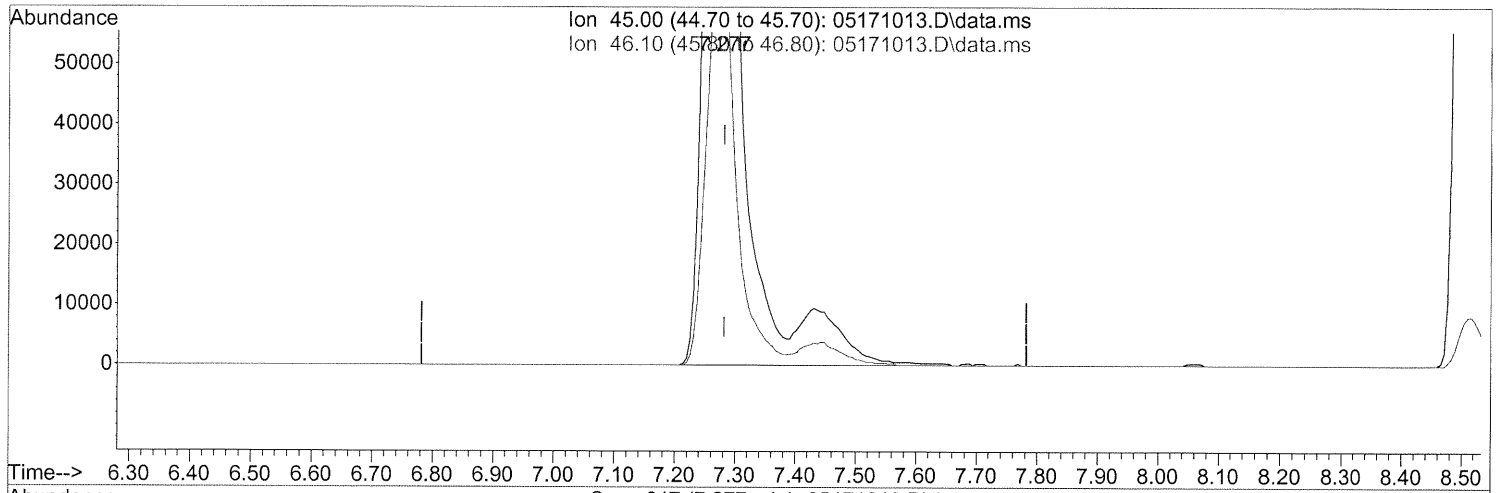
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.56 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

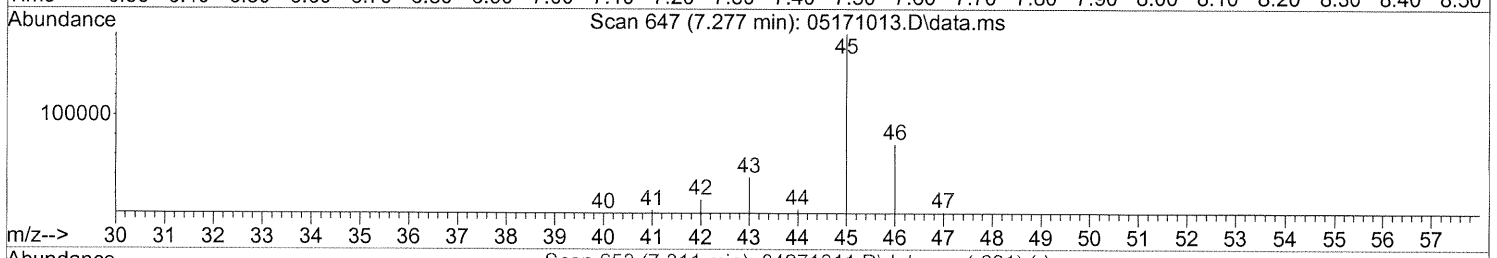
SP

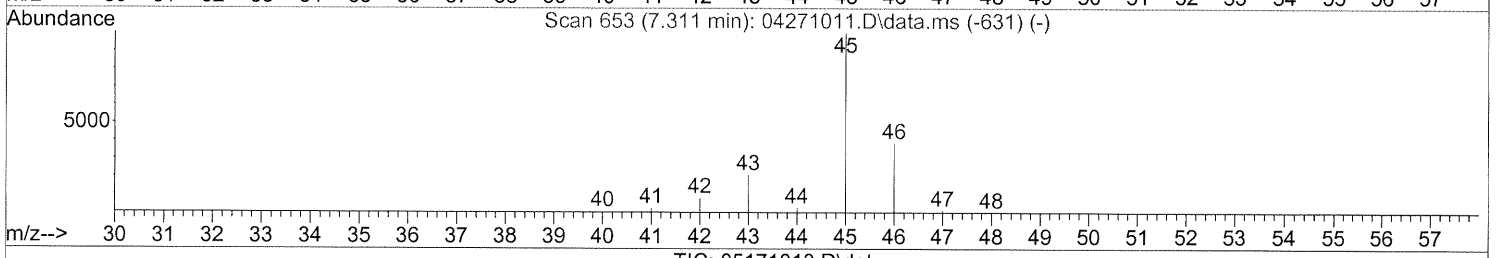
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171013.D\data.ms

(10) Ethanol (T)

7.277min (-0.006) 51.45ng m

response 653216

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 35.61 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → IC

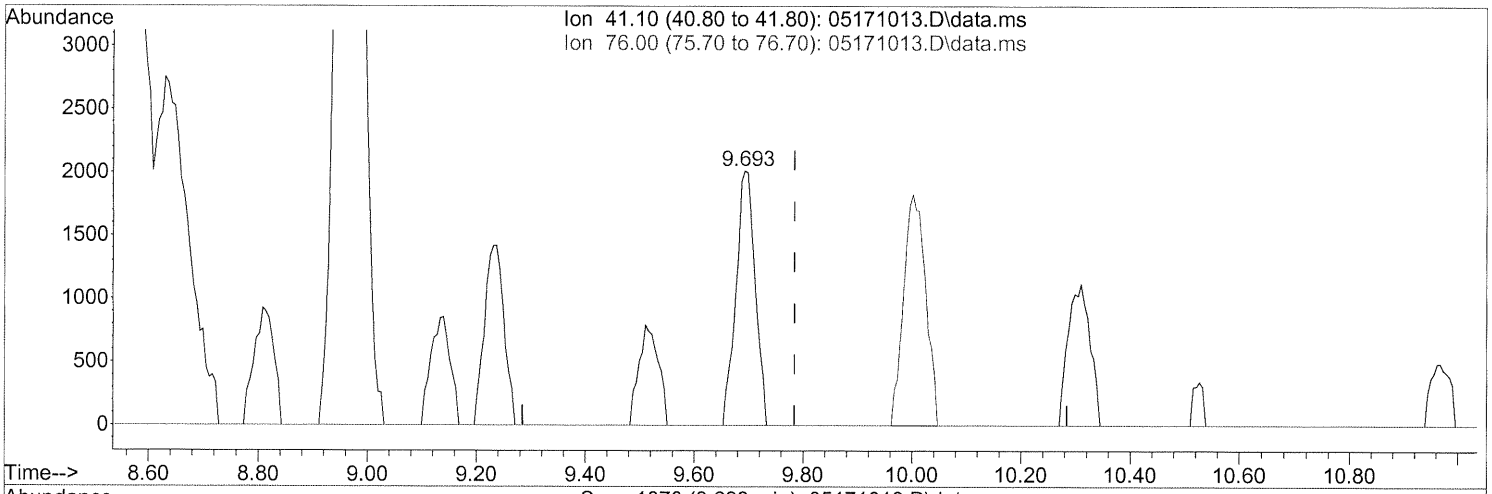
DA 5/19/10

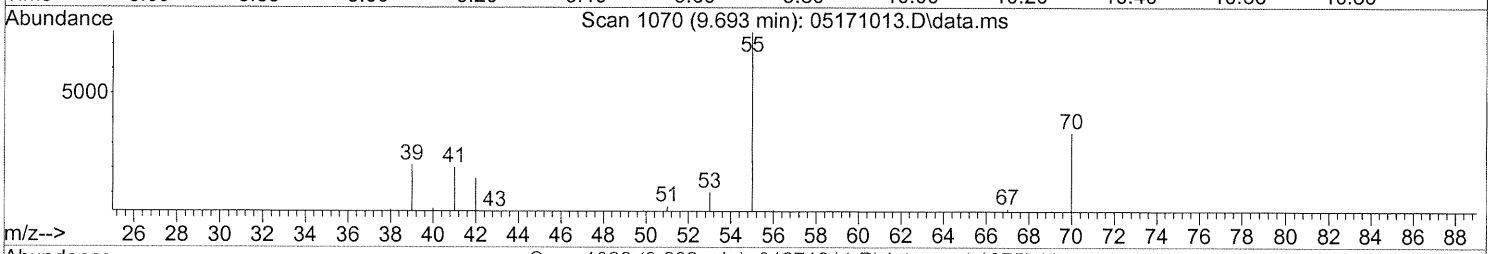
R 5/20/10

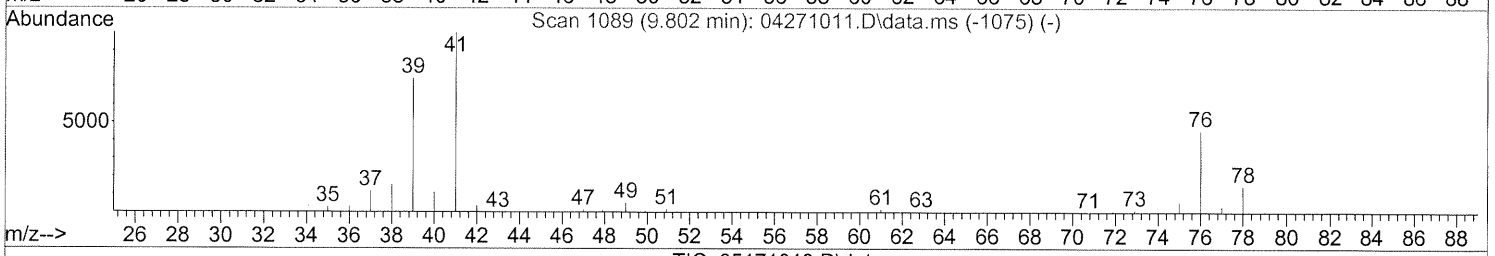
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171013.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.693min (-0.091) 0.20ng

response 4897

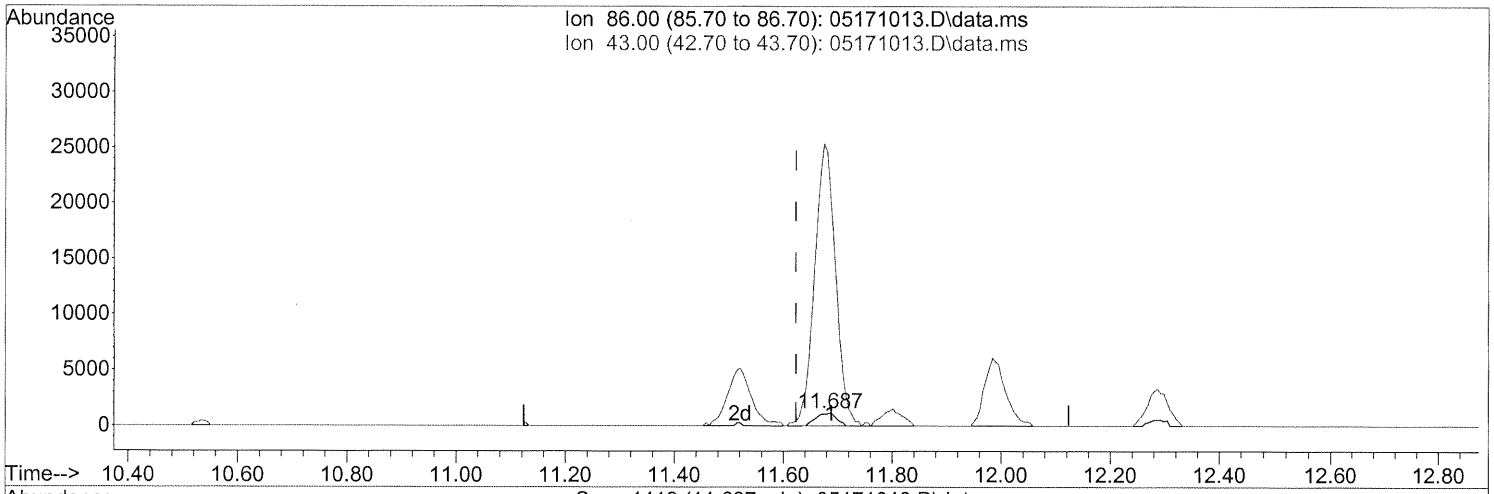
FP

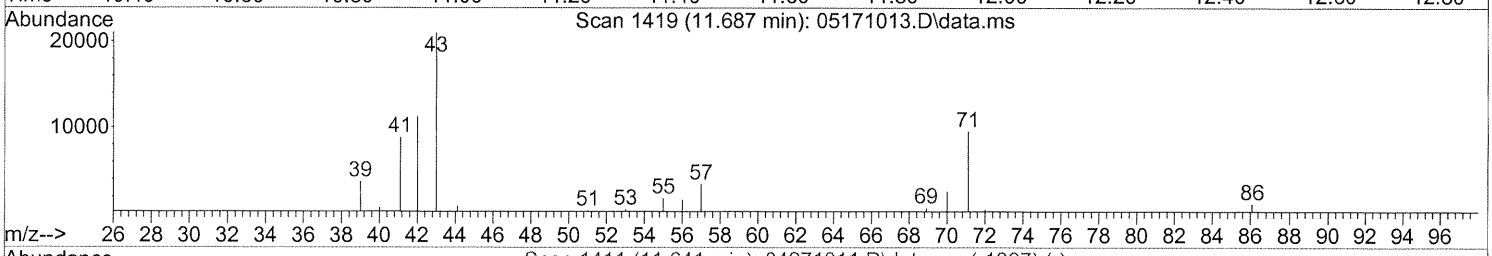
| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 76.00 | 32.80 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

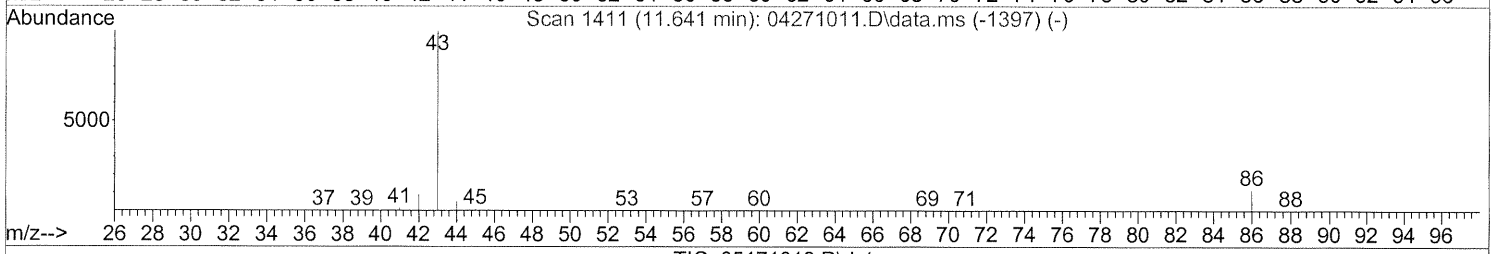
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171013.D\data.ms

(26) Vinyl Acetate (T)

11.687min (+0.063) 0.51ng

response 2904

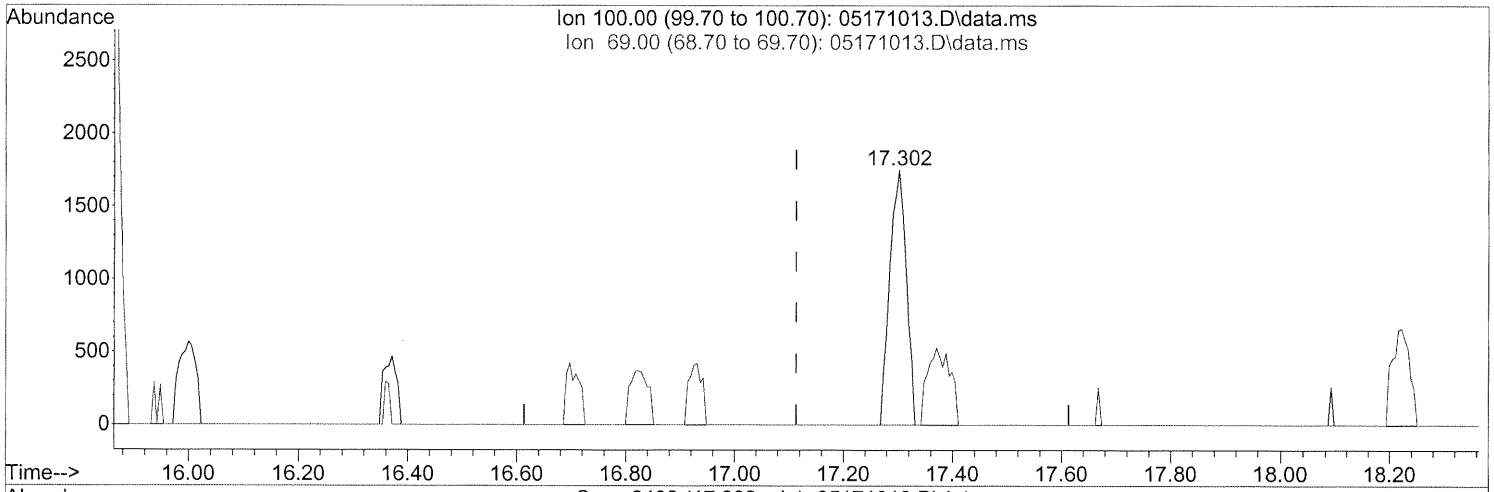
| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 43.00 | 1305.50 | 2334.71# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

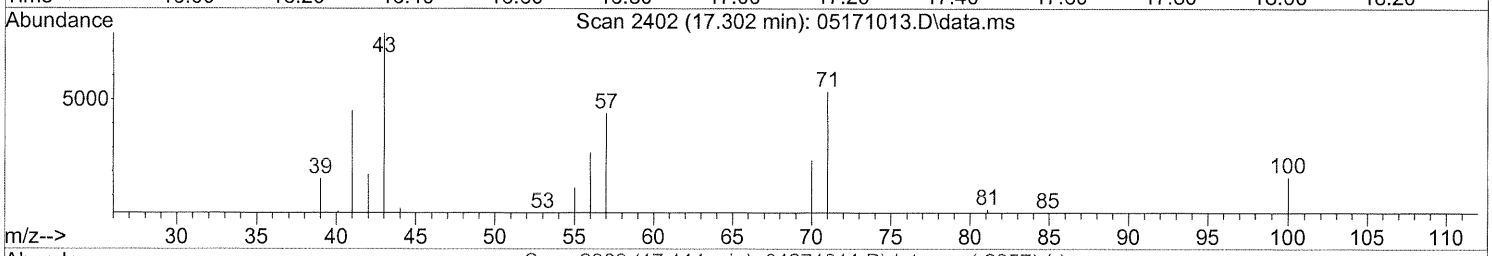
7P

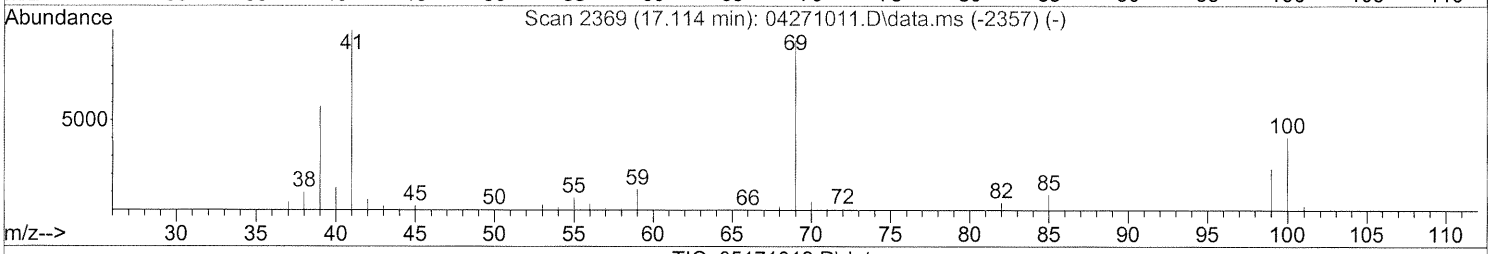
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171013.D\data.ms

(50) Methyl Methacrylate (T)

17.302min (+0.189) 0.34ng

response 3645

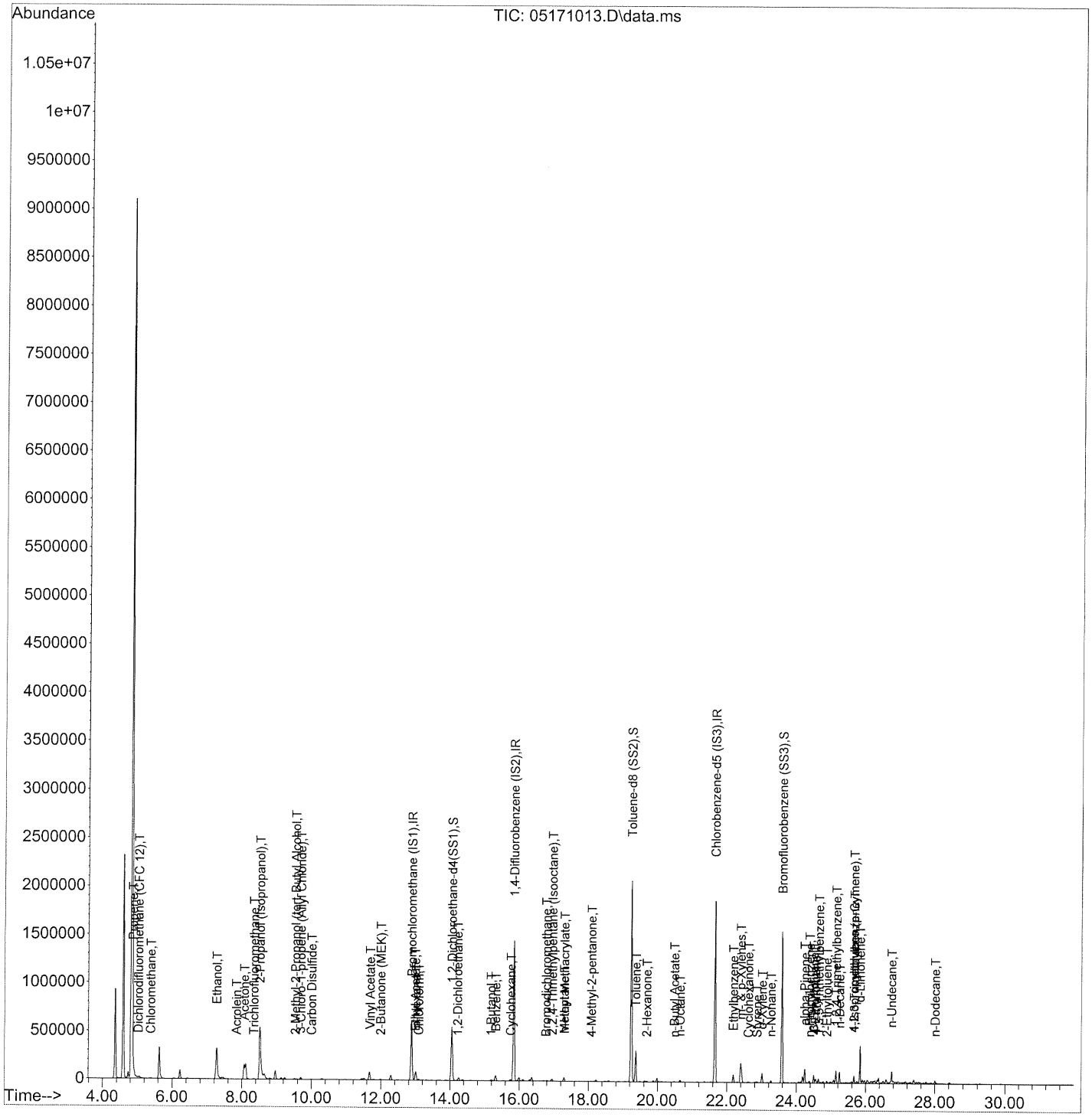
| Ion | Exp% | Act% |
|---|---|---|
| 100.00 | 100 | 100 |
| 69.00 | 311.50 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

TP

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 367948 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1767896 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 743221 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 554027 | 24.948 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.80% | | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1857432 | 24.779 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.12% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 617533 | 23.519 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 94.08% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 67997 | 3.262 | ng | | 96 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 8639 | 0.176 | ng | # | 92 |
| 4) Chloromethane | 5.38 | 50 | 5195 | 0.175 | ng | | 98 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 0.00 | 135 | 0 | N.D. | | | |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 0.00 | 54 | 0 | N.D. | | | |
| 8) Bromomethane | 0.00 | 94 | 0 | N.D. | | | |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | | | |
| 10) Ethanol | 7.28 | 45 | 603269 | 47.513 | ng | | 100 |
| 11) Acetonitrile | 7.61 | 41 | 1247 | N.D. | | | |
| 12) Acrolein | 7.84 | 56 | 1620 | 0.129 | ng | | 97 |
| 13) Acetone | 8.07 | 58 | 89264 | 5.502 | ng | # | 75 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 3457 | 0.077 | ng | | 96 |
| 15) 2-Propanol (Isopropanol) | 8.52 | 45 | 1261076 | 26.677 | ng | | 100 |
| 16) Acrylonitrile | 8.81 | 53 | 938 | N.D. | | | |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.53 | 59 | 3967 | 0.071 | ng | # | 61 |
| 19) Methylene Chloride | 9.59 | 84 | 880 | N.D. | | | |
| 20) 3-Chloro-1-propene (Al... | 9.69 | 41 | 4897 | 0.199 | ng | # | 42 |
| 21) Trichlorotrifluoroethane | 10.05 | 151 | 421 | N.D. | | | |
| 22) Carbon Disulfide | 10.00 | 76 | 5137 | 0.065 | ng | # | 75 |
| 23) trans-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 24) 1,1-Dichloroethane | 0.00 | 63 | 0 | N.D. | | | |
| 25) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | | | |
| 26) Vinyl Acetate | 11.69 | 86 | 2904 | 0.514 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.99 | 72 | 4197 | 0.282 | ng | # | 83 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 13.01 | 87 | 92 | N.D. | | | |
| 30) Ethyl Acetate | 12.99 | 61 | 6205 | 0.784 | ng | | 87 |
| 31) n-Hexane | 13.01 | 57 | 47100 | 1.249 | ng | # | 97 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.09 | 83 | 8770 | 0.219 ng | | 96 |
| 34) Tetrahydrofuran (THF) | 0.00 | 72 | 0 | N.D. | | |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 14.22 | 62 | 2414 | 0.080 ng | | 72 |
| 38) 1,1,1-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 39) Isopropyl Acetate | 0.00 | 61 | 0 | N.D. | | |
| 40) 1-Butanol | 15.18 | 56 | 8845 | 0.415 ng | | 90 |
| 41) Benzene | 15.32 | 78 | 71213 | 0.708 ng | | 99 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 1237 | N.D. | | |
| 43) Cyclohexane | 15.75 | 84 | 7981 | 0.213 ng | # | 82 |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | | |
| 45) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | | |
| 46) Bromodichloromethane | 16.78 | 83 | 3261 | 0.108 ng | | 77 |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | | |
| 48) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 23764 | 0.257 ng | | 93 |
| 50) Methyl Methacrylate | 17.30 | 100 | 3645 | 0.342 ng | # | 1 |
| 51) n-Heptane | 17.30 | 71 | 12735 | 0.532 ng | | 88 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 1179 | 0.062 ng | # | 93 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 58) Toluene | 19.37 | 91 | 314217 | 2.972 ng | | 99 |
| 59) 2-Hexanone | 19.68 | 43 | 4730 | 0.106 ng | # | 47 |
| 60) Dibromochloromethane | 19.91 | 129 | 748 | N.D. | | |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.48 | 43 | 5227 | 0.102 ng | | 89 |
| 63) n-Octane | 20.65 | 57 | 4153 | 0.219 ng | | 86 |
| 64) Tetrachloroethene | 20.85 | 166 | 720 | N.D. | | |
| 65) Chlorobenzene | 0.00 | 112 | 0 | N.D. | | |
| 66) Ethylbenzene | 22.19 | 91 | 74741 | 0.645 ng | | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 210457 | 2.299 ng | | 93 |
| 68) Bromoform | 0.00 | 173 | 0 | N.D. | | |
| 69) Styrene | 22.87 | 104 | 8362 | 0.116 ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 72251 | 0.774 ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 8058 | 0.198 ng | | 90 |
| 72) 1,1,2,2-Tetrachloroethane | 0.00 | 83 | 0 | N.D. | | |
| 74) Cumene | 23.75 | 105 | 4843 | N.D. | | |
| 75) alpha-Pinene | 24.24 | 93 | 68302 | 1.154 ng | | 95 |
| 76) n-Propylbenzene | 24.38 | 91 | 20216 | 0.137 ng | | 94 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 54553 | 0.467 ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 29053 | 0.247 ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 19629 | 0.204 ng | | 93 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171013.D
Acq On : 17 May 2010 19:42
Operator : LM
Sample : P1001650-002 dil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 25.15 | 118 | 497 | N.D. | | |
| 81) 2-Ethyltoluene | 24.88 | 105 | 17626 | 0.145 ng | | 96 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 70390 | 0.709 ng | | 97 |
| 83) n-Decane | 25.25 | 57 | 41459 | 0.916 ng | | 87 |
| 84) Benzyl Chloride | 25.43 | 91 | 771 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.41 | 146 | 805 | N.D. | | |
| 86) 1,4-Dichlorobenzene | 25.41 | 146 | 805 | N.D. | | |
| 87) sec-Butylbenzene | 25.48 | 105 | 1230 | N.D. | | |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 19103 | 0.149 ng | | 94 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 14657 | 0.146 ng | | 91 |
| 90) 1,2-Dichlorobenzene | 25.41 | 146 | 805 | N.D. | | |
| 91) d-Limonene | 25.84 | 68 | 93609 | 2.714 ng | | 83 |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 93) n-Undecane | 26.75 | 57 | 41364 | 0.923 ng | | 75 |
| 94) 1,2,4-Trichlorobenzene | 0.00 | 180 | 0 | N.D. | | |
| 95) Naphthalene | 28.05 | 128 | 6219 | N.D. | | |
| 96) n-Dodecane | 28.01 | 57 | 11875 | 0.256 ng | | 97 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.62 | 55 | 3034 | 0.100 ng | # | 72 |
| 99) tert-Butylbenzene | 25.58 | 119 | 2025 | N.D. | | |
| 100) n-Butylbenzene | 26.16 | 91 | 4480 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110356** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P1001650-003

Test Code: EPA TO-15 Date Collected: 5/9/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 5/11/10
Analyst: Liliana Marghitoiu Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC00796

Initial Pressure (psig): -3.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.57

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | **Propene** | **81** | 0.79 | **47** | 0.46 | |
| 75-71-8 | **Dichlorodifluoromethane (CFC 12)** | **2.3** | 0.79 | **0.47** | 0.16 | |
| 74-87-3 | **Chloromethane** | **1.0** | 0.31 | **0.51** | 0.15 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.79 | ND | 0.11 | |
| 75-01-4 | Vinyl Chloride | ND | 0.16 | ND | 0.061 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.31 | ND | 0.14 | |
| 74-83-9 | Bromomethane | ND | 0.16 | ND | 0.040 | |
| 75-00-3 | Chloroethane | ND | 0.16 | ND | 0.060 | |
| 64-17-5 | **Ethanol** | **970** | 79 | **510** | 42 | **D** |
| 75-05-8 | Acetonitrile | ND | 0.79 | ND | 0.47 | |
| 107-02-8 | **Acrolein** | **3.7** | 3.1 | **1.6** | 1.4 | |
| 67-64-1 | **Acetone** | **94** | 7.9 | **39** | 3.3 | |
| 75-69-4 | **Trichlorofluoromethane** | **1.3** | 0.16 | **0.23** | 0.028 | |
| 67-63-0 | **2-Propanol (Isopropyl Alcohol)** | **510** | 16 | **210** | 6.4 | **D** |
| 107-13-1 | Acrylonitrile | ND | 0.79 | ND | 0.36 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.16 | ND | 0.040 | |
| 75-09-2 | Methylene Chloride | ND | 0.79 | ND | 0.23 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.16 | ND | 0.050 | |
| 76-13-1 | **Trichlorotrifluoroethane** | **0.51** | 0.16 | **0.066** | 0.020 | |
| 75-15-0 | Carbon Disulfide | ND | 7.9 | ND | 2.5 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.16 | ND | 0.040 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.16 | ND | 0.039 | |
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 0.16 | ND | 0.044 | |
| 108-05-4 | Vinyl Acetate | ND | 7.9 | ND | 2.2 | |
| 78-93-3 | 2-Butanone (MEK) | ND | 7.9 | ND | 2.7 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.
D = The reported result is from a dilution.

Verified By: Re Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110356** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P1001650-003

Test Code: EPA TO-15 Date Collected: 5/9/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 5/11/10
Analyst: Liliana Marghitoiu Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC00796

Initial Pressure (psig): -3.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.57

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.16 | ND | 0.040 | |
| 141-78-6 | **Ethyl Acetate** | **11** | 0.79 | **3.1** | 0.22 | |
| 110-54-3 | **n-Hexane** | **24** | 0.79 | **6.8** | 0.22 | |
| 67-66-3 | **Chloroform** | **5.3** | 0.16 | **1.1** | 0.032 | |
| 109-99-9 | Tetrahydrofuran (THF) | ND | 0.79 | ND | 0.27 | |
| 107-06-2 | **1,2-Dichloroethane** | **1.5** | 0.16 | **0.38** | 0.039 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.16 | ND | 0.029 | |
| 71-43-2 | **Benzene** | **14** | 0.16 | **4.3** | 0.049 | |
| 56-23-5 | **Carbon Tetrachloride** | **0.73** | 0.16 | **0.12** | 0.025 | |
| 110-82-7 | **Cyclohexane** | **4.2** | 0.79 | **1.2** | 0.23 | |
| 78-87-5 | **1,2-Dichloropropane** | **0.21** | 0.16 | **0.045** | 0.034 | |
| 75-27-4 | **Bromodichloromethane** | **2.7** | 0.16 | **0.40** | 0.023 | |
| 79-01-6 | Trichloroethene | ND | 0.16 | ND | 0.029 | |
| 123-91-1 | 1,4-Dioxane | ND | 0.79 | ND | 0.22 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.79 | ND | 0.19 | |
| 142-82-5 | **n-Heptane** | **10** | 0.79 | **2.5** | 0.19 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.79 | ND | 0.17 | |
| 108-10-1 | **4-Methyl-2-pentanone** | **1.5** | 0.79 | **0.35** | 0.19 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.79 | ND | 0.17 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.16 | ND | 0.029 | |
| 108-88-3 | **Toluene** | **57** | 0.79 | **15** | 0.21 | |
| 591-78-6 | 2-Hexanone | ND | 0.79 | ND | 0.19 | |
| 124-48-1 | **Dibromochloromethane** | **1.0** | 0.16 | **0.12** | 0.018 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.16 | ND | 0.020 | |
| 123-86-4 | **n-Butyl Acetate** | **4.0** | 0.79 | **0.83** | 0.17 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Rec Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110356**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P1001650-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00796

Date Collected: 5/9/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -3.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.57

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | **n-Octane** | **3.9** | 0.79 | **0.84** | 0.17 | |
| 127-18-4 | **Tetrachloroethene** | **0.23** | 0.16 | **0.033** | 0.023 | |
| 108-90-7 | Chlorobenzene | ND | 0.16 | ND | 0.034 | |
| 100-41-4 | **Ethylbenzene** | **13** | 0.79 | **3.0** | 0.18 | |
| 179601-23-1 | **m,p-Xylenes** | **46** | 0.79 | **11** | 0.18 | |
| 75-25-2 | Bromoform | ND | 0.79 | ND | 0.076 | |
| 100-42-5 | **Styrene** | **1.8** | 0.79 | **0.43** | 0.18 | |
| 95-47-6 | **o-Xylene** | **16** | 0.79 | **3.6** | 0.18 | |
| 111-84-2 | **n-Nonane** | **4.0** | 0.79 | **0.76** | 0.15 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.16 | ND | 0.023 | |
| 98-82-8 | Cumene | ND | 0.79 | ND | 0.16 | |
| 80-56-8 | **alpha-Pinene** | **20** | 0.79 | **3.6** | 0.14 | |
| 103-65-1 | **n-Propylbenzene** | **2.8** | 0.79 | **0.57** | 0.16 | |
| 622-96-8 | **4-Ethyltoluene** | **5.1** | 0.79 | **1.0** | 0.16 | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **4.2** | 0.79 | **0.85** | 0.16 | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **15** | 0.79 | **3.1** | 0.16 | |
| 100-44-7 | Benzyl Chloride | ND | 0.79 | ND | 0.15 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.16 | ND | 0.026 | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.16 | ND | 0.026 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.16 | ND | 0.026 | |
| 5989-27-5 | **d-Limonene** | **81** | 0.79 | **15** | 0.14 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.79 | ND | 0.081 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.79 | ND | 0.11 | |
| 91-20-3 | **Naphthalene** | **1.2** | 0.79 | **0.23** | 0.15 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.79 | ND | 0.074 | |

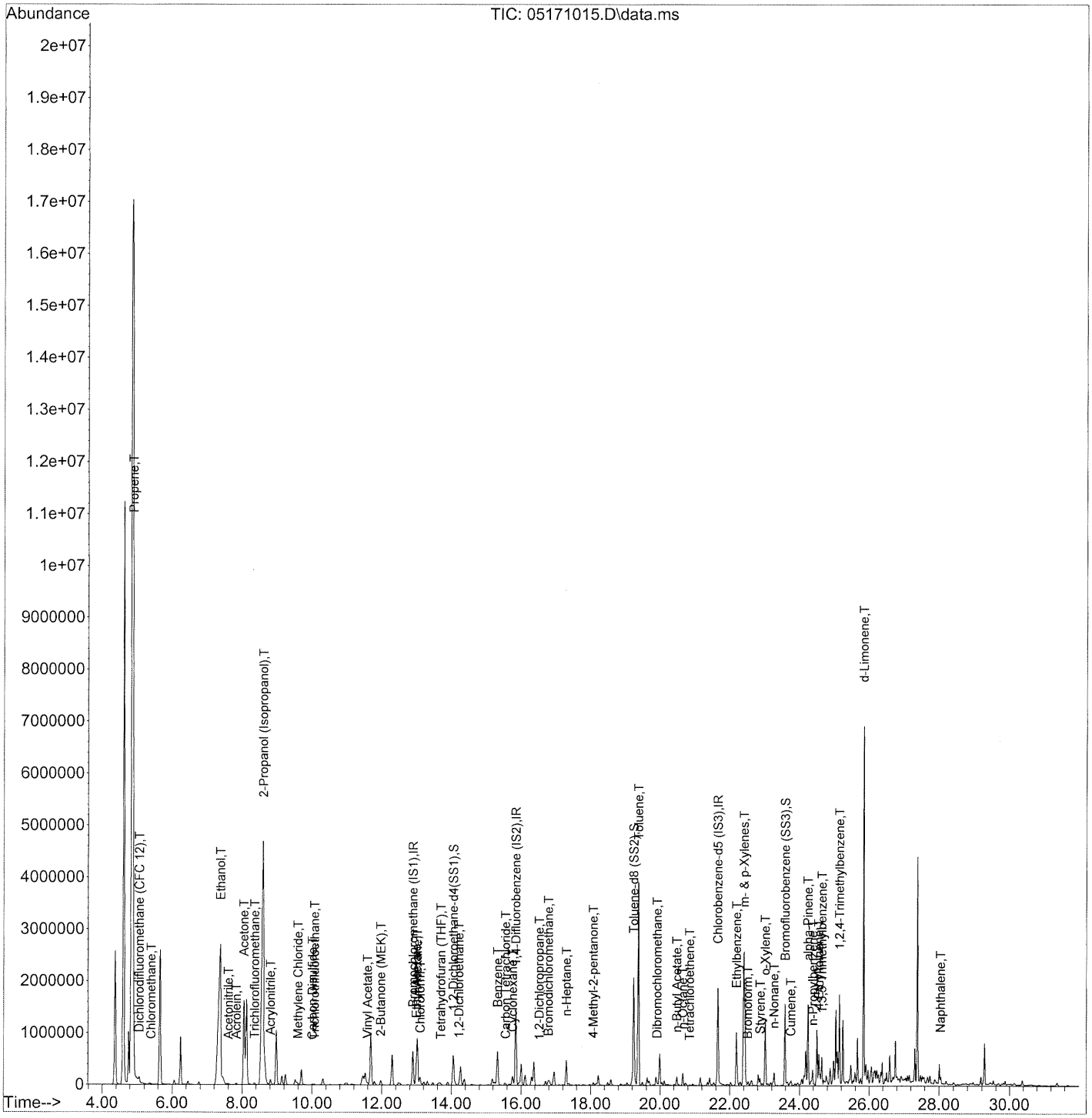
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Re Date: 5/21/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 16:35:04 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 16:35:04 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 372572 | 25.000 | ng | | 0.01 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1782350 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 748580 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 558758 | 24.849 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 99.40% | | ✓ |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1872035 | 24.795 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 99.16% | | ✓ |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 625602 | 23.655 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.64% | | ✓ |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 1094896 | 51.873 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 5.06 | 85 | 73447 | 1.480 | ng | | 99 |
| 4) Chloromethane | 5.40 | 50 | 19993 | 0.664 | ng | | 98 |
| 10) Ethanol | 7.38 | 45 | 8238110 | 640.779 | ng | su di/ | 99 |
| 11) Acetonitrile | 7.61 | 41 | 12924 | 0.415 | ng | | 91 |
| 12) Acrolein | 7.83 | 56 | 30086 | 2.373 | ng | | 100 |
| 13) Acetone | 8.05 | 58 | 980450m | 59.680 | ng | | |
| 14) Trichlorofluoromethane | 8.36 | 101 | 36671 | 0.812 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.60 | 45 | 12996625 | 271.523 | ng | su di/ | 100 |
| 16) Acrylonitrile | 8.81 | 53 | 12408 | 0.496 | ng | # | 7 |
| 19) Methylene Chloride | 9.60 | 84 | 5441 | 0.220 | ng | # | 74 |
| 21) Trichlorotrifluoroethane | 10.07 | 151 | 7347 | 0.324 | ng | # | 74 |
| 22) Carbon Disulfide | 10.01 | 76 | 26872 | 0.337 | ng | | 97 |
| 26) Vinyl Acetate | 11.59 | 86 | 11565 | 2.023 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 39874 | 2.643 | ng | # | 70 |
| 30) Ethyl Acetate | 12.99 | 61 | 57191 | 7.136 | ng | | 82 |
| 31) n-Hexane | 13.02 | 57 | 584299 | 15.297 | ng | # | 96 |
| 32) Chloroform | 13.10 | 83 | 138267 | 3.406 | ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.70 | 72 | 3051 | 0.208 | ng | # | 1 |
| 36) 1,2-Dichloroethane | 14.22 | 62 | 29509 | 0.969 | ng | | 100 |
| 41) Benzene | 15.33 | 78 | 881902 | 8.691 | ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 14557 | 0.467 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 99993 | 2.647 | ng | # | 81 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 2895 | 0.131 | ng | | 98 |
| 46) Bromodichloromethane | 16.79 | 83 | 52039 | 1.708 | ng | | 82 |
| 51) n-Heptane | 17.30 | 71 | 158465 | 6.565 | ng | | 90 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 17752 | 0.924 | ng | | 91 |
| 58) Toluene | 19.38 | 91 | 3858261 | 36.234 | ng | | 98 |
| 60) Dibromochloromethane | 19.91 | 129 | 16804 | 0.660 | ng | | 100 |
| 62) n-Butyl Acetate | 20.48 | 43 | 129875 | 2.524 | ng | | 88 |

Quantitation Report (QT Reviewed)

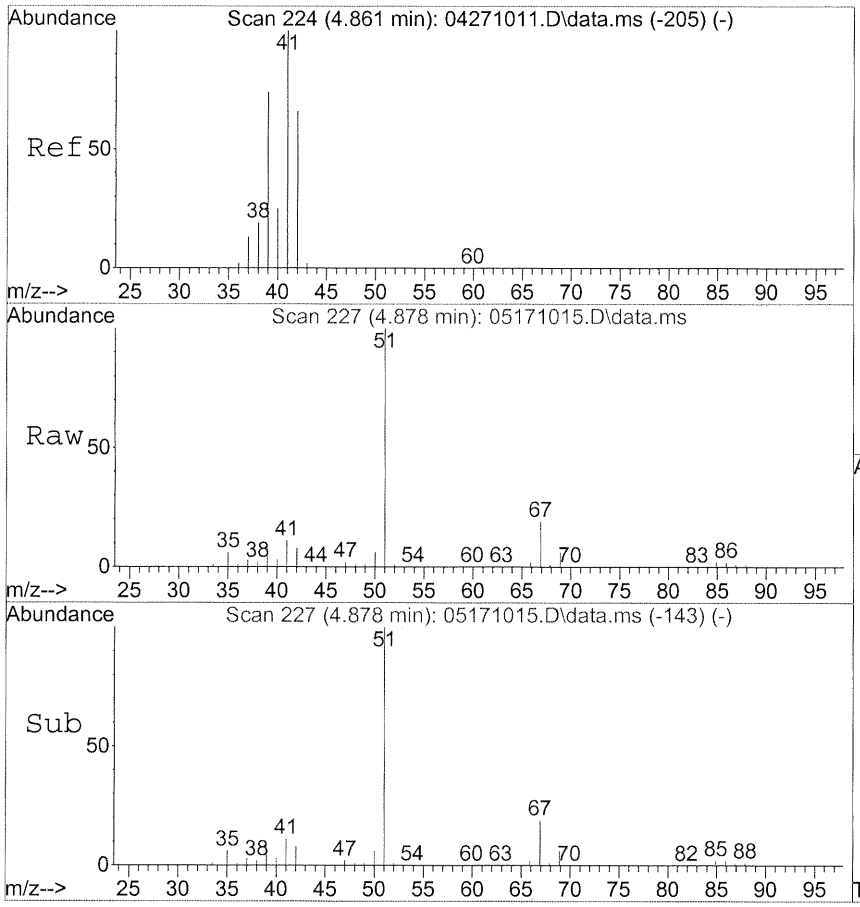
Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 16:35:04 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 63) n-Octane | 20.65 | 57 | 47482 | 2.485 | ng | # | 83 |
| 64) Tetrachloroethene | 20.85 | 166 | 4790 | 0.144 | ng | | 97 |
| 66) Ethylbenzene | 22.19 | 91 | 971752 | 8.327 | ng | | 95 |
| 67) m- & p-Xylenes | 22.40 | 91 | 2729213 | 29.596 | ng | | 93 |
| 68) Bromoform | 22.51 | 173 | 3084 | 0.129 | ng | | 99 |
| 69) Styrene | 22.87 | 104 | 85235 | 1.175 | ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 941542 | 10.015 | ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 103641 | 2.527 | ng | | 91 |
| 74) Cumene | 23.75 | 105 | 54085 | 0.421 | ng | | 95 |
| 75) alpha-Pinene | 24.24 | 93 | 763645 | 12.810 | ng | | 93 |
| 76) n-Propylbenzene | 24.38 | 91 | 267503 | 1.795 | ng | | 94 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 388111 | 3.274 | ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 258222 | 2.669 | ng | | 93 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 976121 | 9.758 | ng | | 97 |
| 91) d-Limonene | 25.84 | 68 | 1798913 | 51.786 | ng | | 82 |
| 95) Naphthalene | 28.05 | 128 | 97708 | 0.769 | ng | | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

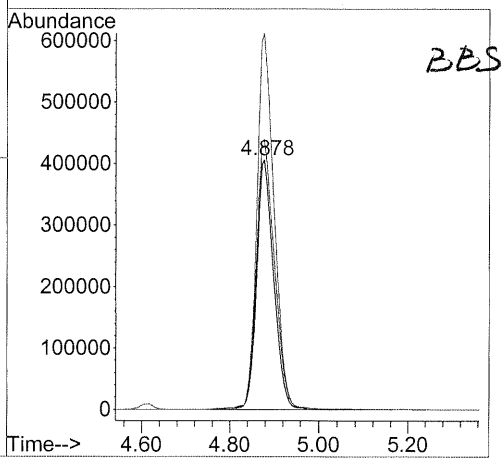
DA 5/19/10

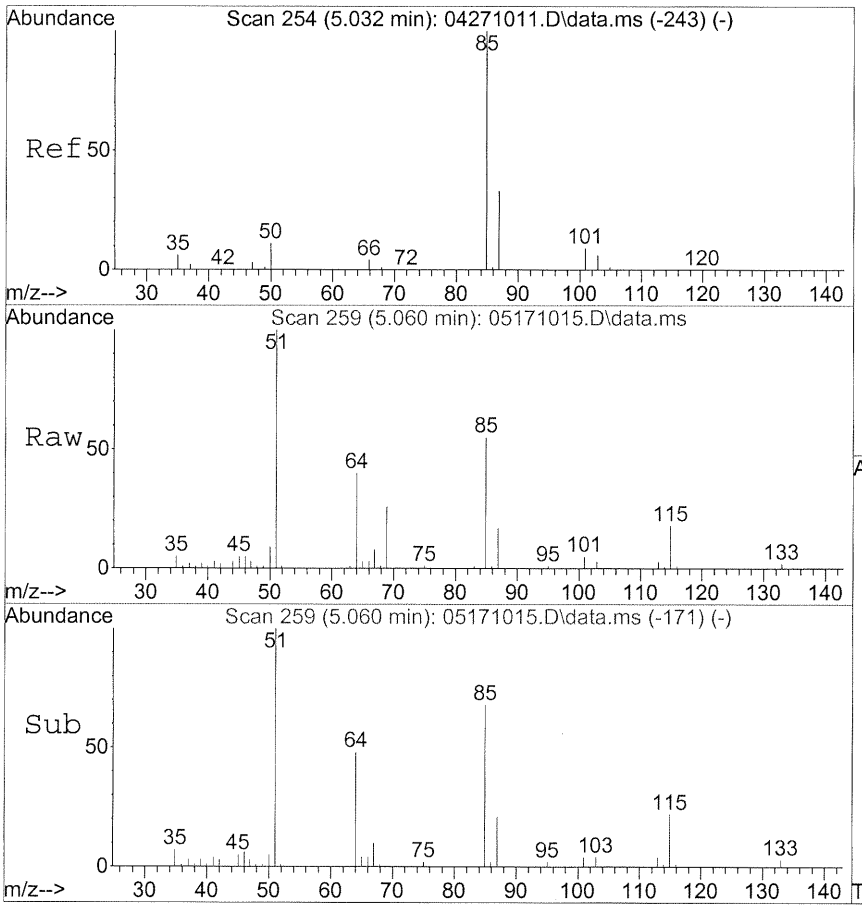



#2
Propene
Concen: 51.87 ng
RT: 4.88 min Scan# 227
Delta R.T. -0.023 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 42 Resp: 1094896

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 39 | 115.9 | 92.2 | 132.2 |
| 41 | 153.8 | 133.9 | 173.9 |

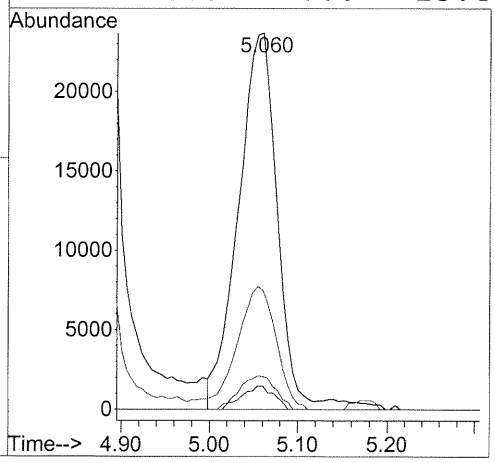



#3
Dichlorodifluoromethane (CFC
Concen: 1.48 ng
RT: 5.06 min Scan# 259
Delta R.T. -0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 85 Resp: 73447

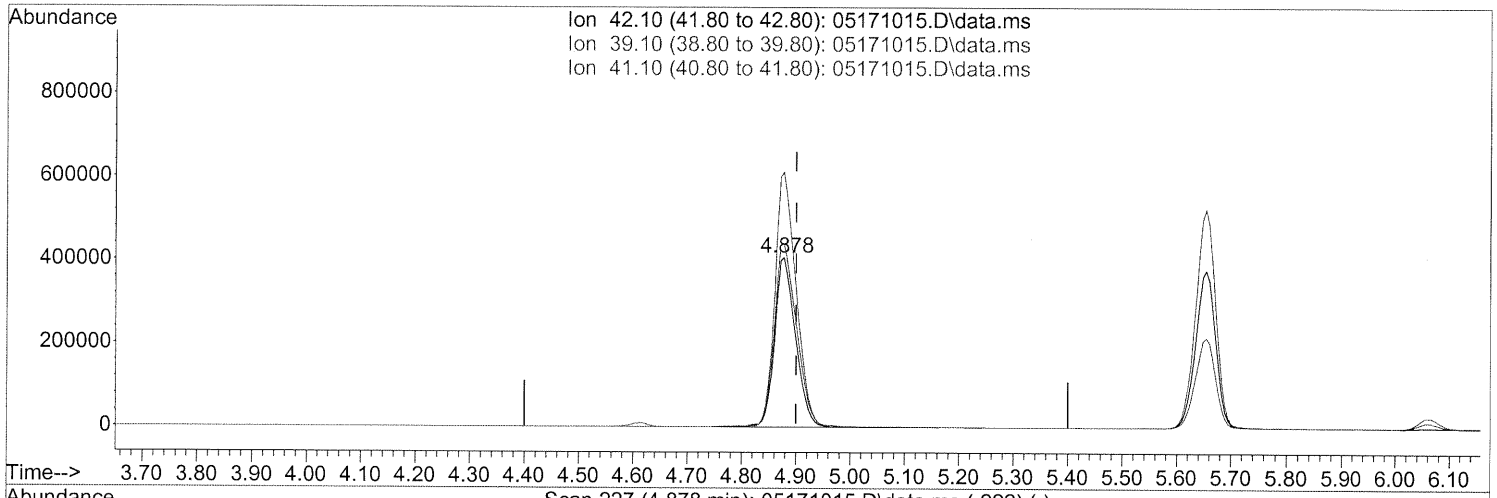
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 32.2 | 12.0 | 52.0 |
| 101 | 8.1 | 0.0 | 28.5 |
| 103 | 5.0 | 0.0 | 25.4 |

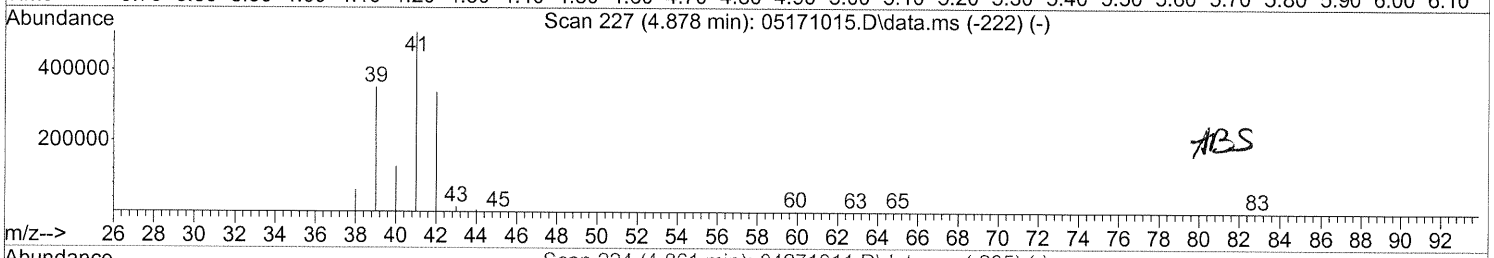


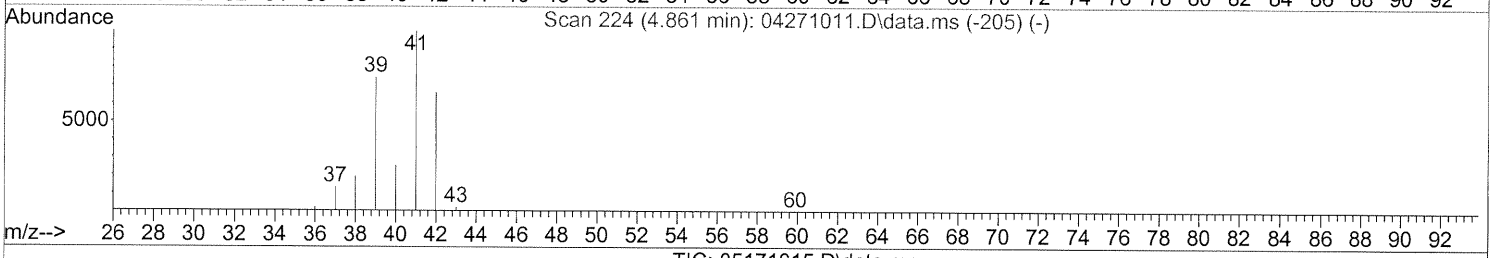
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



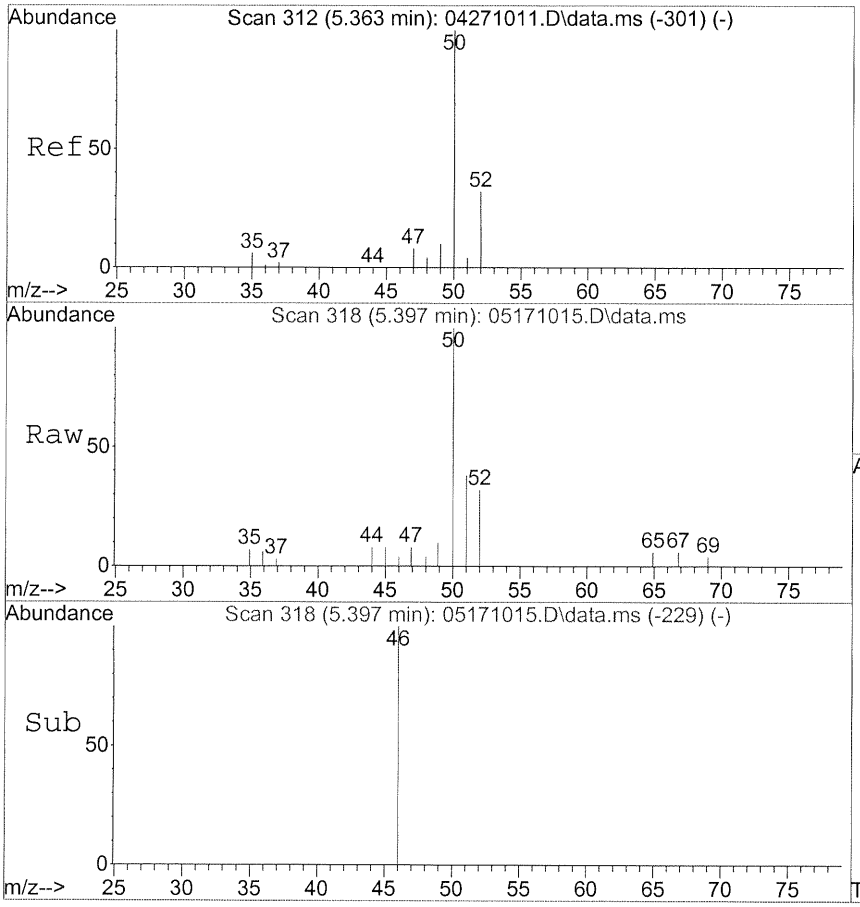

TIC: 05171015.D\data.ms

(2) Propene (T)

4.878min (-0.023) 51.87ng

response 1094896

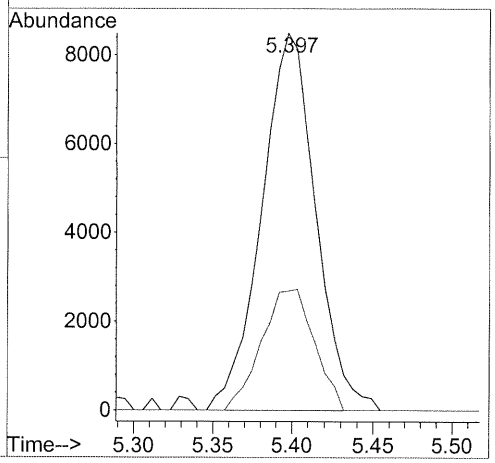
| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 112.20 | 115.85 |
| 41.10 | 153.90 | 153.78 |
| 0.00 | 0.00 | 0.00 |

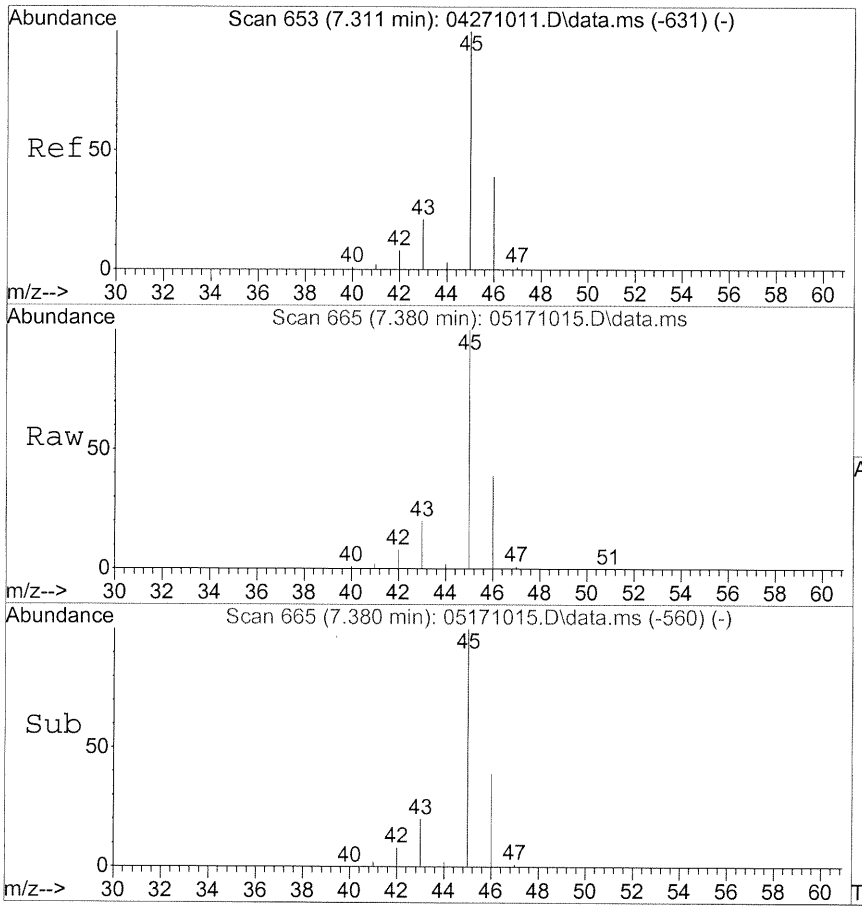



#4
Chloromethane
Concen: 0.66 ng
RT: 5.40 min Scan# 318
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 50 Resp: 19993

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.2 | 12.1 | 52.1 |

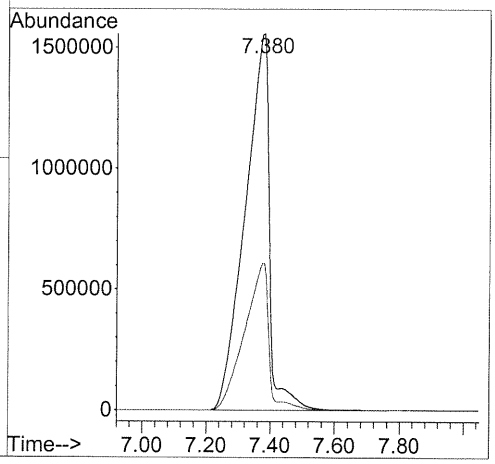


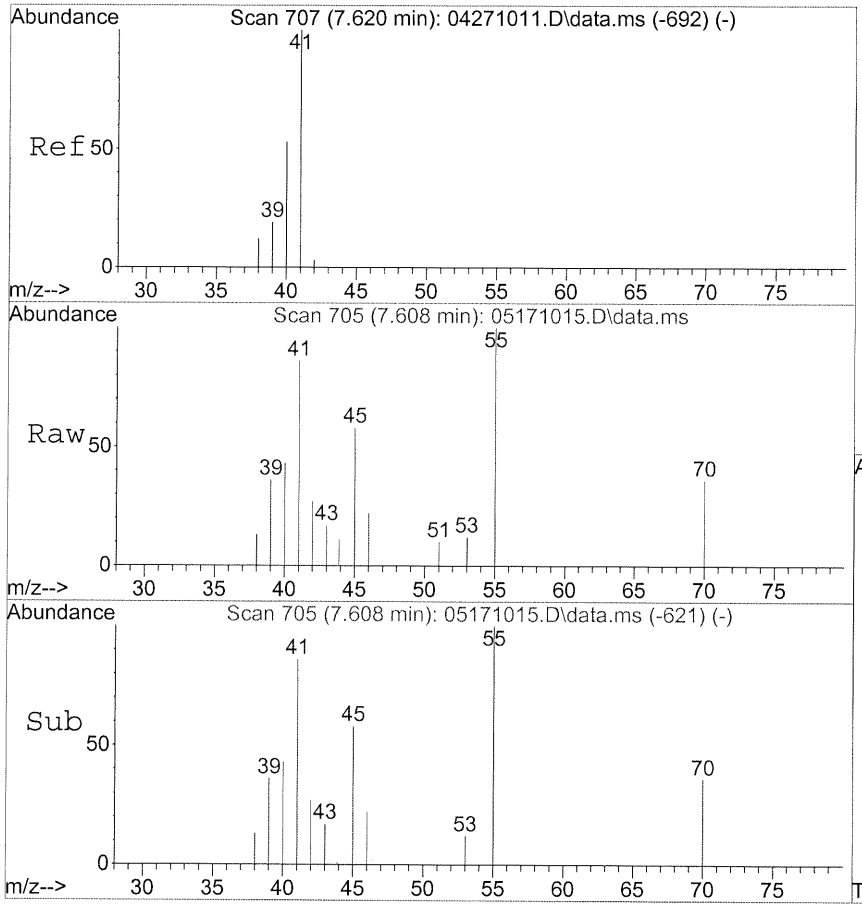




#10
Ethanol
Concen: 640.78 ng
RT: 7.38 min Scan# 665
Delta R.T. 0.097 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 45 Resp: 8238110

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 38.9 | 18.4 | 58.4 |

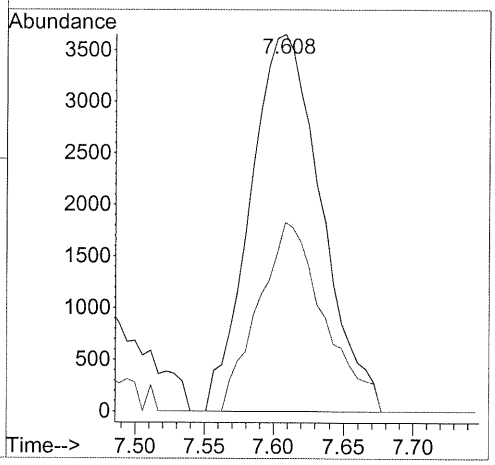


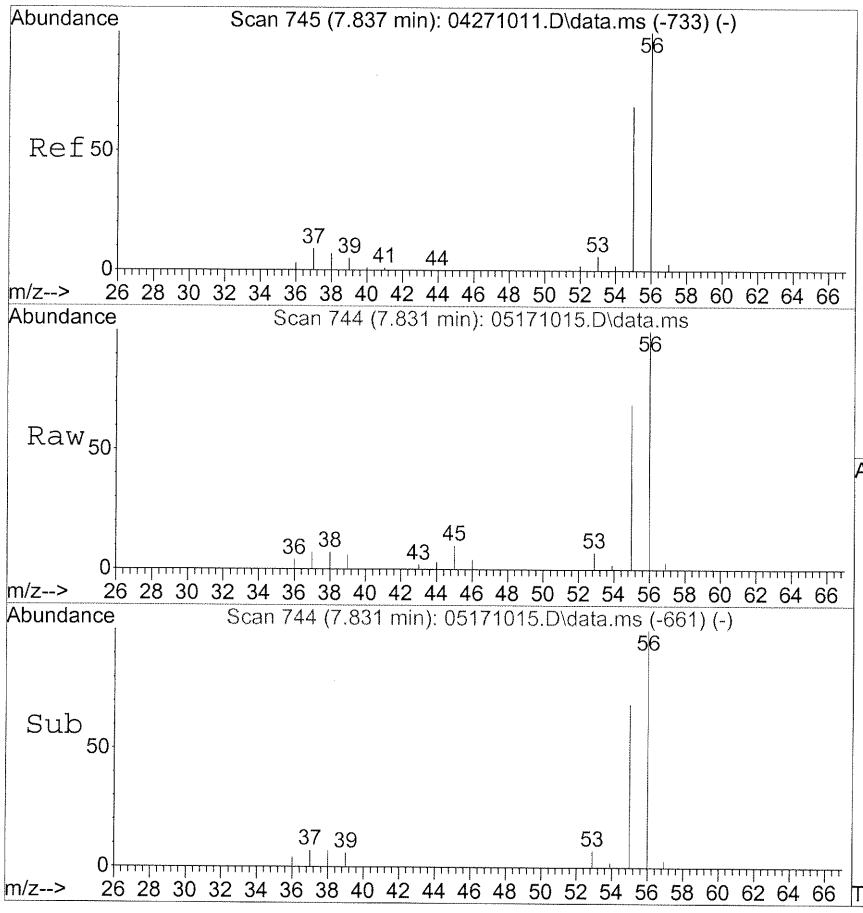



#11
Acetonitrile
Concen: 0.41 ng
RT: 7.61 min Scan# 705
Delta R.T. -0.023 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 41 Resp: 12924

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 40 | 46.1 | 32.7 | 72.7 |

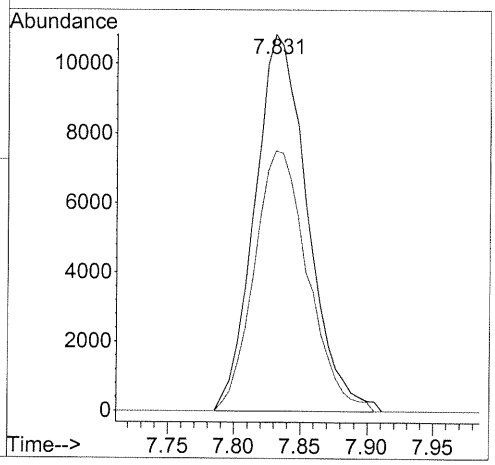


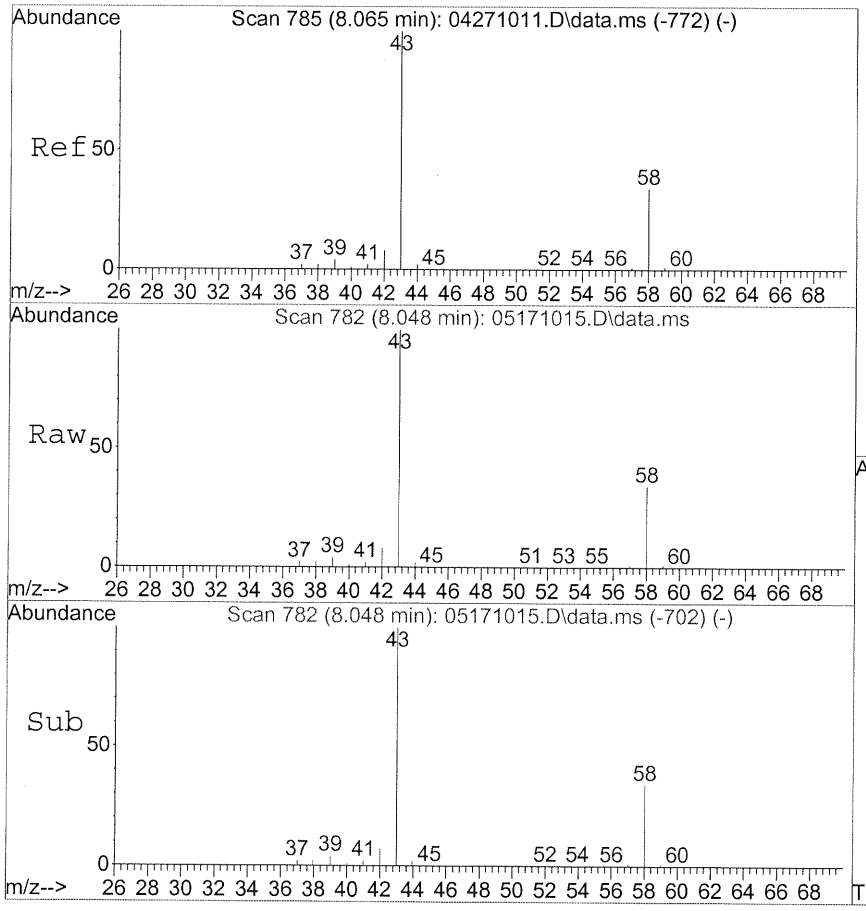




#12
Acrolein
Concen: 2.37 ng
RT: 7.83 min Scan# 744
Delta R.T. -0.028 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 56 Resp: 30086

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 55 | 70.2 | 50.5 | 90.5 |

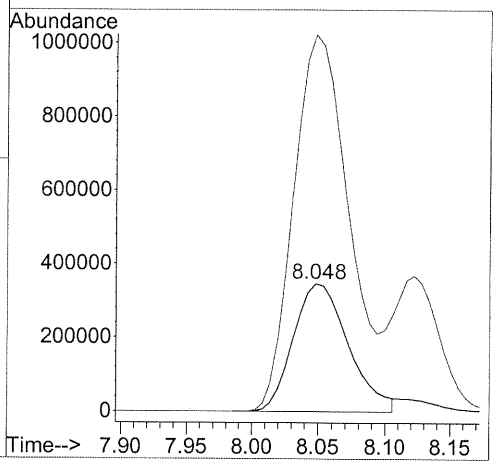


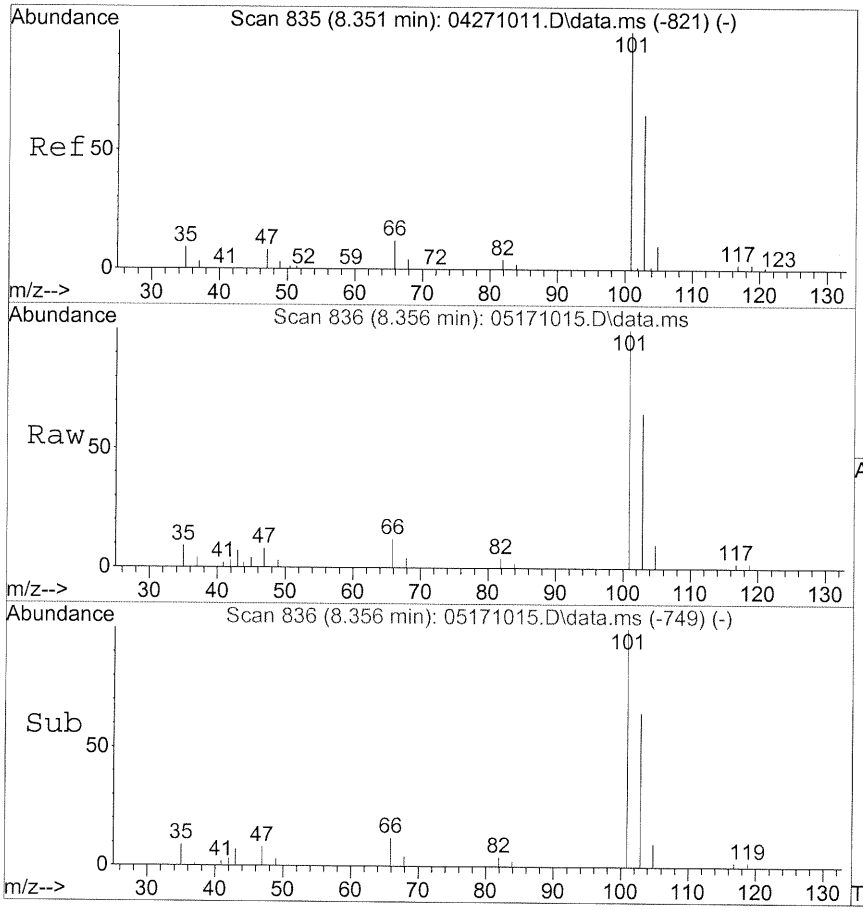



#13
Acetone
Concen: 59.68 ng m
RT: 8.05 min Scan# 782
Delta R.T. -0.046 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 58 Resp: 980450

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 300.6 | 295.0 | 355.0 |

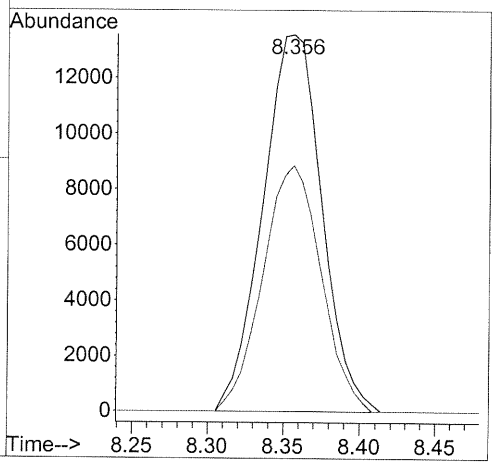


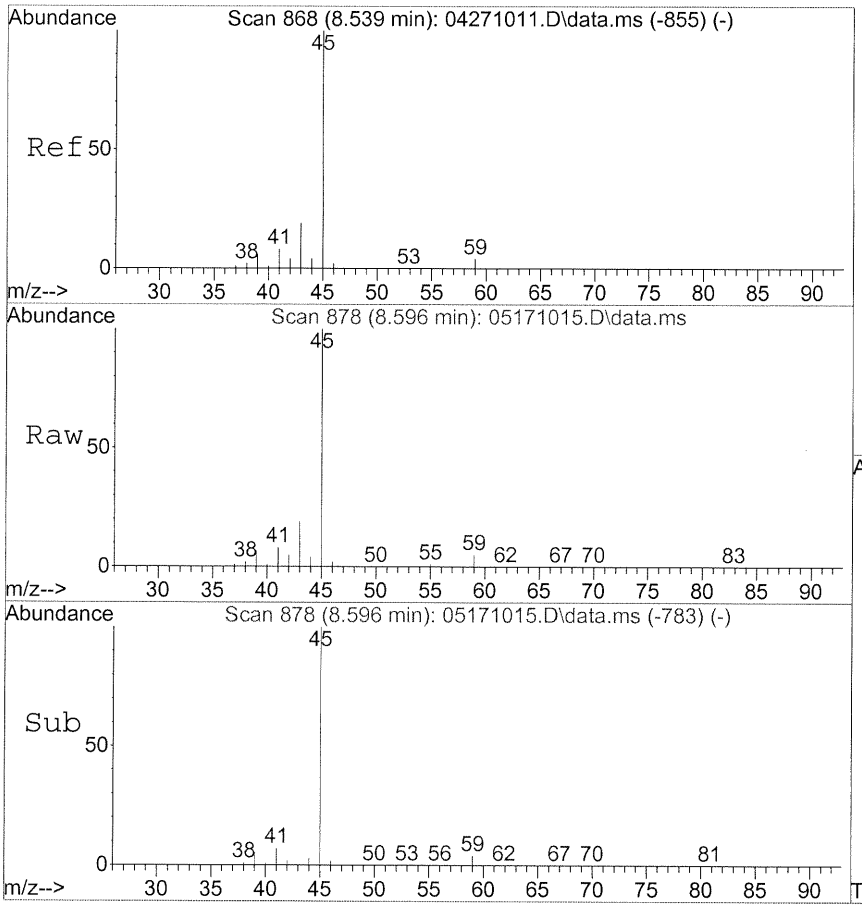




#14
Trichlorofluoromethane
Concen: 0.81 ng
RT: 8.36 min Scan# 836
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:101 Resp: 36671

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 64.5 | 43.8 | 83.8 |

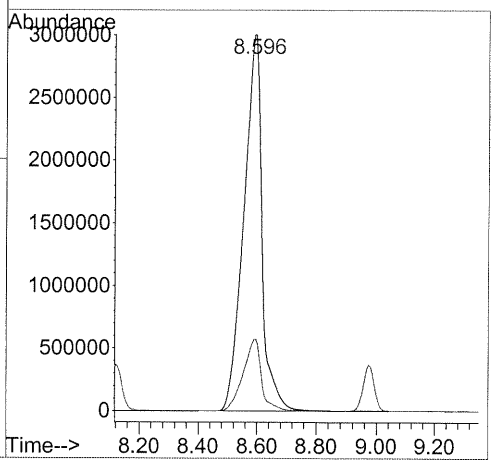


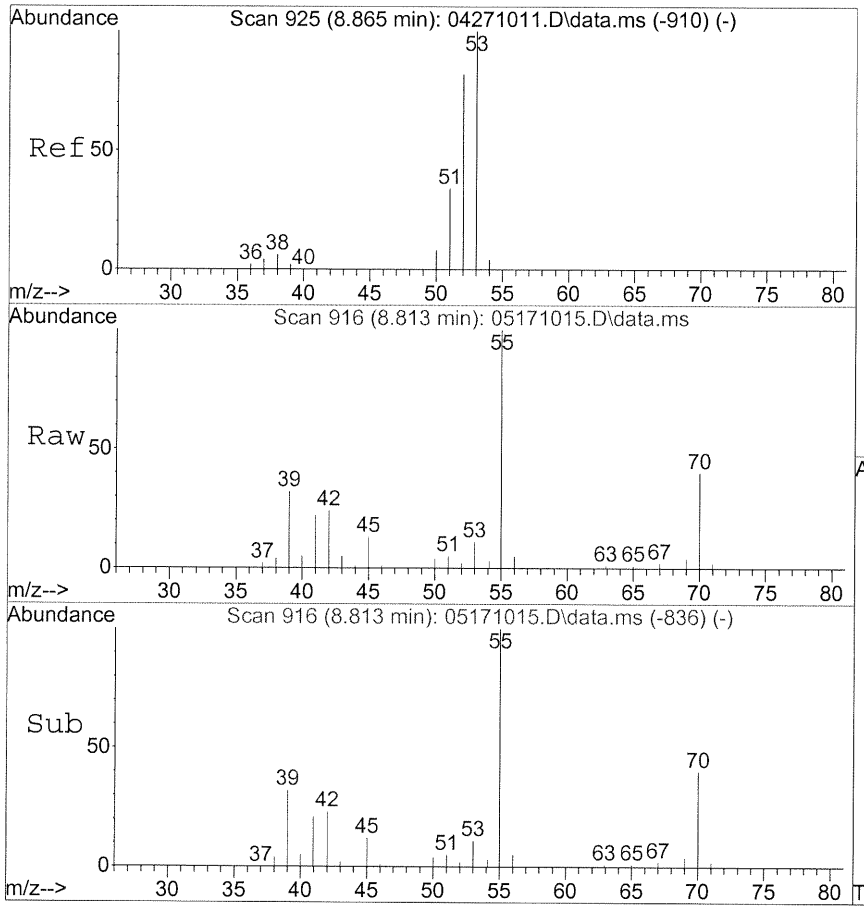



#15
2-Propanol (Isopropanol)
Concen: 271.52 ng
RT: 8.60 min Scan# 878
Delta R.T. 0.040 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 45 Resp:12996625

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 19.0 | 0.0 | 39.2 |

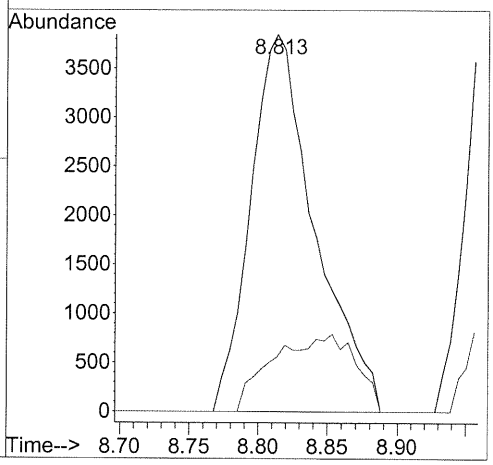


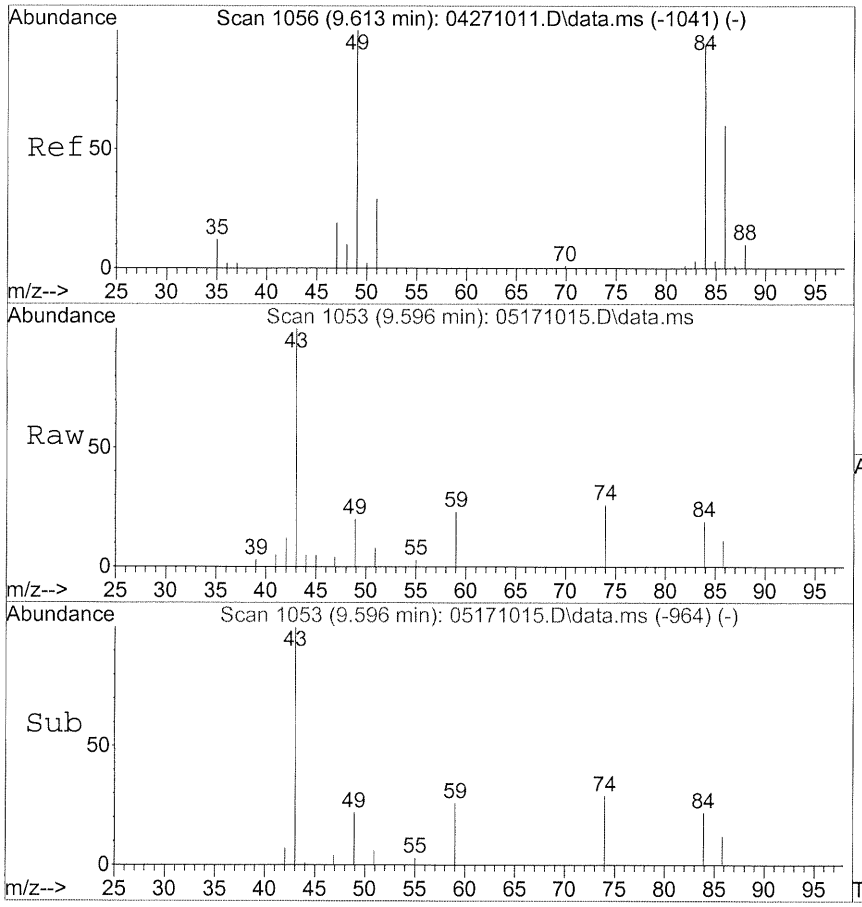




#16
Acrylonitrile
Concen: 0.50 ng
RT: 8.81 min Scan# 916
Delta R.T. -0.046 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 53 Resp: 12408

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 53 | 100 | | |
| 52 | 0.0 | 64.1 | 104.1# |

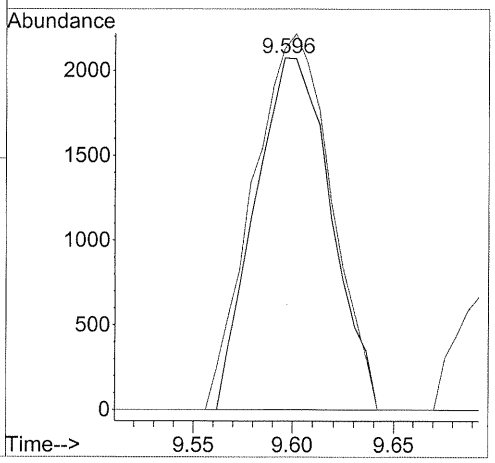


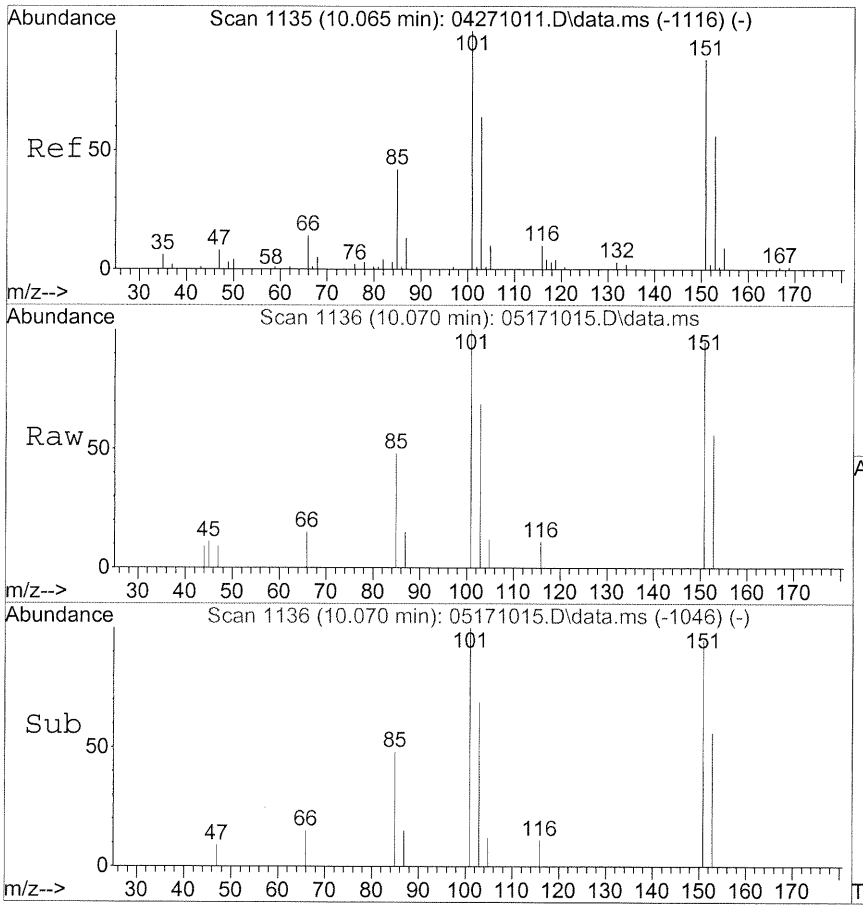



#19
Methylene Chloride
Concen: 0.22 ng
RT: 9.60 min Scan# 1053
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 84 Resp: 5441

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 110.3 | 116.6 | 166.6# |

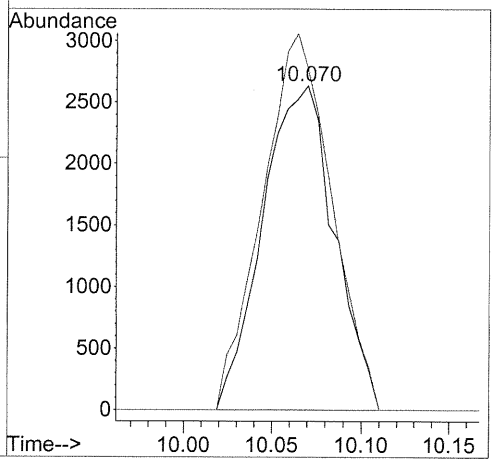


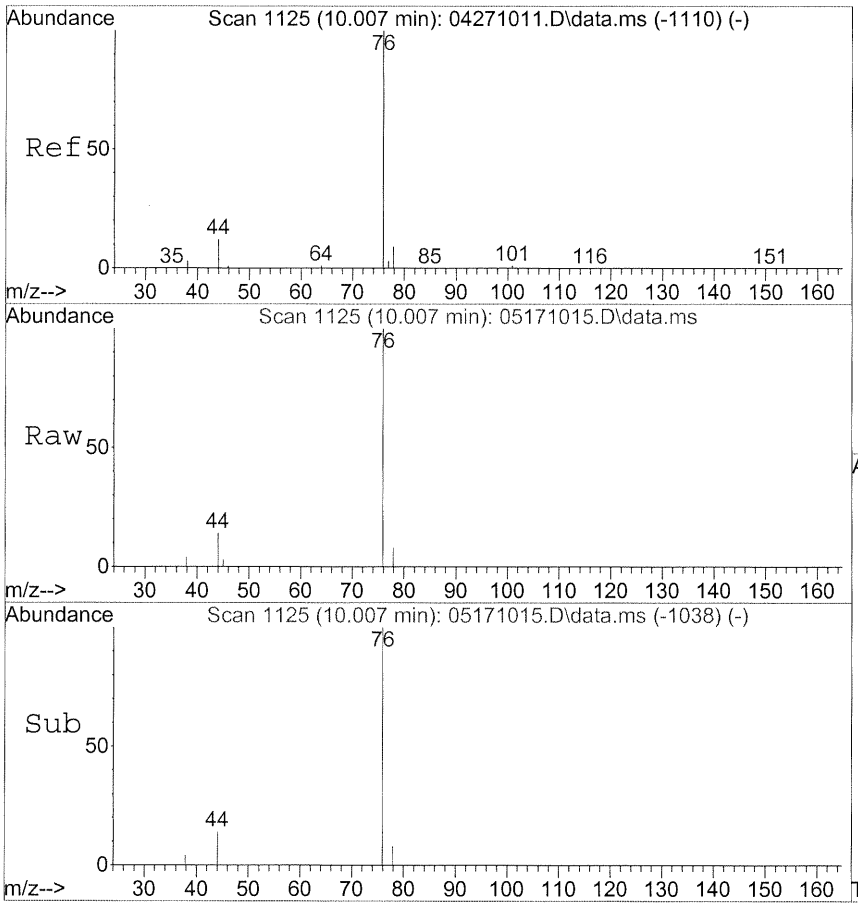




#21
Trichlorotrifluoroethane
Concen: 0.32 ng
RT: 10.07 min Scan# 1136
Delta R.T. 0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:151 Resp: 7347

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 151 | 100 | | |
| 101 | 112.6 | 125.6 | 165.6# |

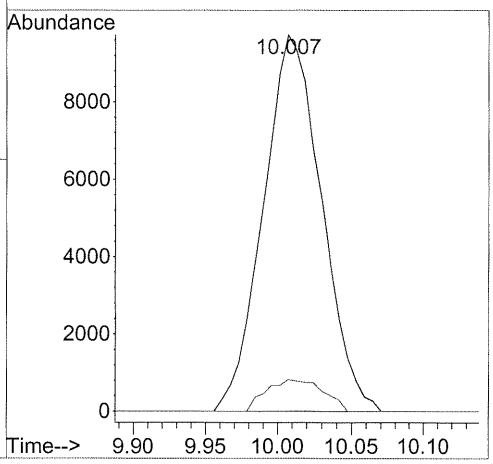


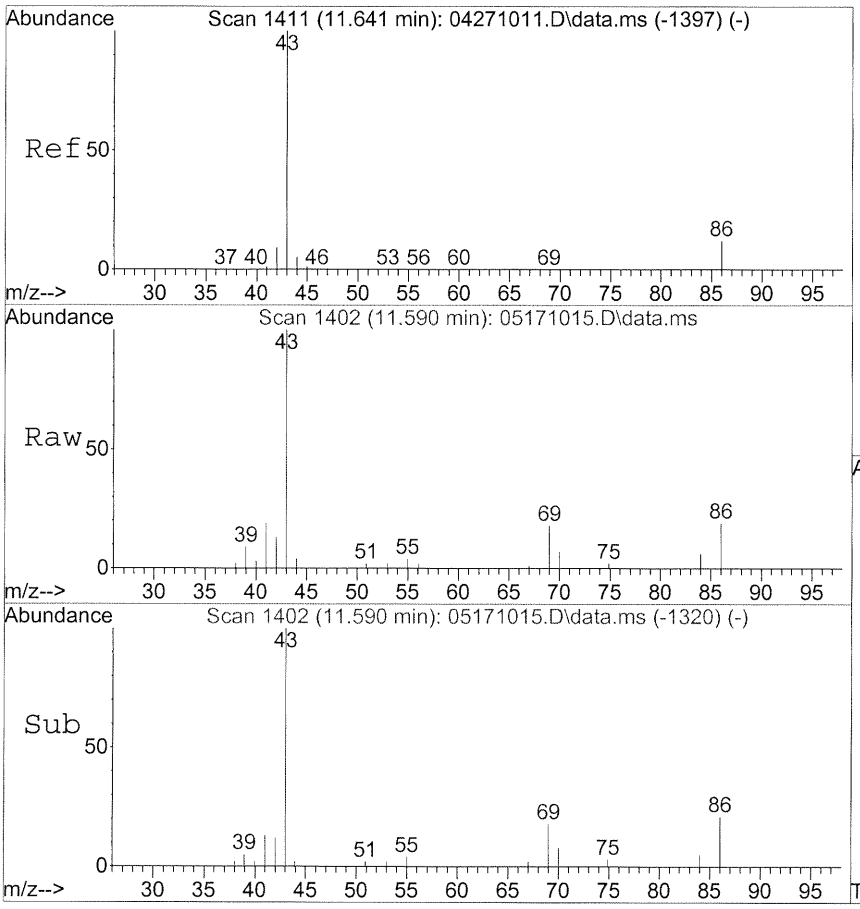



#22
Carbon Disulfide
Concen: 0.34 ng
RT: 10.01 min Scan# 1125
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 76 Resp: 26872

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 8.2 | 0.0 | 29.1 |

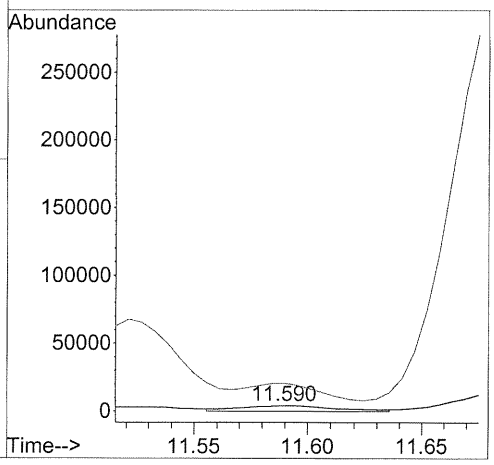


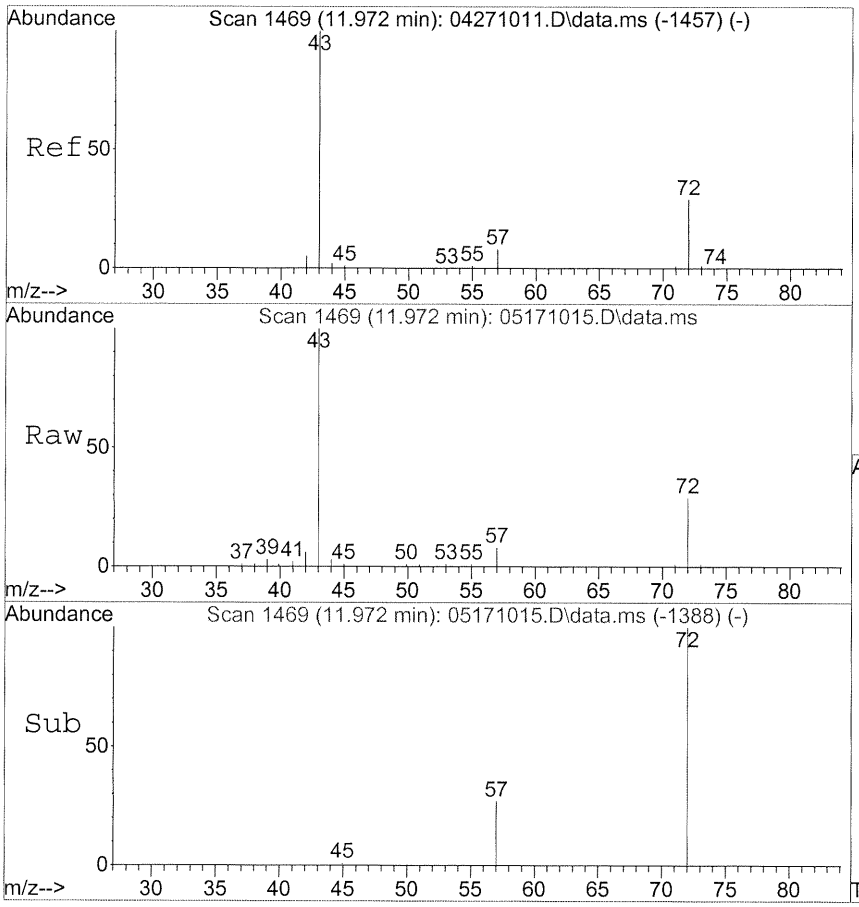




#26
Vinyl Acetate
Concen: 2.02 ng
RT: 11.59 min Scan# 1402
Delta R.T. -0.034 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 86 Resp: 11565

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 86 | 100 | | |
| 43 | 0.0 | 1285.5 | 1325.5# |

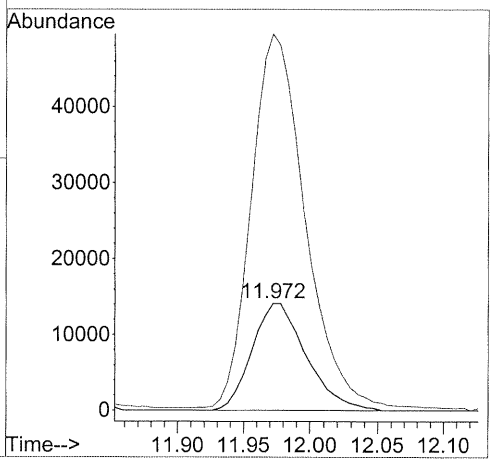


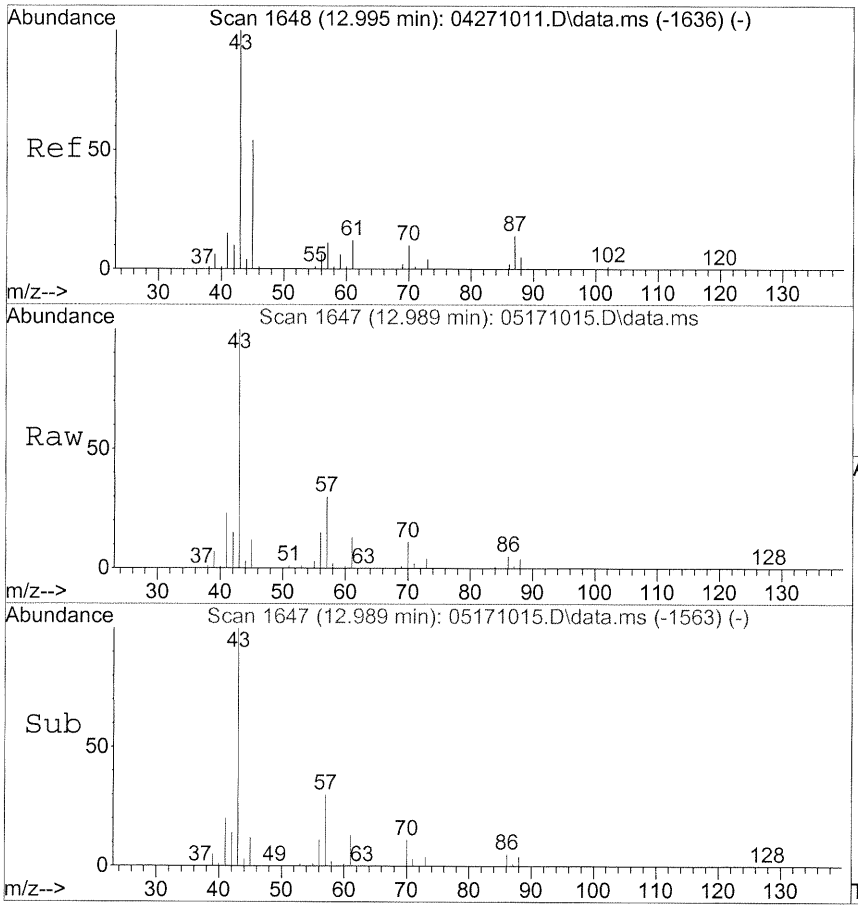



#27
2-Butanone (MEK)
Concen: 2.64 ng
RT: 11.97 min Scan# 1469
Delta R.T. -0.040 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 72 Resp: 39874

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 356.9 | 412.3 | 452.3# |

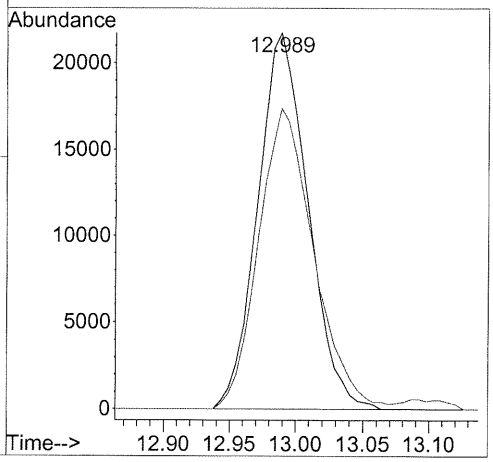


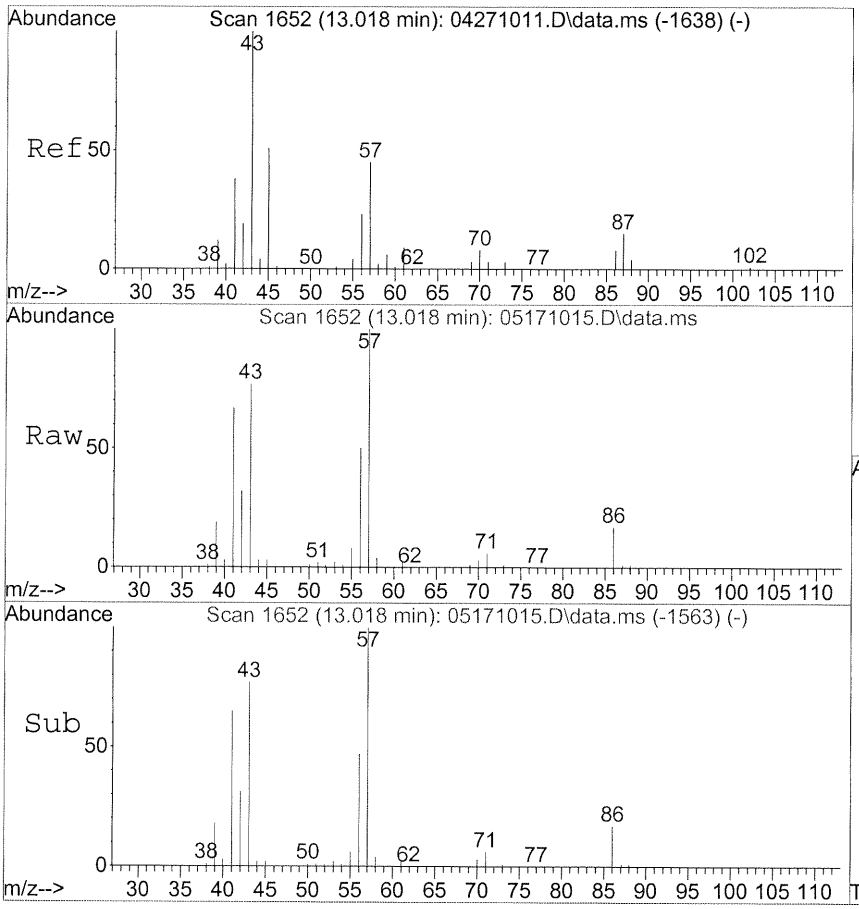




#30
Ethyl Acetate
Concen: 7.14 ng
RT: 12.99 min Scan# 1647
Delta R.T. -0.023 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 61 Resp: 57191

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 70 | 87.4 | 52.2 | 92.2 |

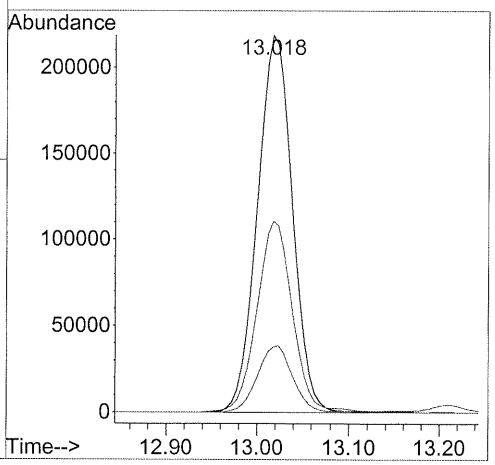


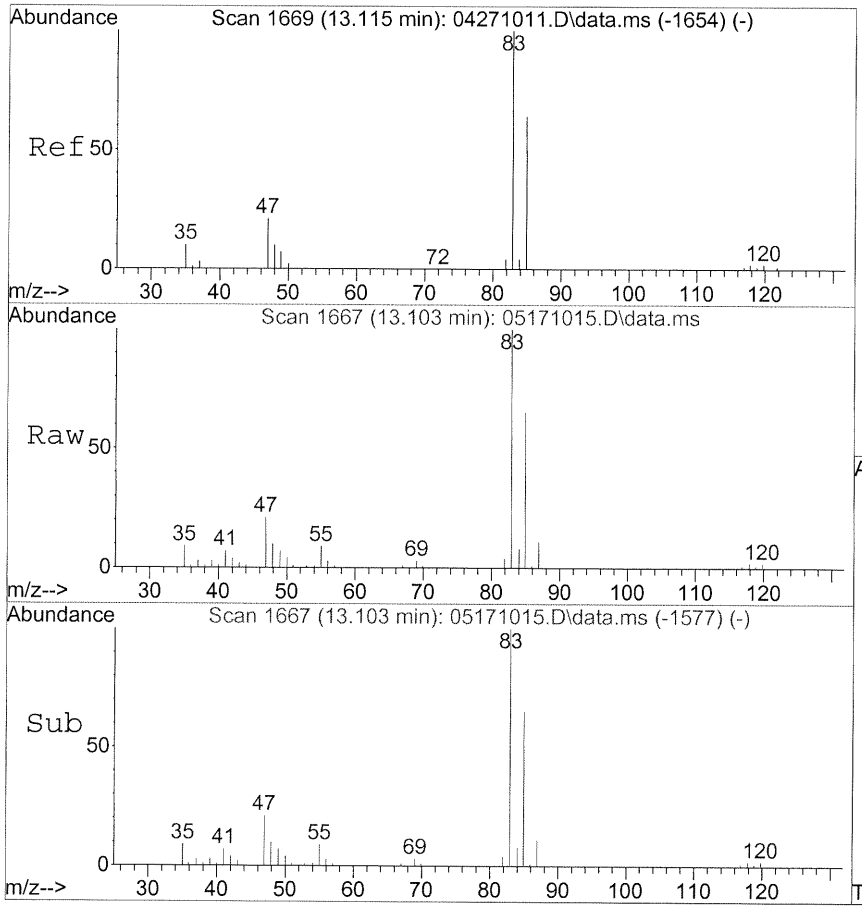



#31
n-Hexane
Concen: 15.30 ng
RT: 13.02 min Scan# 1652
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 57 Resp: 584299

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 51.9 | 40.0 | 60.0 |
| 86 | 17.8 | 11.5 | 17.3# |

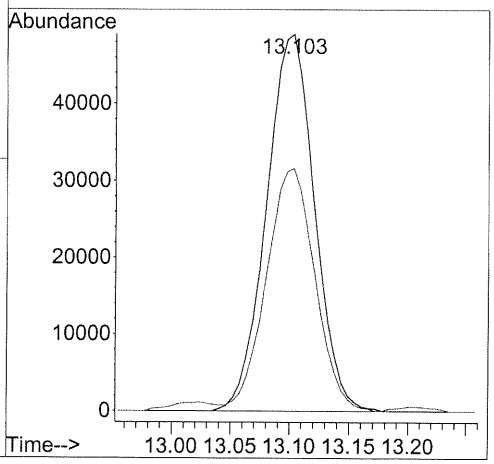


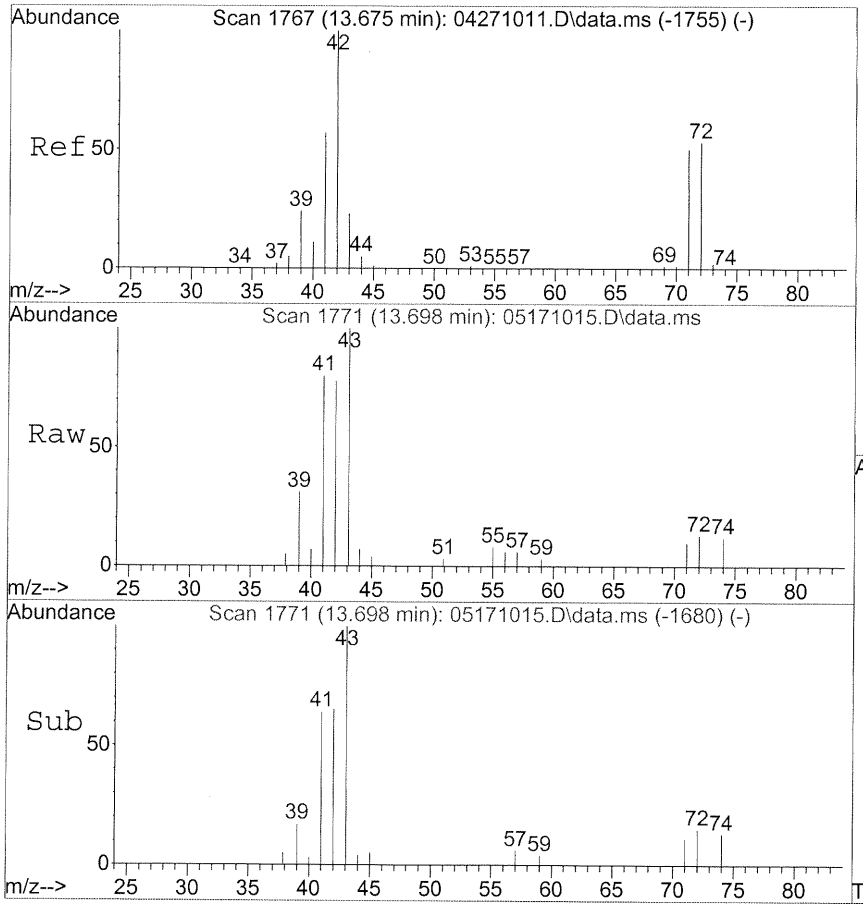




#32
Chloroform
Concen: 3.41 ng
RT: 13.10 min Scan# 1667
Delta R.T. 0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 83 Resp: 138267

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.3 | 44.0 | 84.0 |

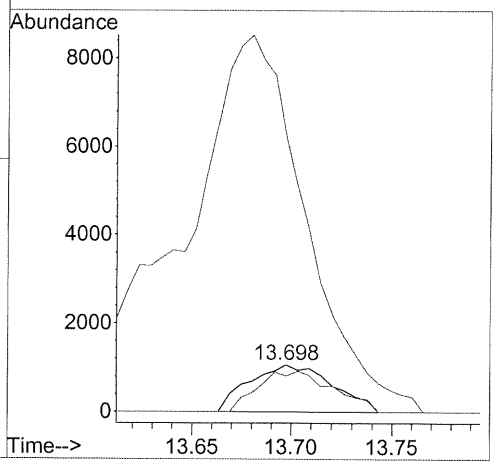


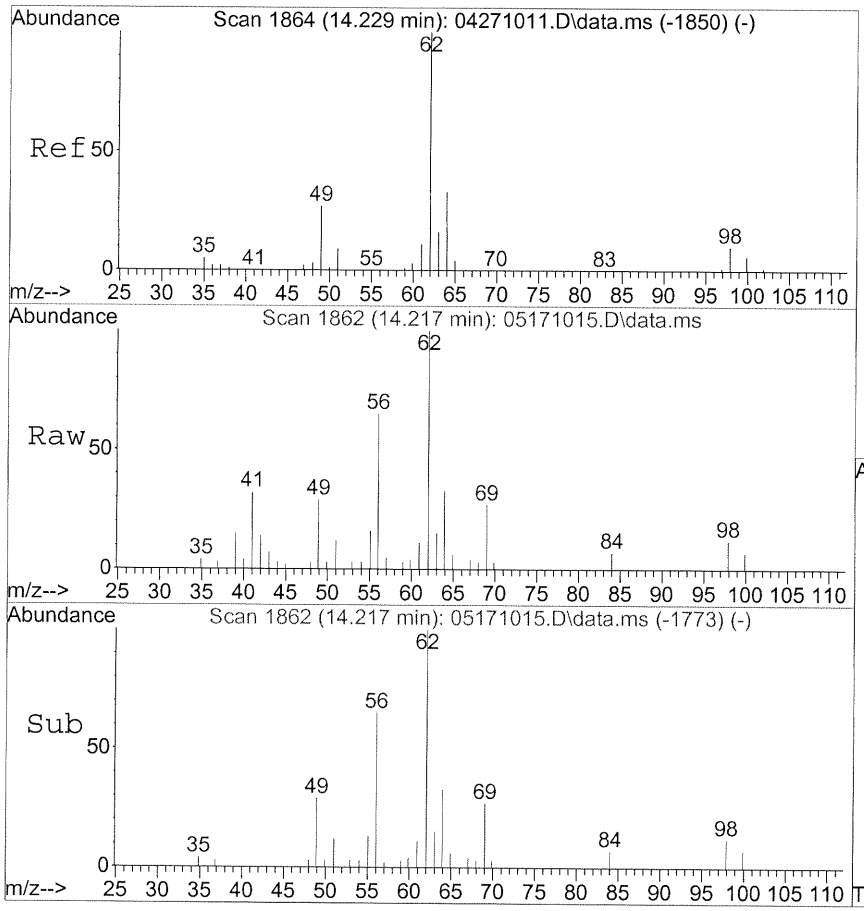



#34
Tetrahydrofuran (THF)
Concen: 0.21 ng
RT: 13.70 min Scan# 1771
Delta R.T. 0.018 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 72 Resp: 3051

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 71 | 78.3 | 76.0 | 116.0 |
| 42 | 0.0 | 231.9 | 271.9# |

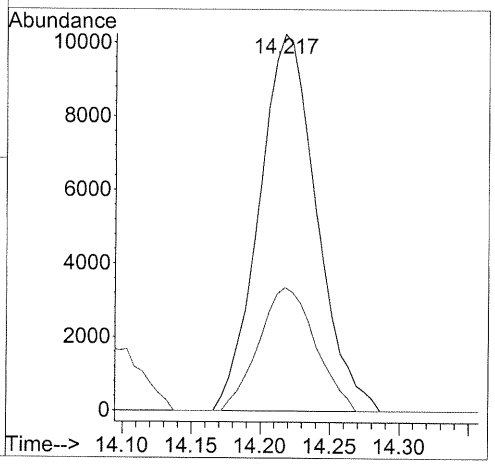


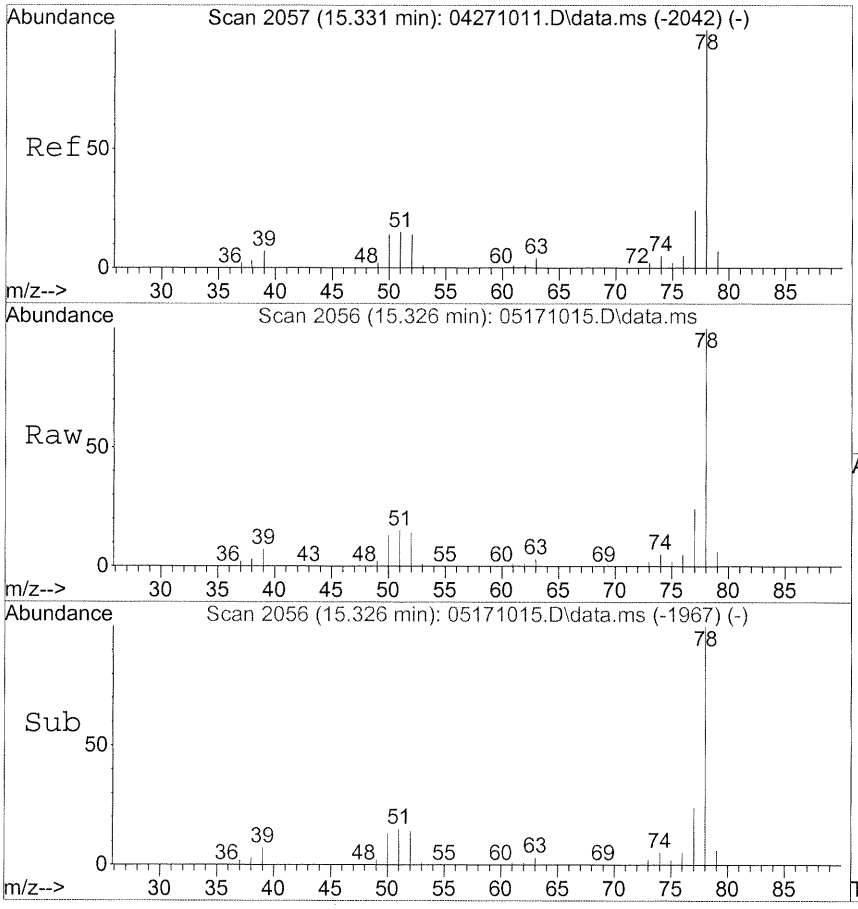




#36
1,2-Dichloroethane
Concen: 0.97 ng
RT: 14.22 min Scan# 1862
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 62 Resp: 29509

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.2 | 12.0 | 52.0 |

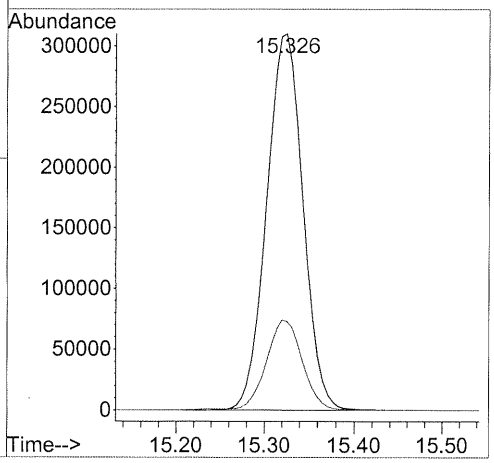


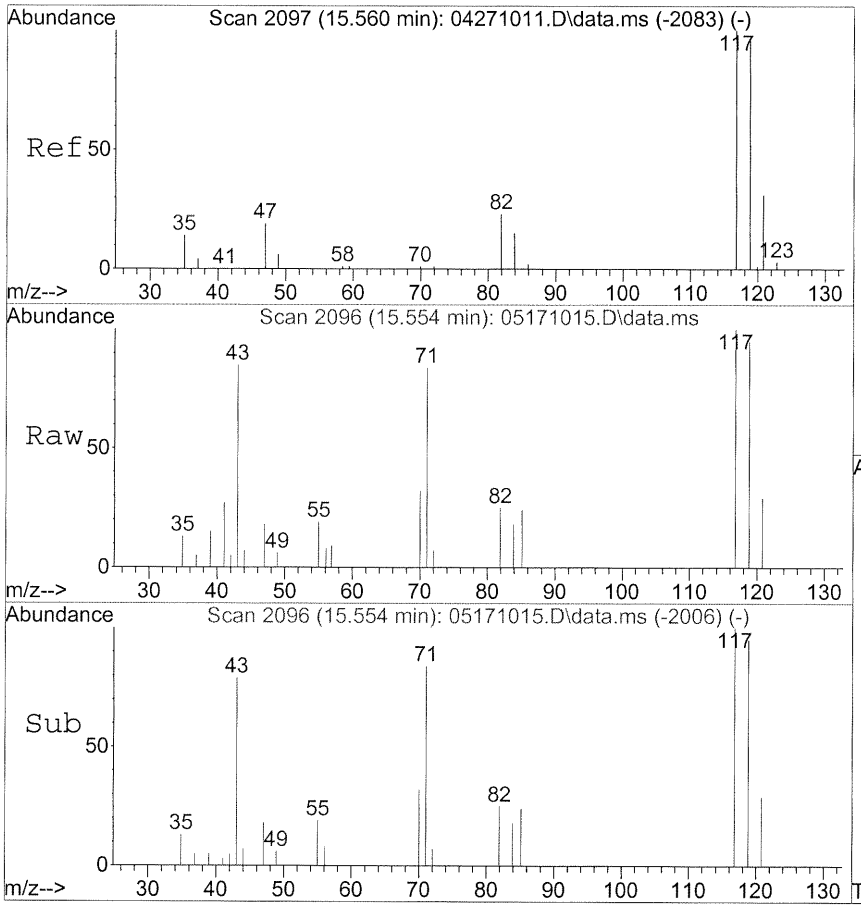



#41
Benzene
Concen: 8.69 ng
RT: 15.33 min Scan# 2056
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 78 Resp: 881902

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.5 | 4.4 | 44.4 |

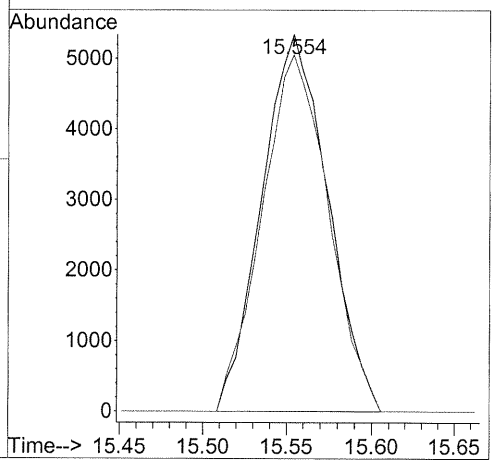


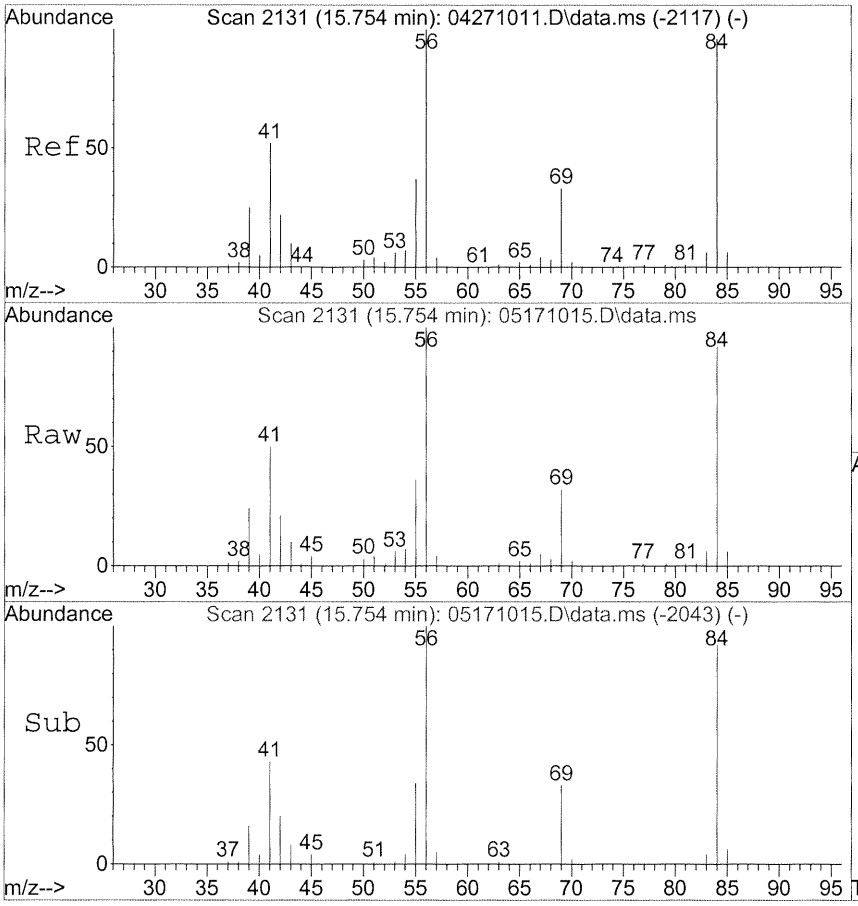




#42
Carbon Tetrachloride
Concen: 0.47 ng
RT: 15.55 min Scan# 2096
Delta R.T. 0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:117 Resp: 14557

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 94.9 | 75.8 | 115.8 |

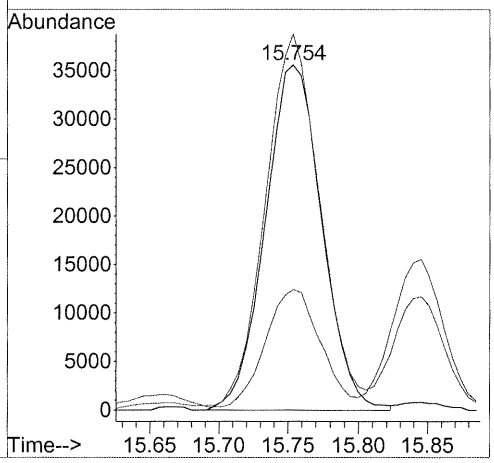


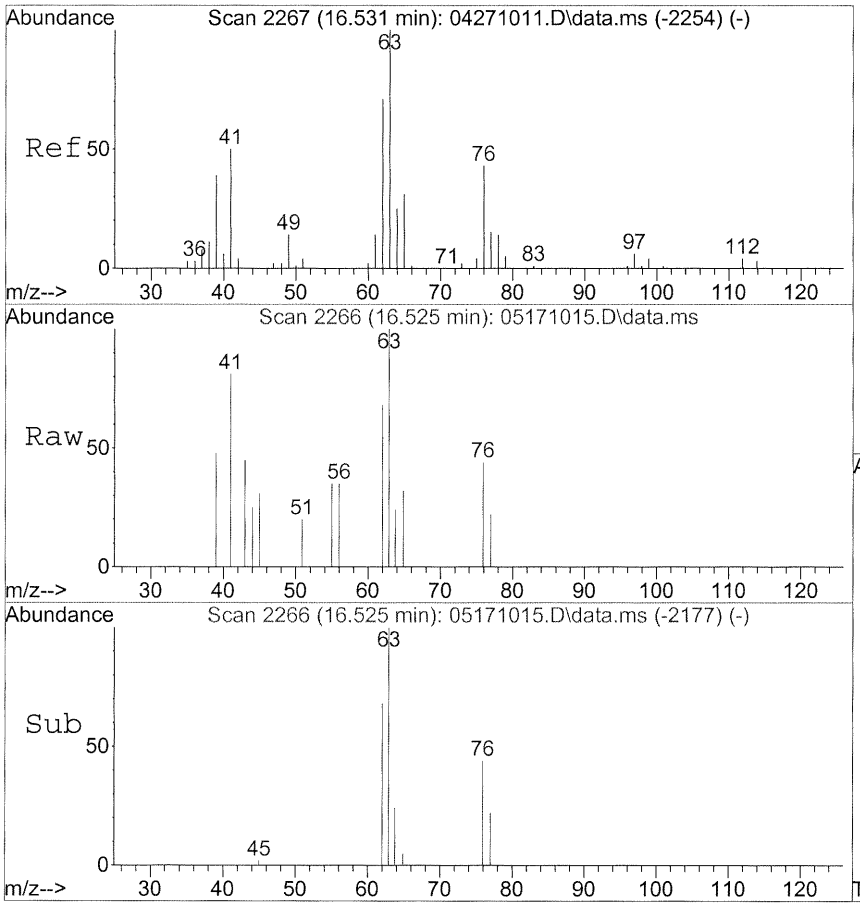



#43
Cyclohexane
Concen: 2.65 ng
RT: 15.75 min Scan# 2131
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 84 Resp: 99993

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 69 | 34.7 | 18.4 | 58.4 |
| 56 | 106.6 | 112.6 | 152.6# |

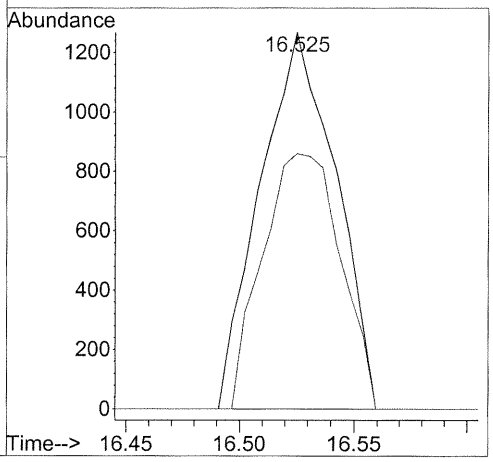


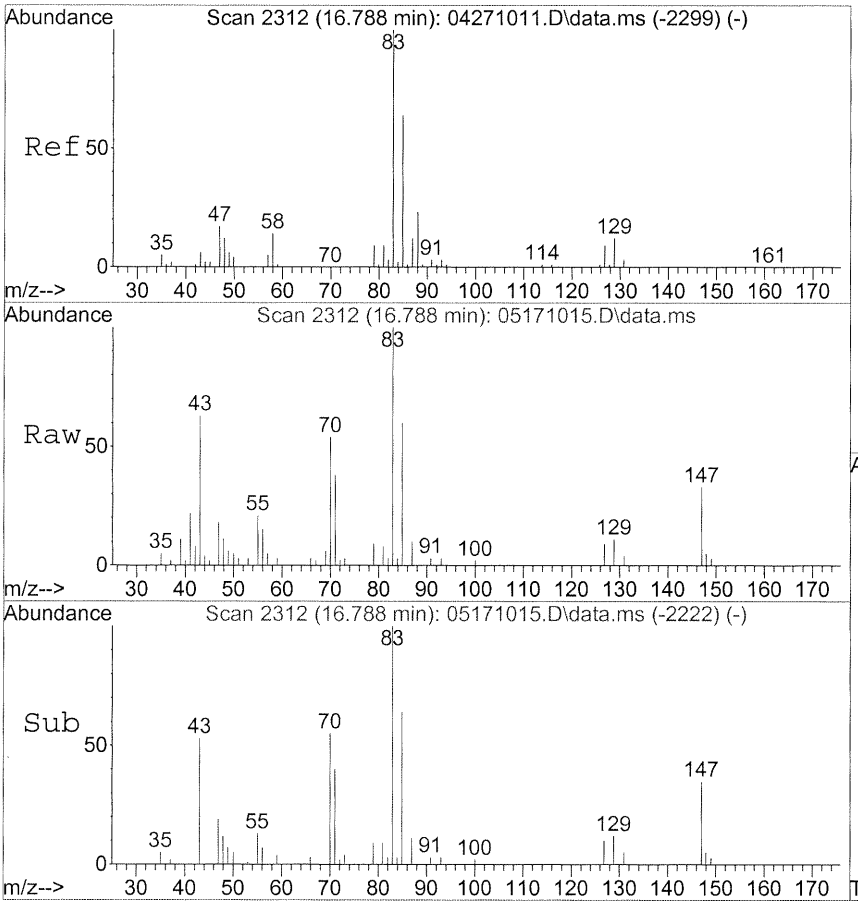




#45
1,2-Dichloropropane
Concen: 0.13 ng
RT: 16.53 min Scan# 2266
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 63 Resp: 2895

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 62 | 70.2 | 52.0 | 92.0 |

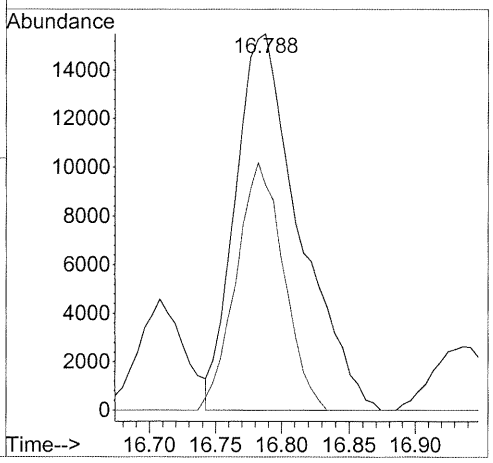


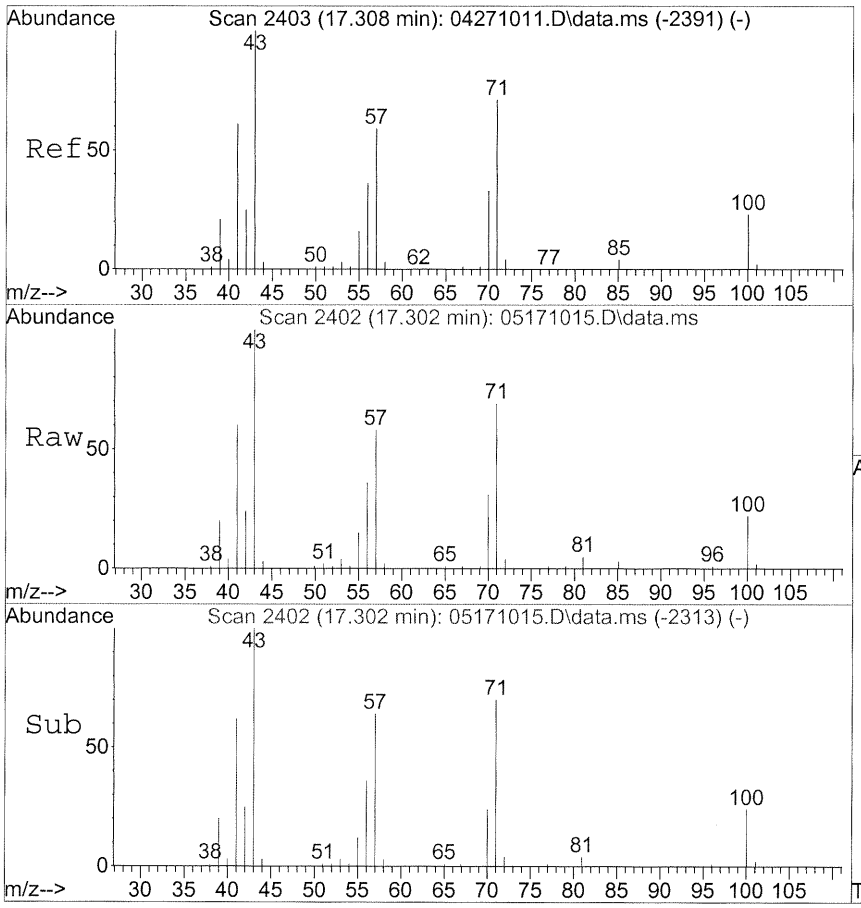



#46
Bromodichloromethane
Concen: 1.71 ng
RT: 16.79 min Scan# 2312
Delta R.T. 0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 83 Resp: 52039

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 49.1 | 42.8 | 82.8 |

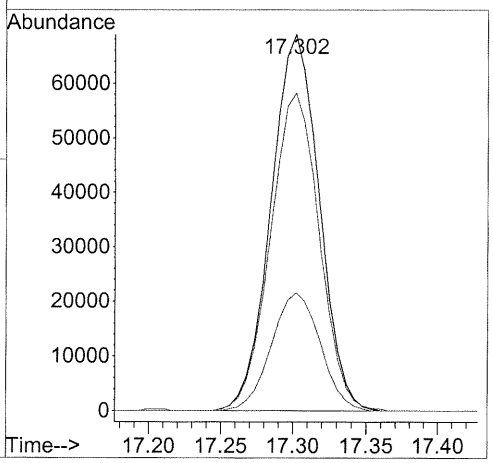


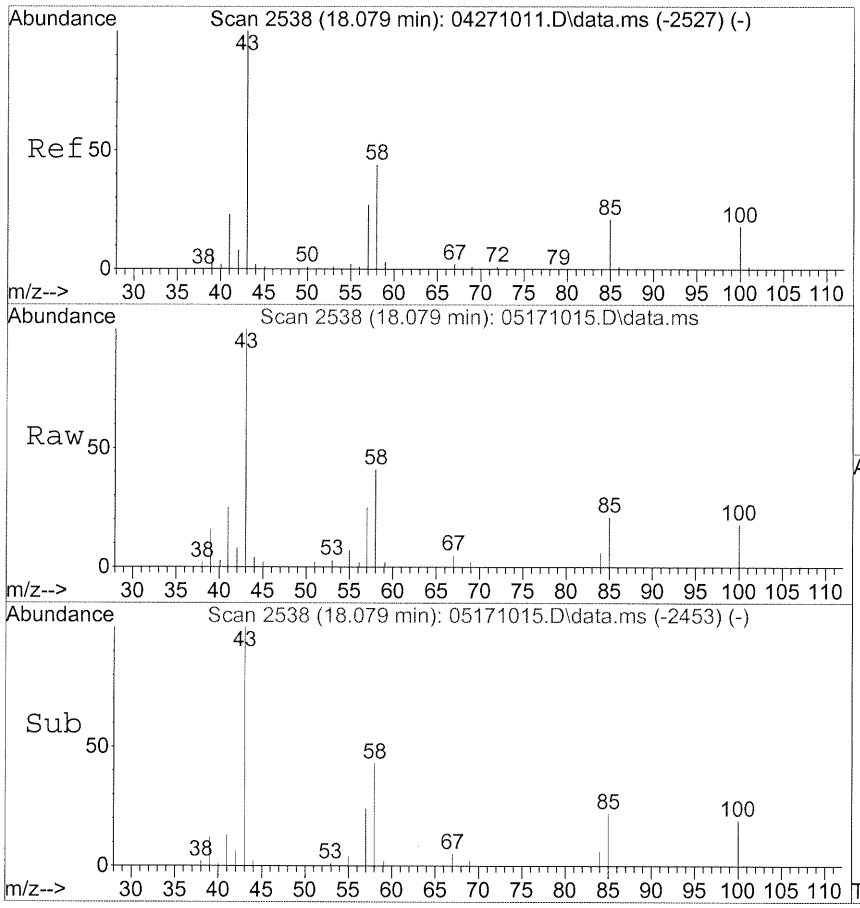




#51
n-Heptane
Concen: 6.56 ng
RT: 17.30 min Scan# 2402
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 71 Resp: 158465

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 71 | 100 | | |
| 57 | 85.6 | 74.9 | 114.9 |
| 100 | 31.7 | 5.0 | 45.0 |

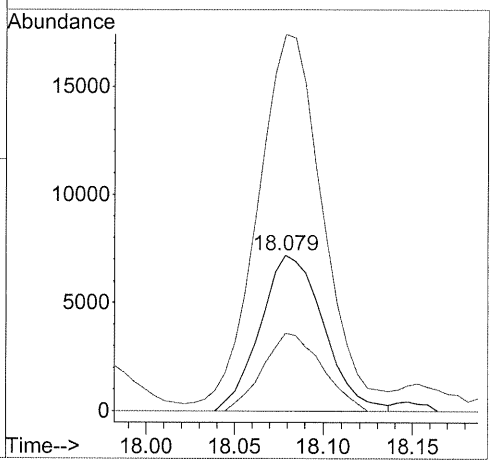


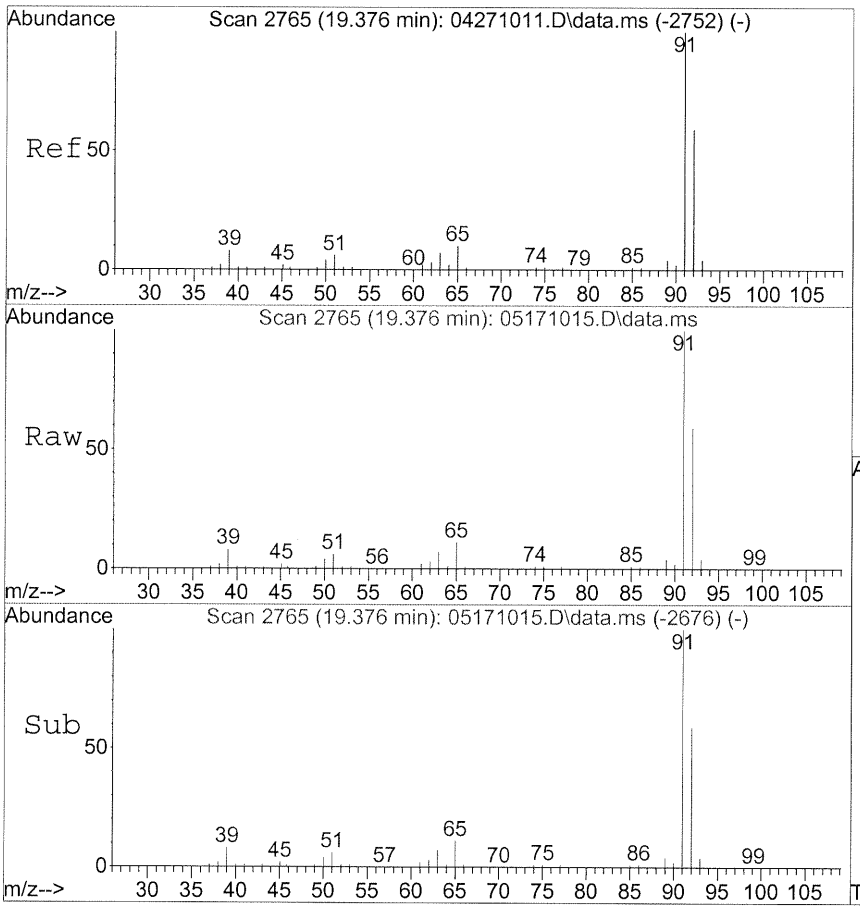



#53
4-Methyl-2-pentanone
Concen: 0.92 ng
RT: 18.08 min Scan# 2538
Delta R.T. -0.017 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 58 Resp: 17752

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 244.5 | 207.1 | 310.7 |
| 85 | 46.5 | 31.4 | 47.2 |

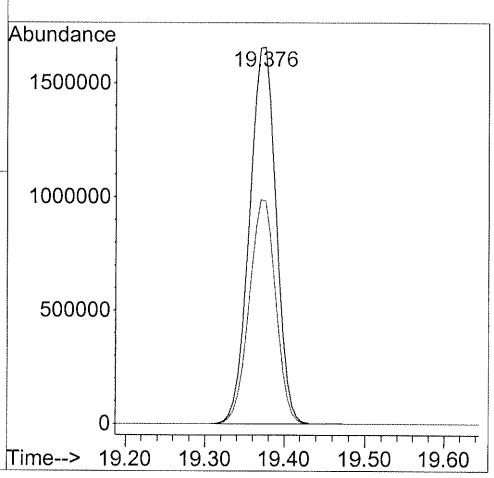


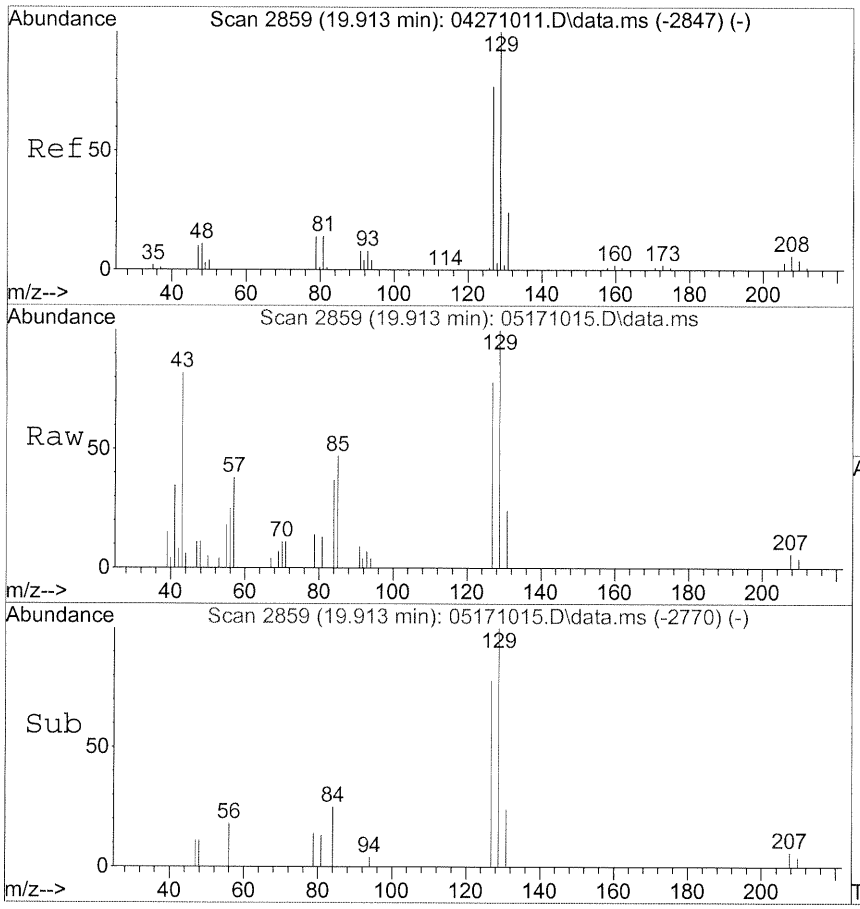




#58
Toluene
Concen: 36.23 ng
RT: 19.38 min Scan# 2765
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 91 Resp: 3858261

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.3 | 37.6 | 77.6 |

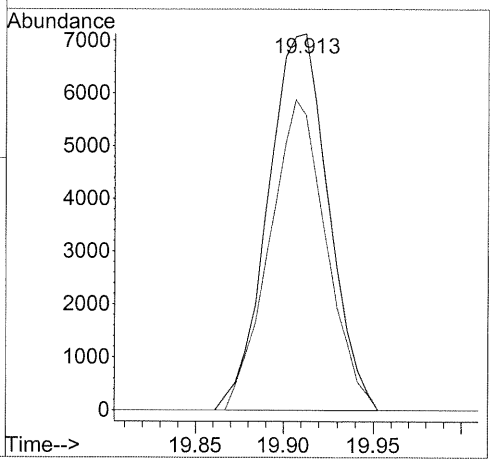


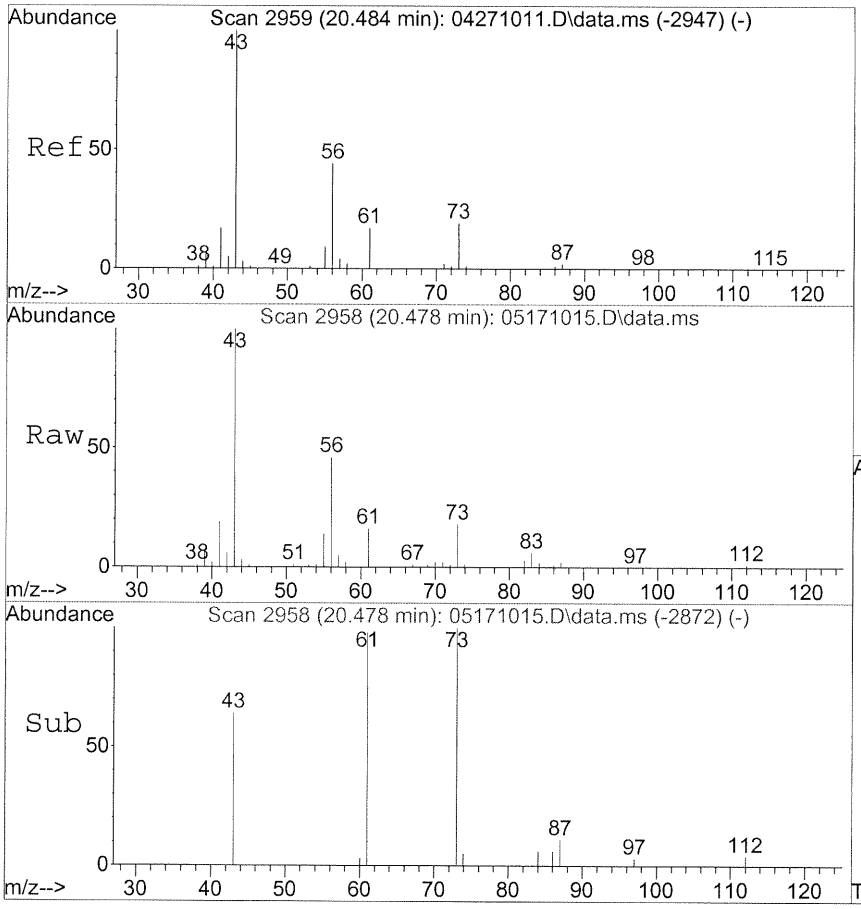



#60
Dibromochloromethane
Concen: 0.66 ng
RT: 19.91 min Scan# 2859
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:129 Resp: 16804

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 127 | 77.3 | 57.2 | 97.2 |

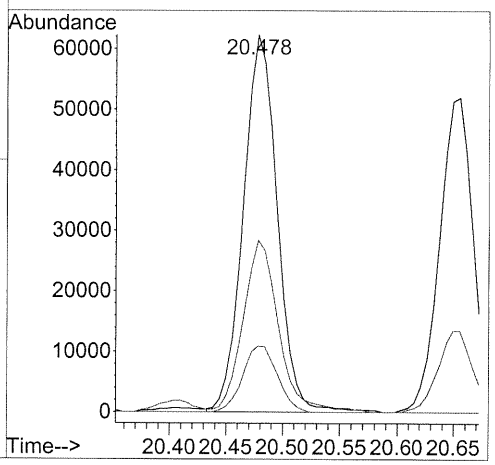


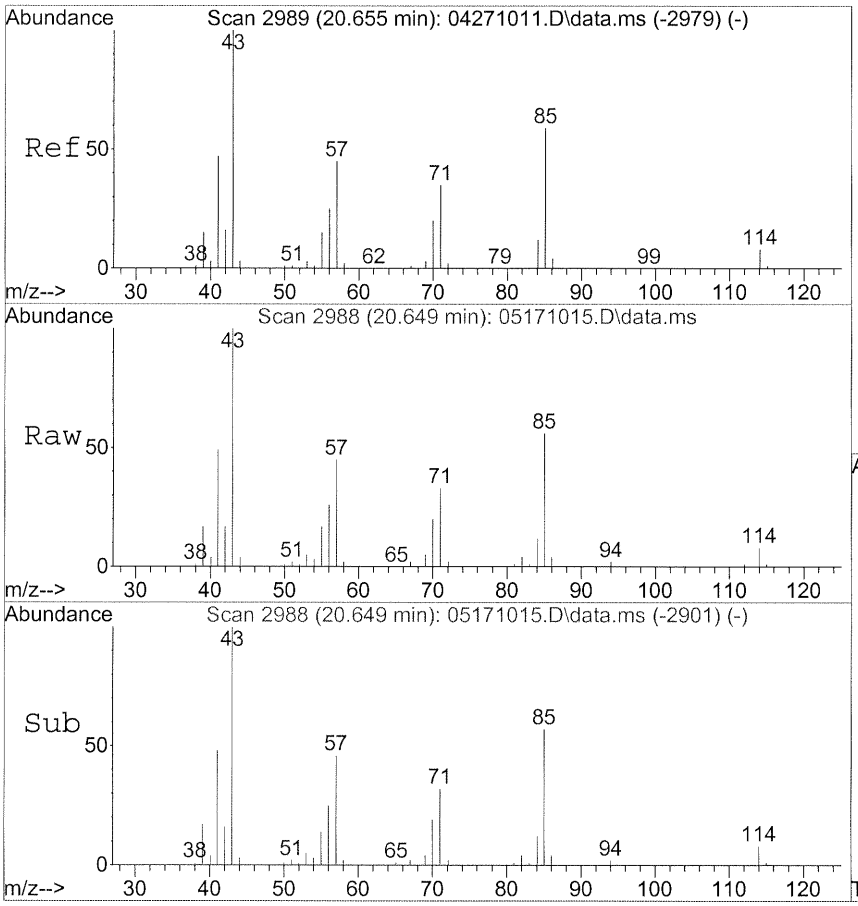




#62
n-Butyl Acetate
Concen: 2.52 ng
RT: 20.48 min Scan# 2958
Delta R.T. -0.011 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 43 Resp: 129875

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 56 | 47.6 | 19.7 | 59.7 |
| 73 | 17.8 | 0.0 | 34.2 |

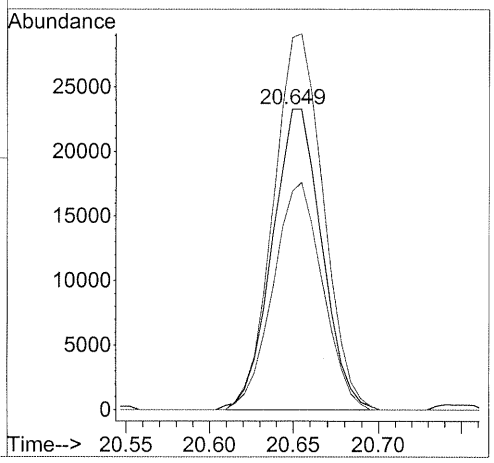


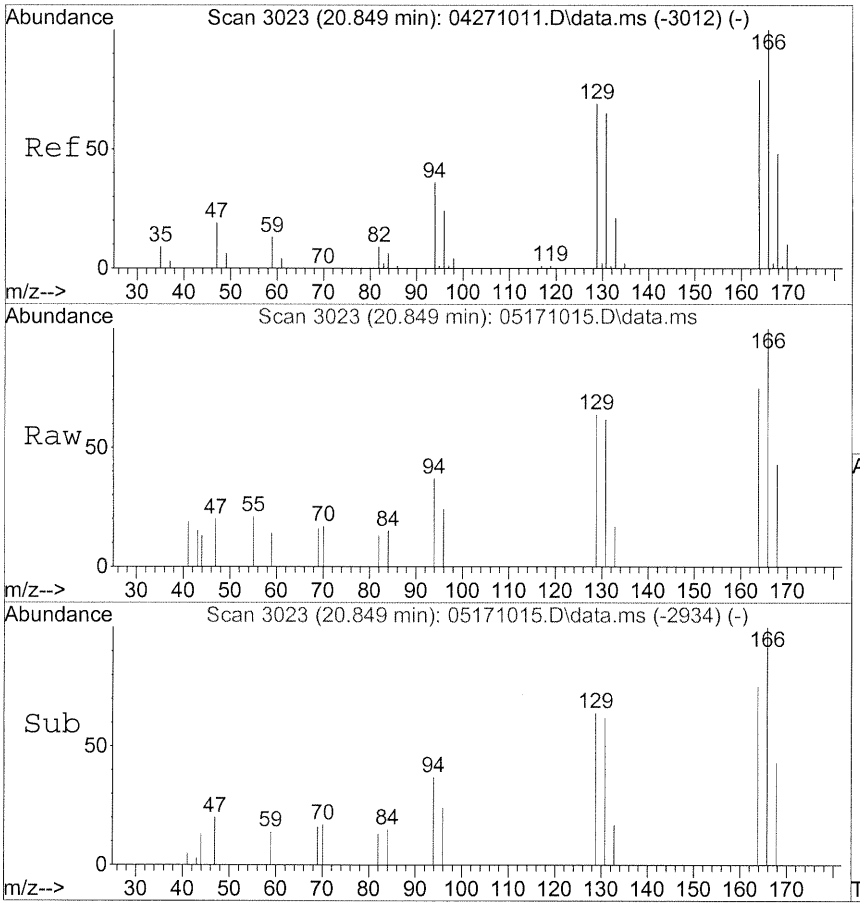



#63
n-Octane
Concen: 2.49 ng
RT: 20.65 min Scan# 2988
Delta R.T. -0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 57 Resp: 47482

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 85 | 125.8 | 81.8 | 122.8# |
| 71 | 75.3 | 55.0 | 82.6 |

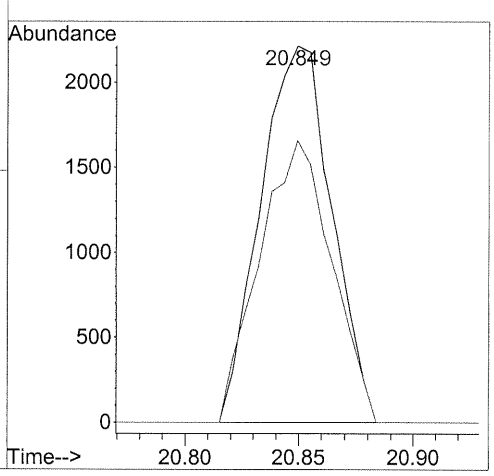


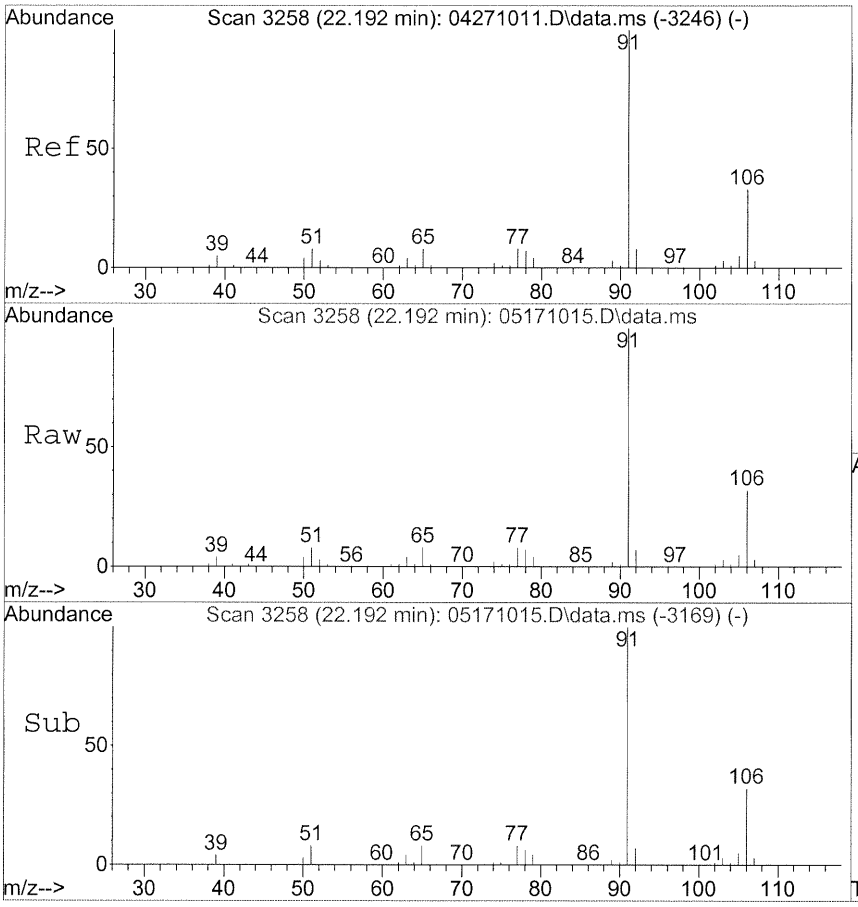




#64
Tetrachloroethene
Concen: 0.14 ng
RT: 20.85 min Scan# 3023
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:166 Resp: 4790

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 76.1 | 58.4 | 98.4 |

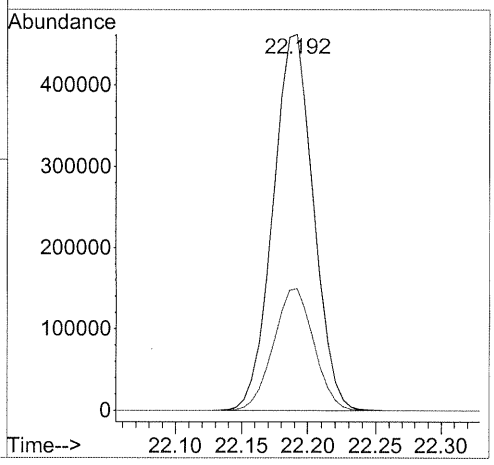


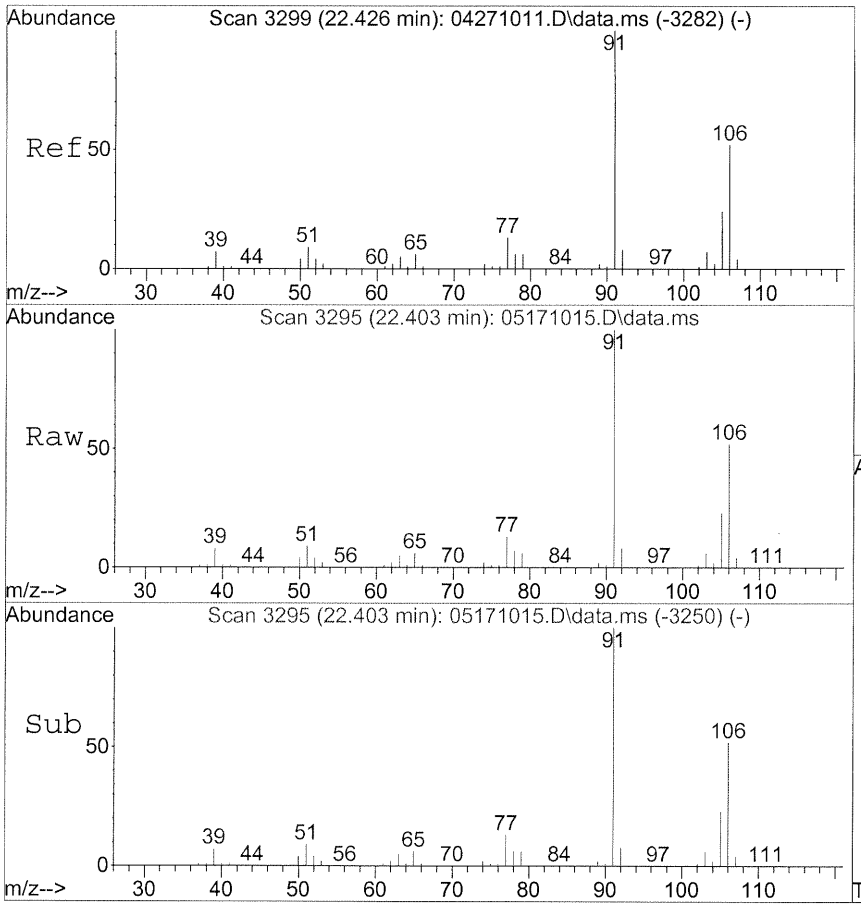



#66
Ethylbenzene
Concen: 8.33 ng
RT: 22.19 min Scan# 3258
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 91 Resp: 971752

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 32.3 | 9.8 | 49.8 |

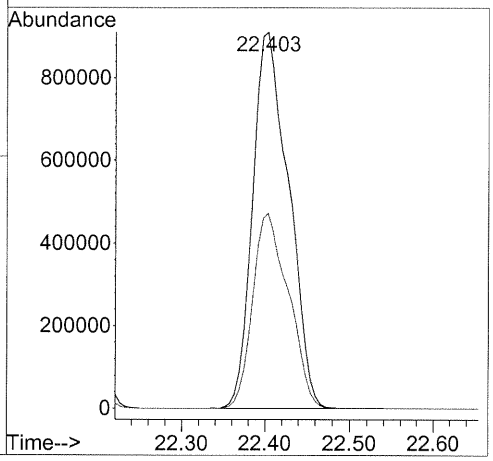


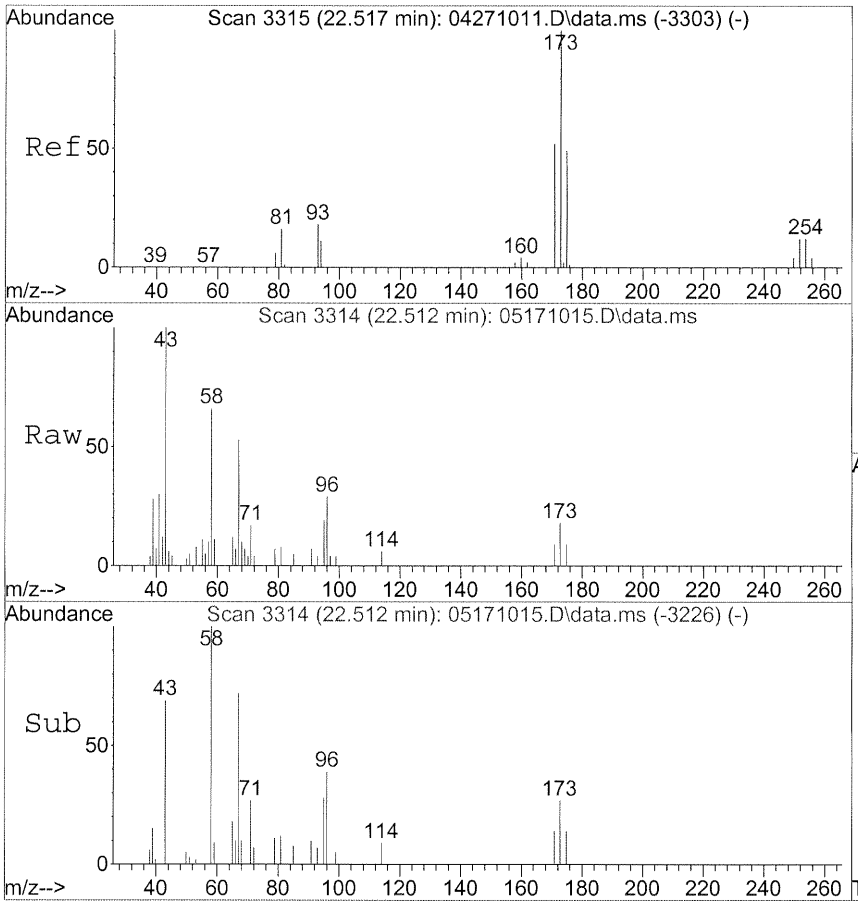




#67
m- & p-Xylenes
Concen: 29.60 ng
RT: 22.40 min Scan# 3295
Delta R.T. 0.006 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 91 Resp: 2729213

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 51.6 | 26.8 | 66.8 |

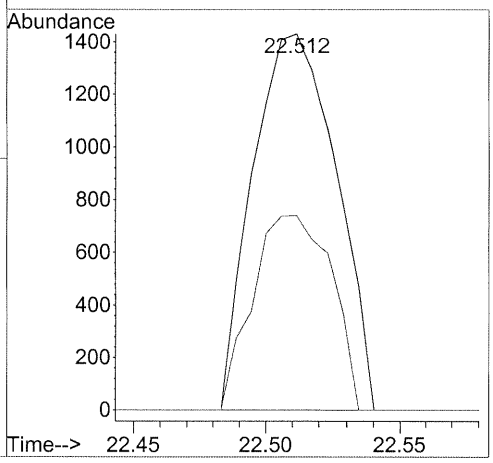


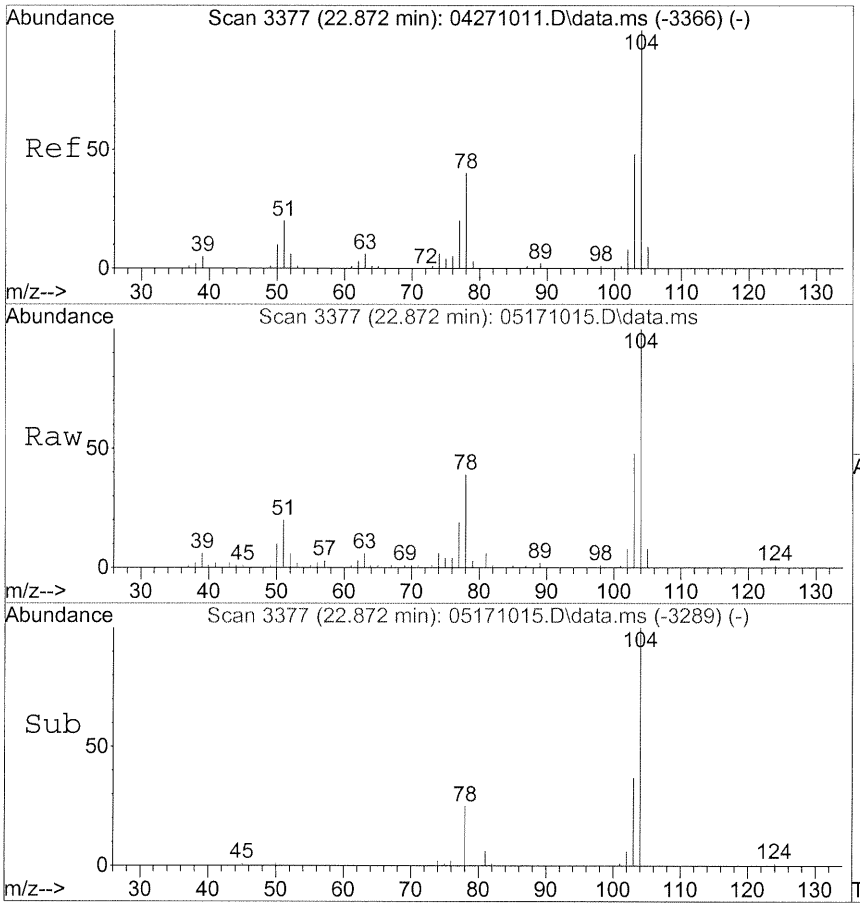



#68
Bromoform
Concen: 0.13 ng
RT: 22.51 min Scan# 3314
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:173 Resp: 3084

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 49.0 | 28.5 | 68.5 |

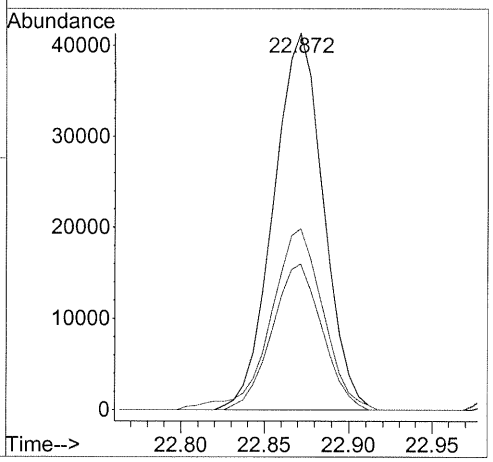


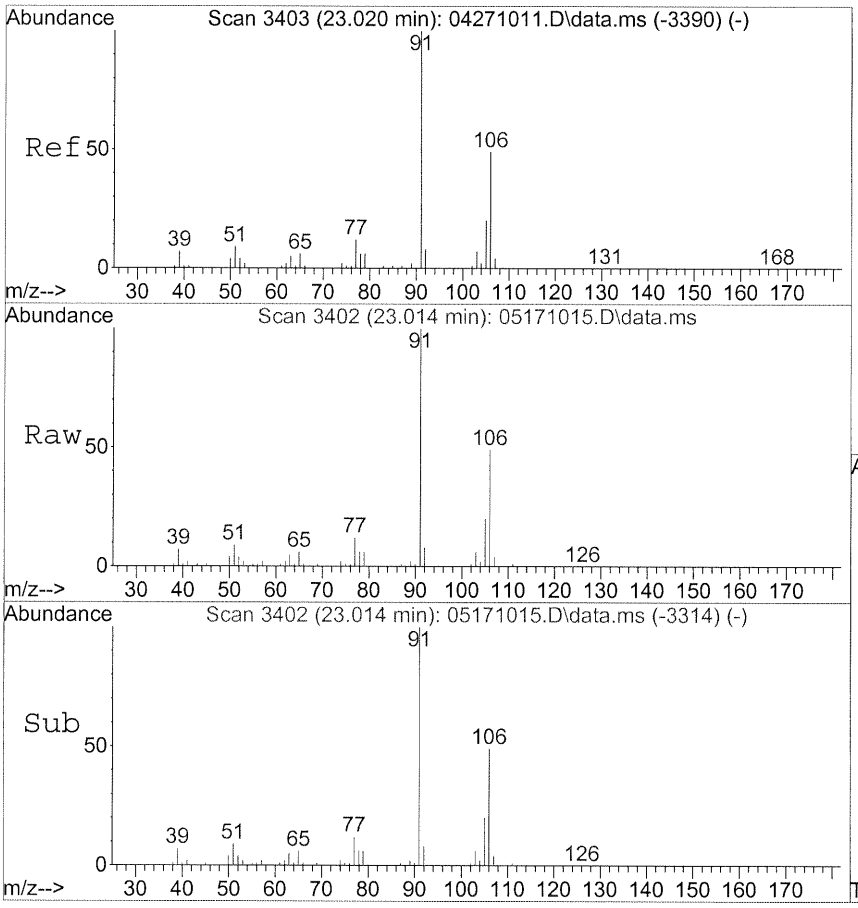




#69
Styrene
Concen: 1.17 ng
RT: 22.87 min Scan# 3377
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:104 Resp: 85235

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 38.7 | 26.1 | 66.1 |
| 103 | 50.2 | 28.7 | 68.7 |

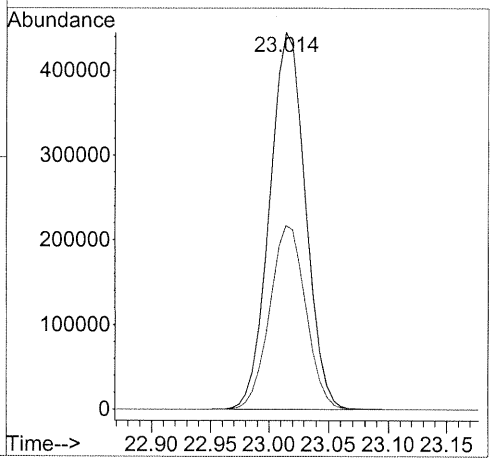


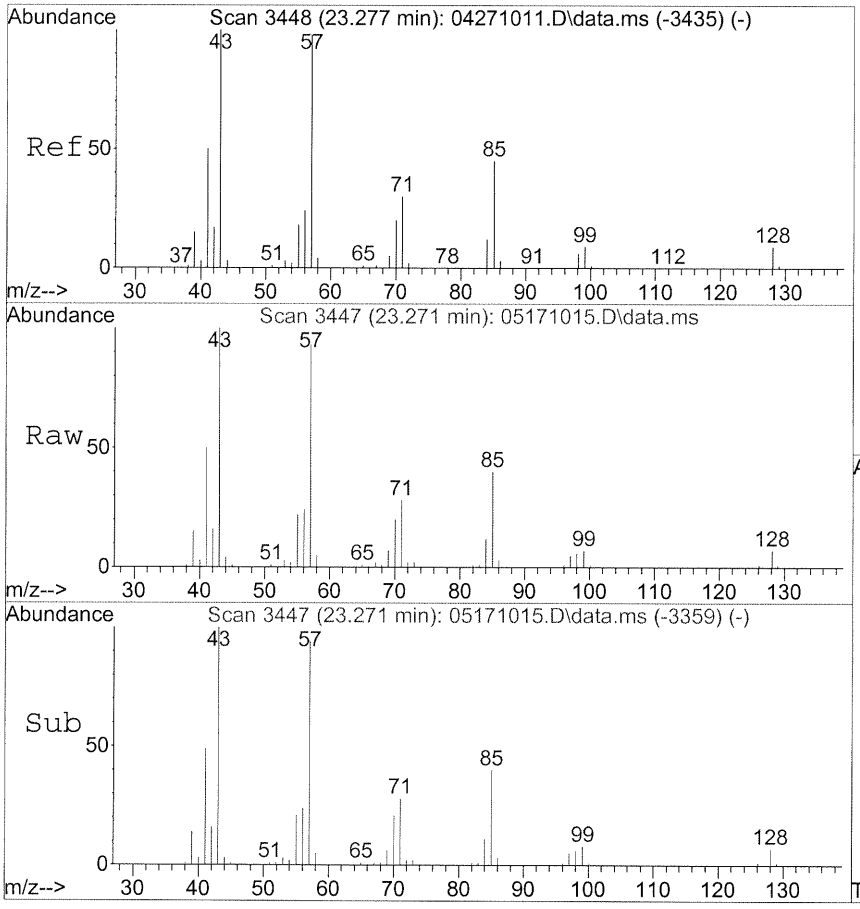



#70
o-Xylene
Concen: 10.01 ng
RT: 23.01 min Scan# 3402
Delta R.T. -0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 91 Resp: 941542

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 48.9 | 24.4 | 64.4 |

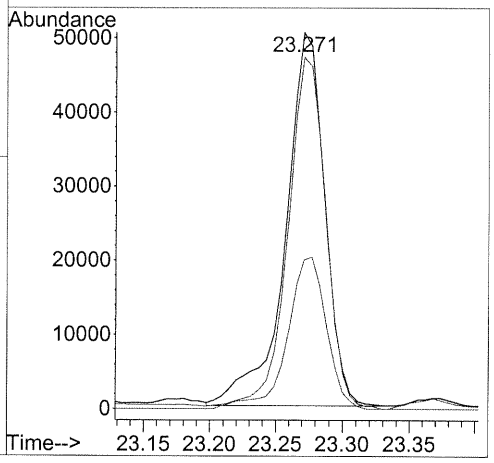


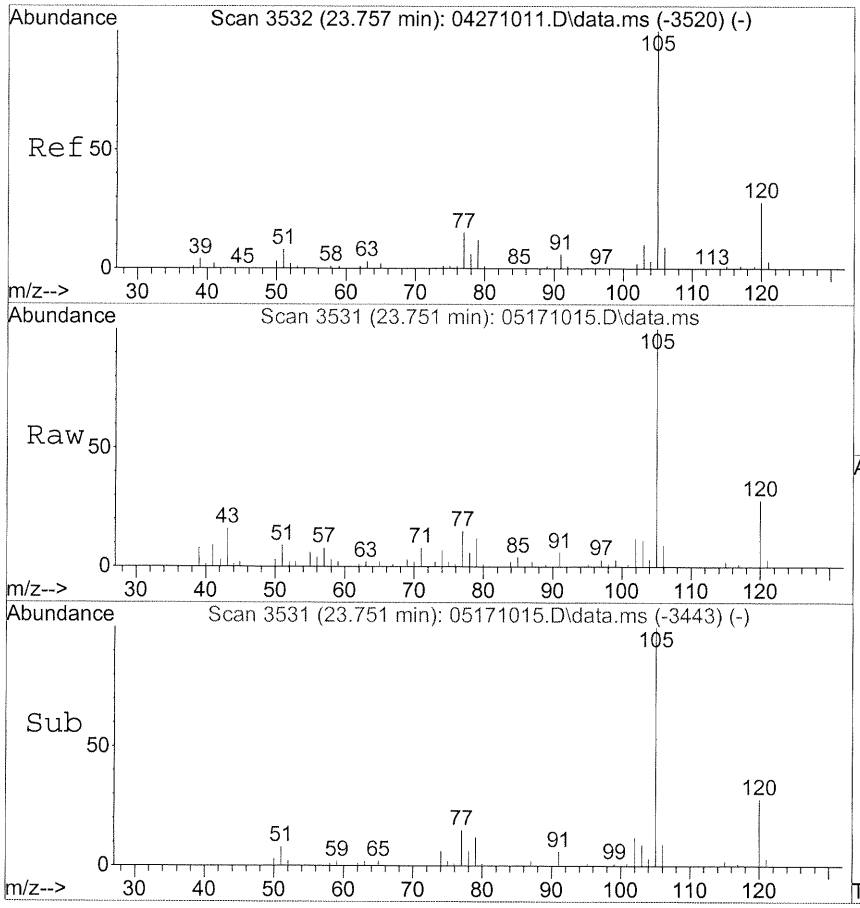




#71
n-Nonane
Concen: 2.53 ng
RT: 23.27 min Scan# 3447
Delta R.T. -0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 43 Resp: 103641

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 90.3 | 65.6 | 105.6 |
| 85 | 40.0 | 9.9 | 49.9 |

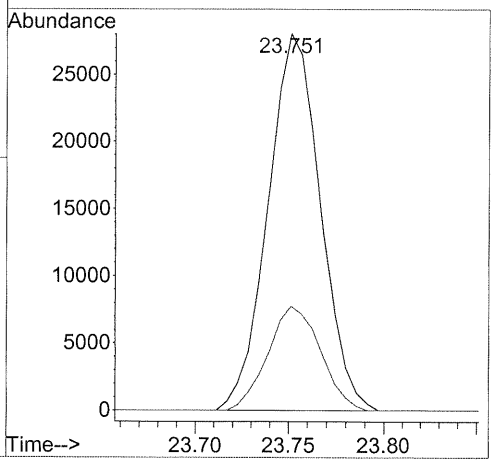


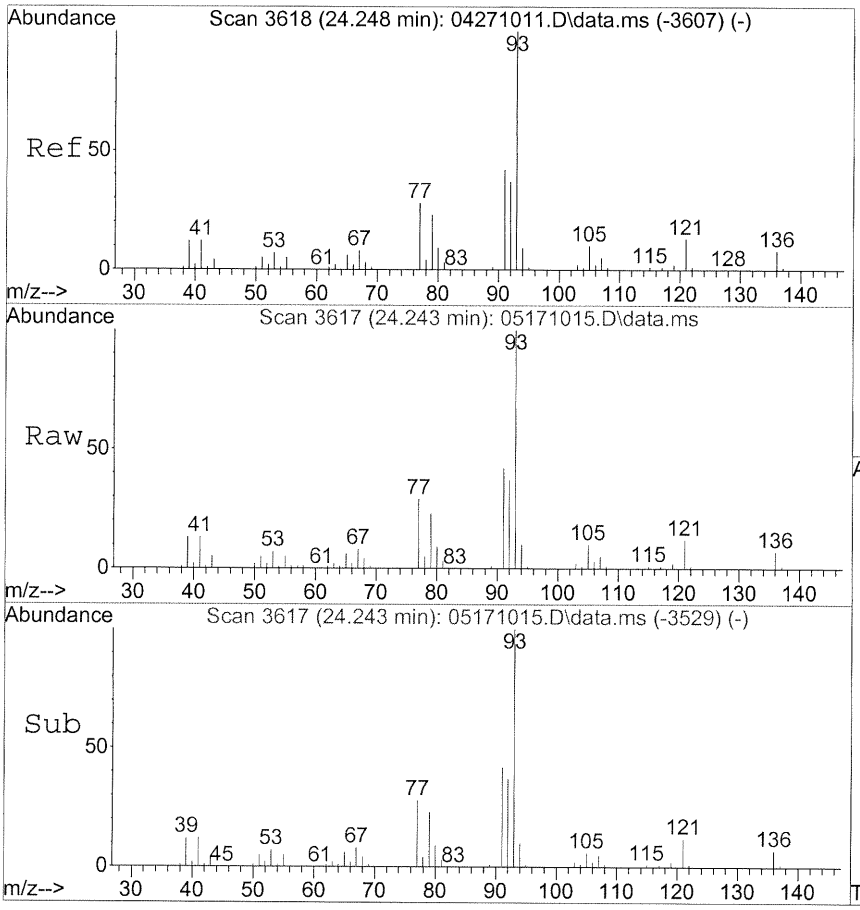



#74
Cumene
Concen: 0.42 ng
RT: 23.75 min Scan# 3531
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:105 Resp: 54085

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.6 | 5.2 | 45.2 |

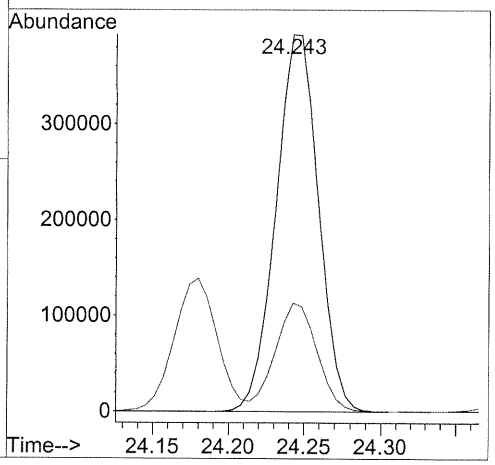


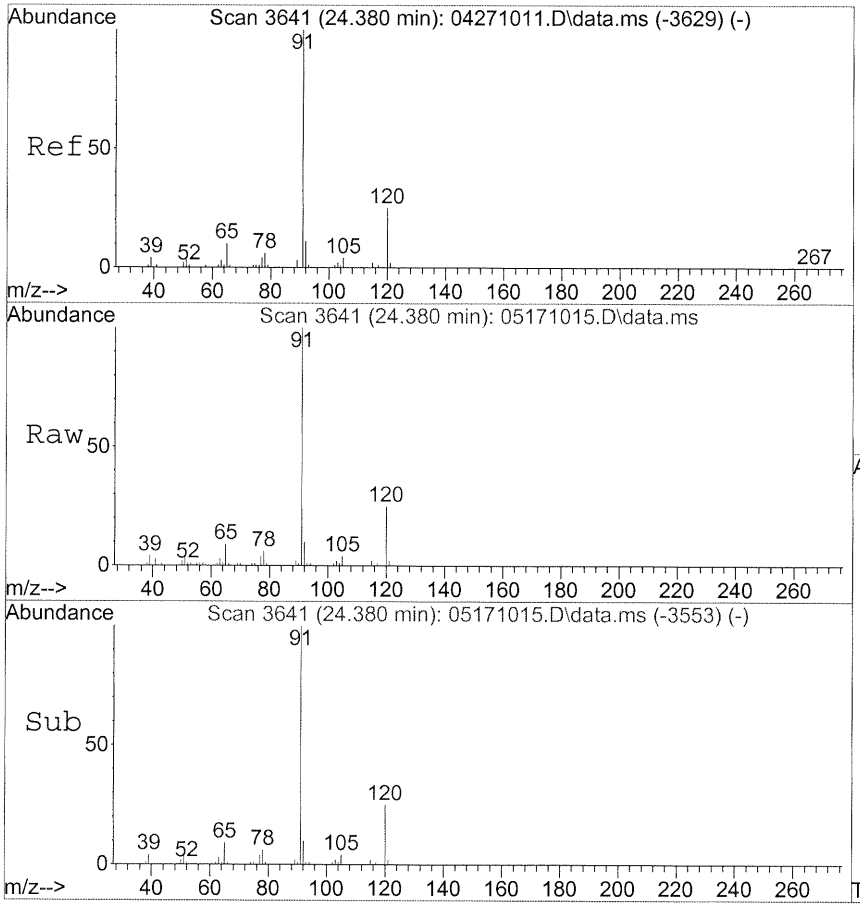




#75
alpha-Pinene
Concen: 12.81 ng
RT: 24.24 min Scan# 3617
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 93 Resp: 763645

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 93 | 100 | | |
| 77 | 28.2 | 12.3 | 52.3 |

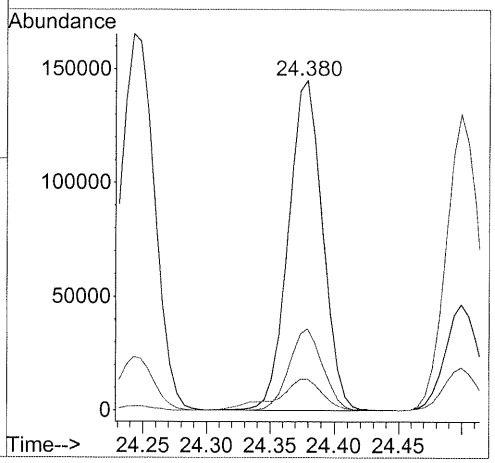


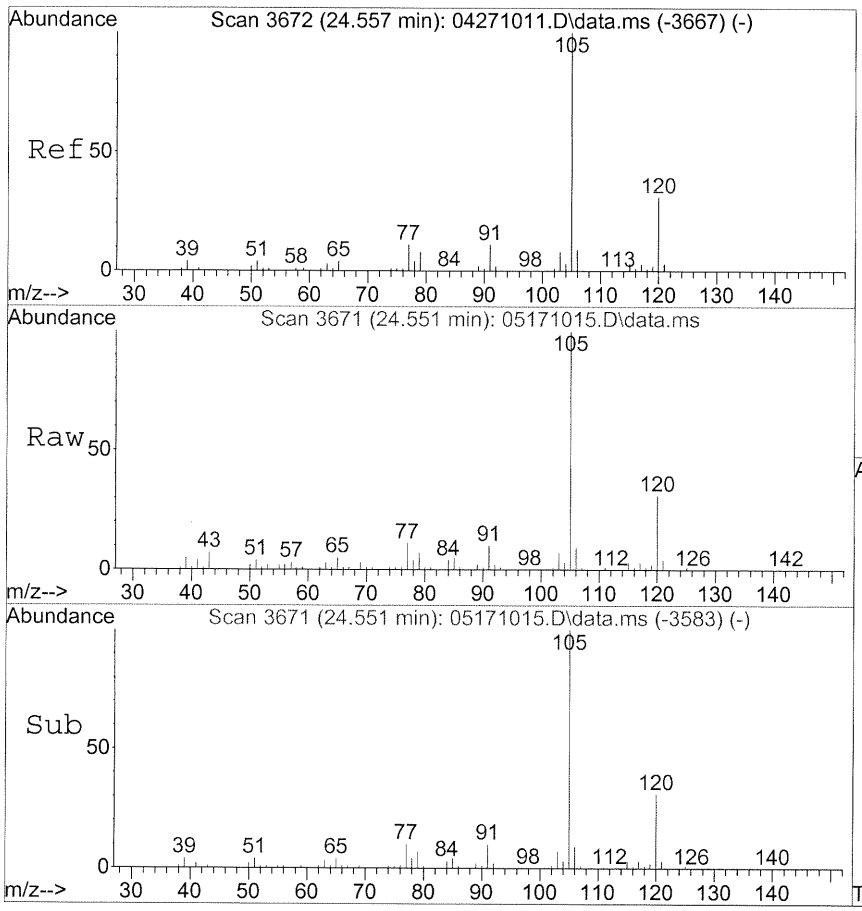



#76
n-Propylbenzene
Concen: 1.79 ng
RT: 24.38 min Scan# 3641
Delta R.T. -0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 91 Resp: 267503

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 24.1 | 0.9 | 40.9 |
| 65 | 12.6 | 0.0 | 31.2 |

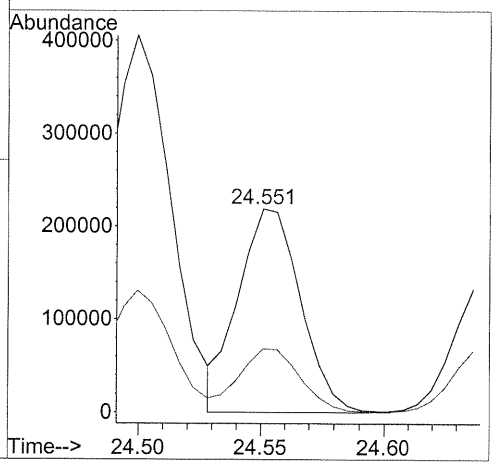


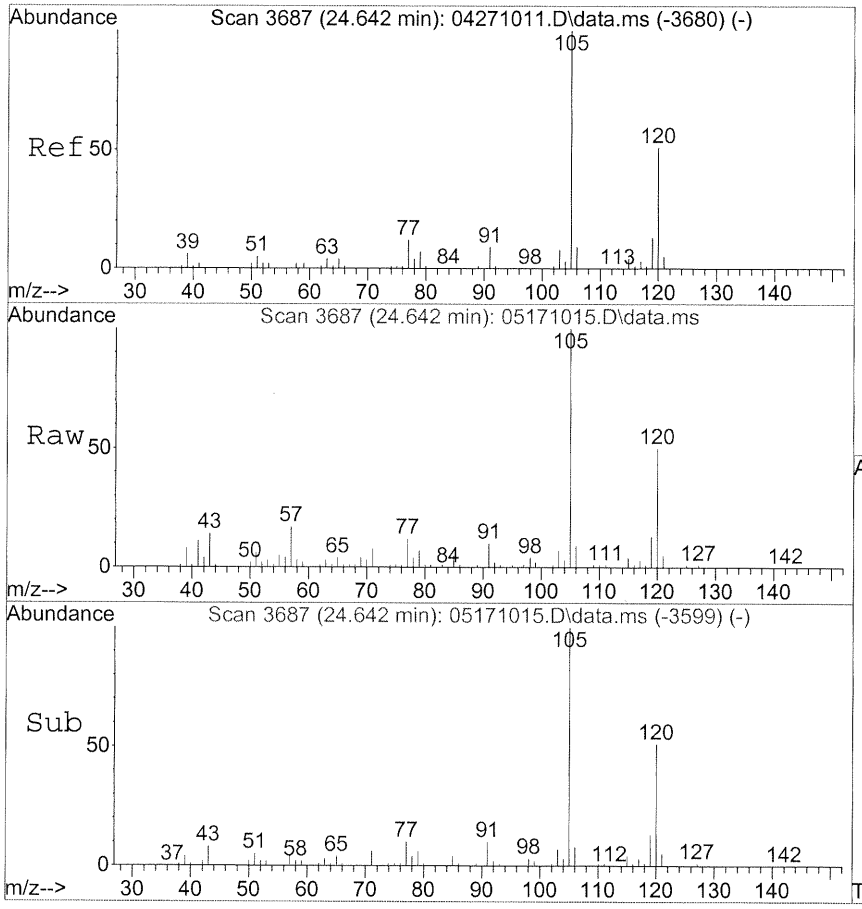




#78
4-Ethyltoluene
Concen: 3.27 ng
RT: 24.55 min Scan# 3671
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:105 Resp: 388111

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.5 | 8.2 | 48.2 |

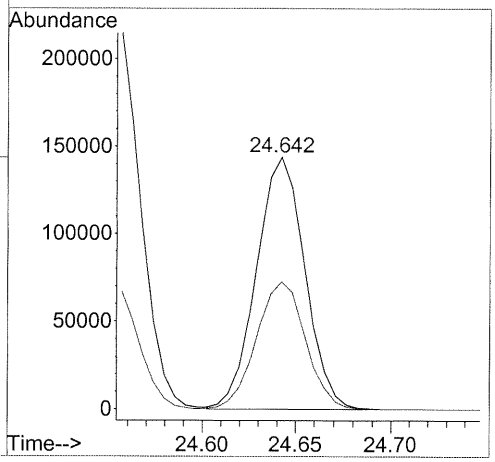


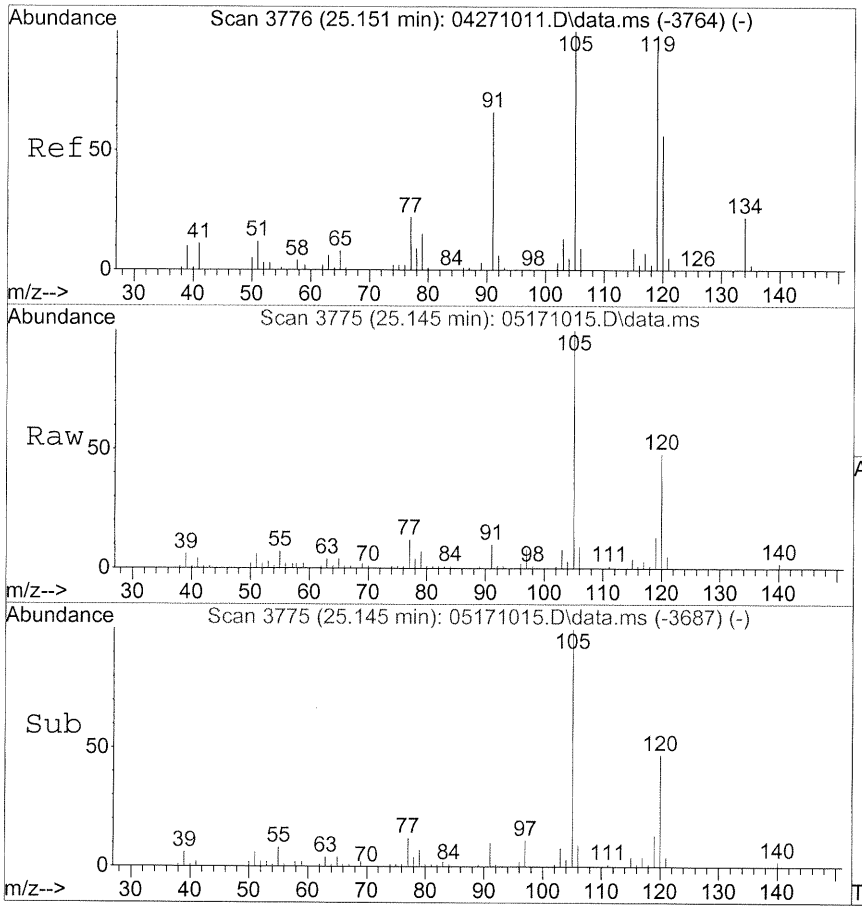



#79
1,3,5-Trimethylbenzene
Concen: 2.67 ng
RT: 24.64 min Scan# 3687
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:105 Resp: 258222

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 51.1 | 26.2 | 66.2 |

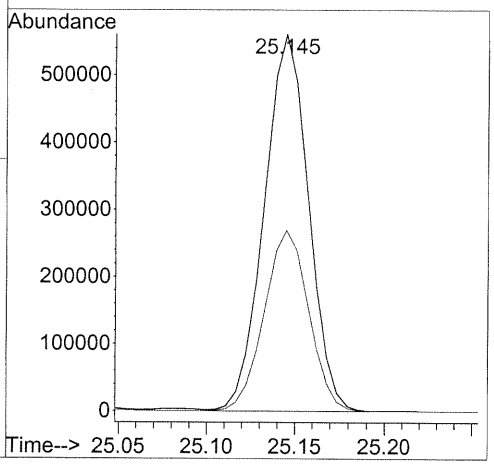


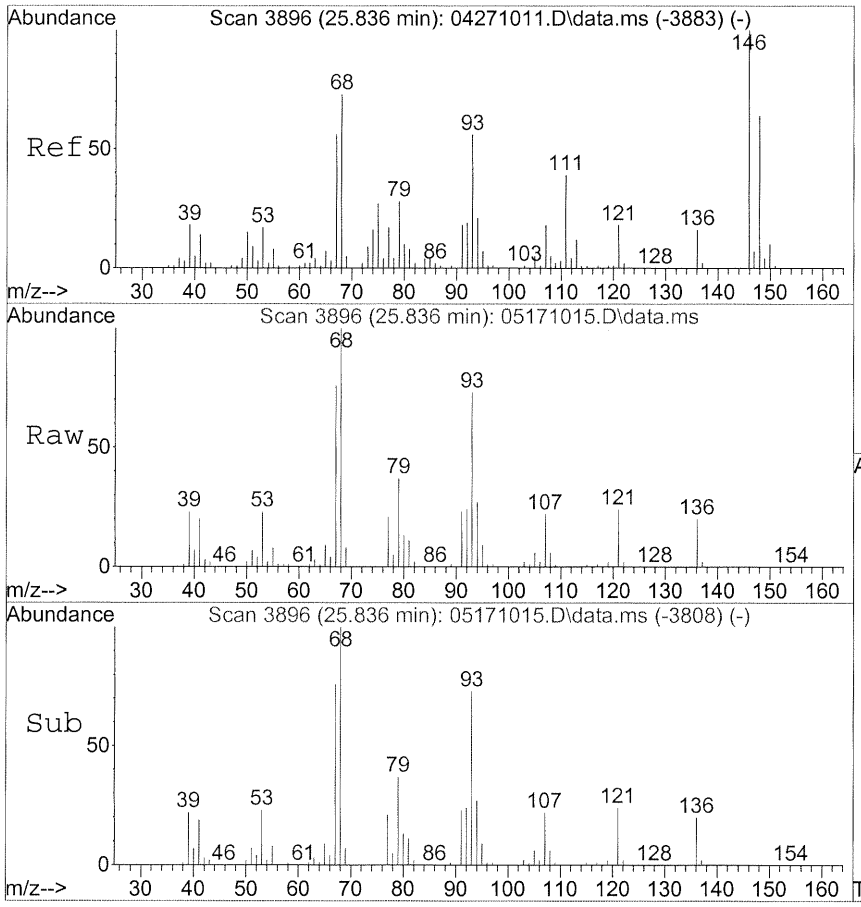




#82
1,2,4-Trimethylbenzene
Concen: 9.76 ng
RT: 25.15 min Scan# 3775
Delta R.T. -0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:105 Resp: 976121

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.1 | 30.1 | 70.1 |

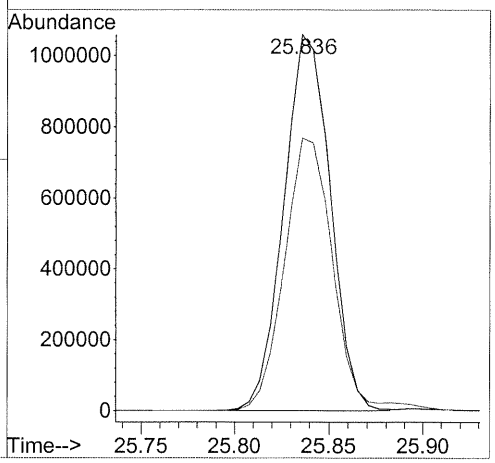


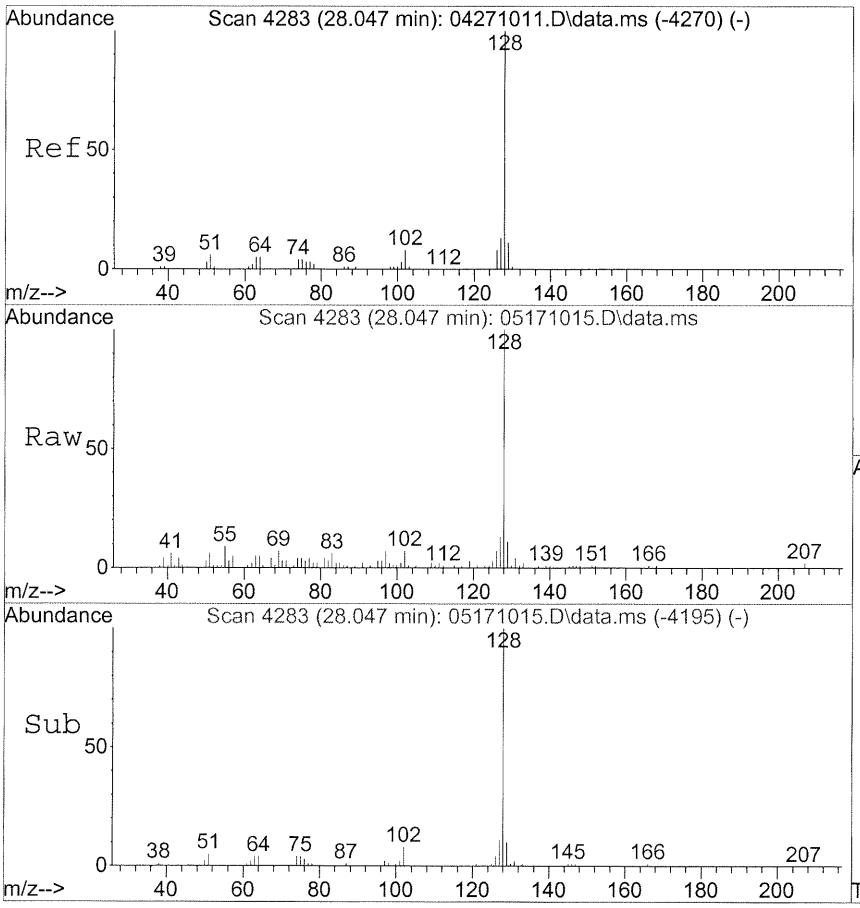



#91
d-Limonene
Concen: 51.79 ng
RT: 25.84 min Scan# 3896
Delta R.T. 0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion: 68 Resp: 1798913

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 68 | 100 | | |
| 93 | 76.0 | 42.0 | 82.0 |

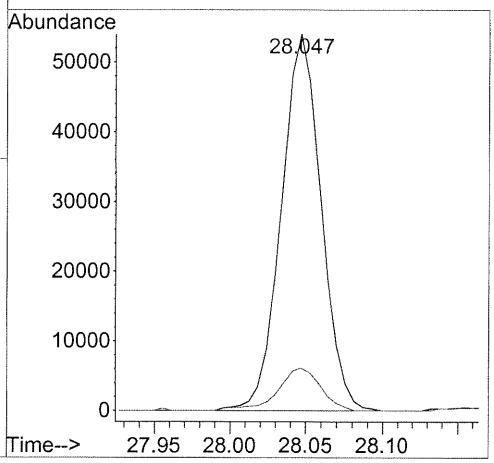



#95
Naphthalene
Concen: 0.77 ng
RT: 28.05 min Scan# 4283
Delta R.T. -0.000 min
Lab File: 05171015.D
Acq: 17 May 2010 21:06

Tgt Ion:128 Resp: 97708

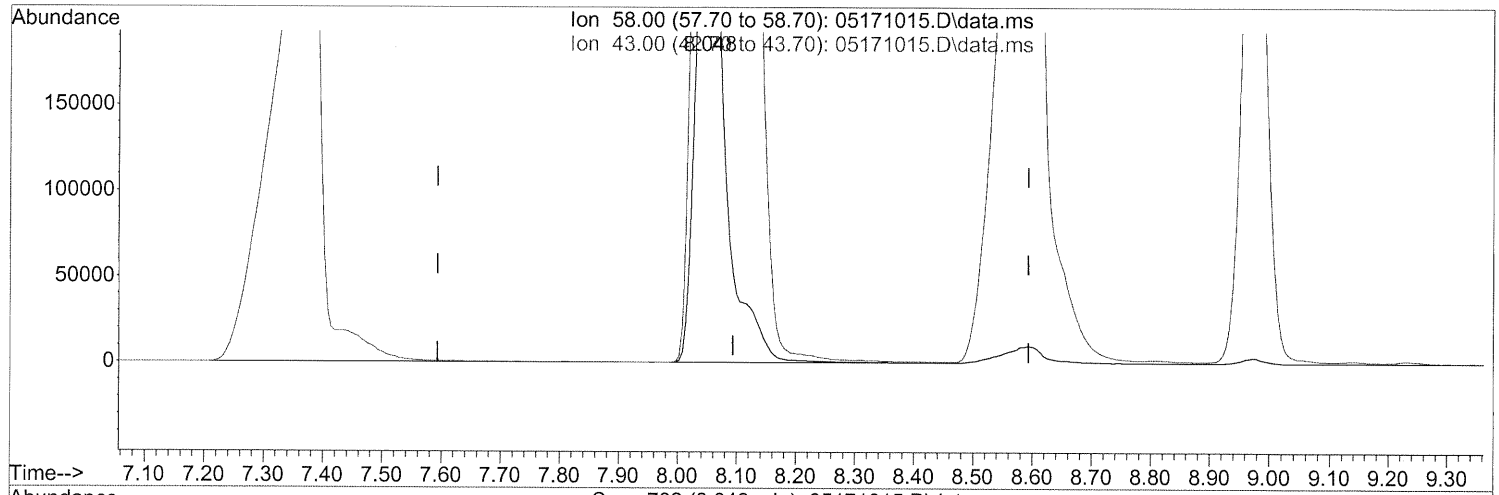
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 129 | 12.1 | 0.0 | 31.1 |

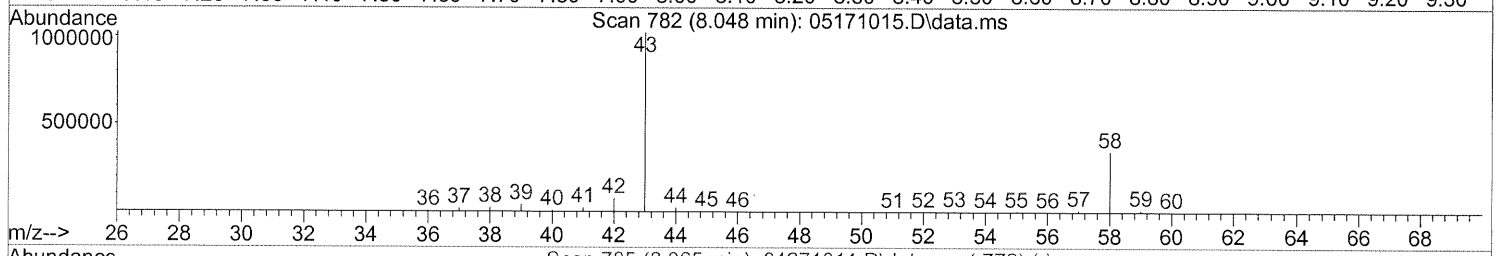


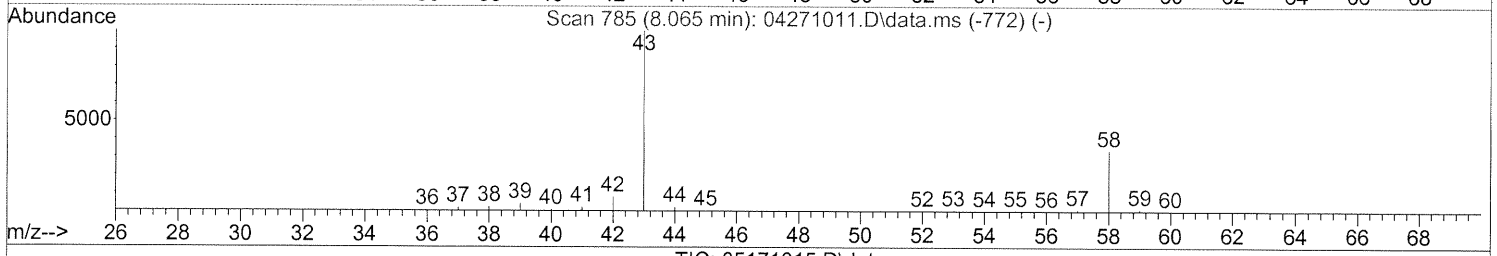
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171015.D\data.ms

(13) Acetone (T)

8.048min (-0.046) 64.64ng

response 1061878

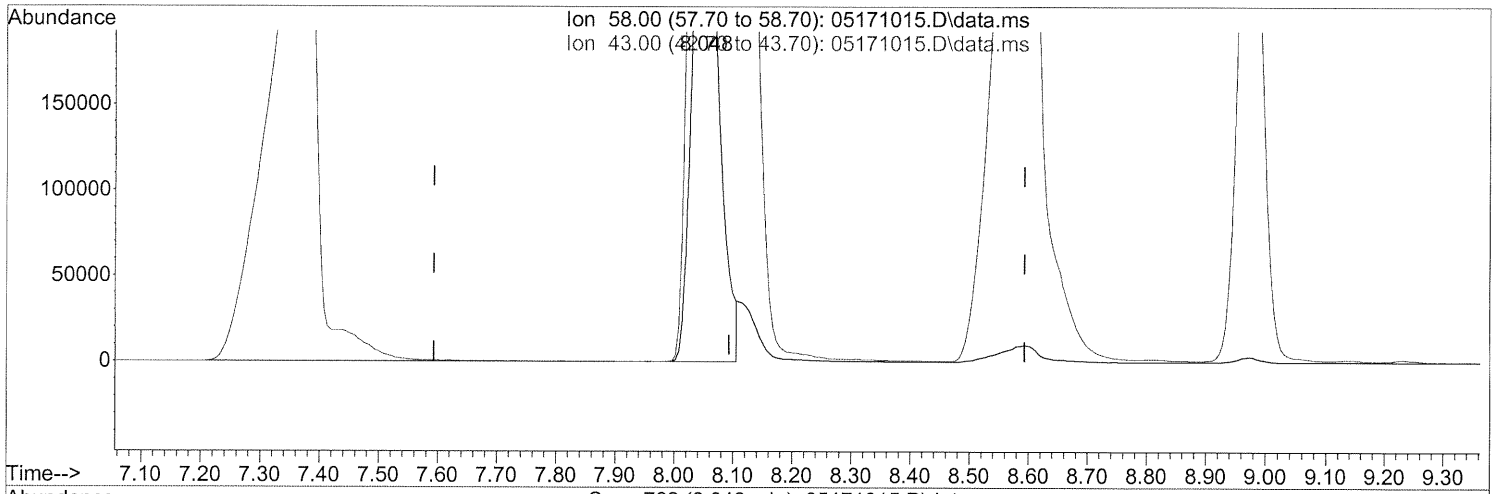
SH

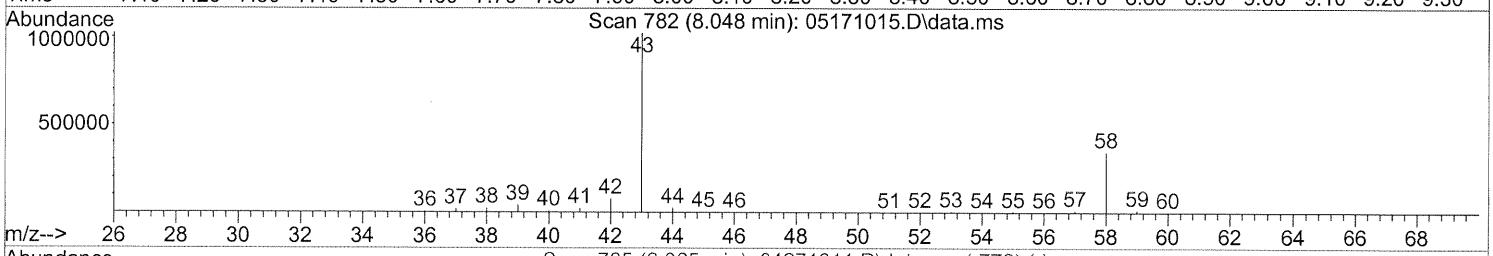
| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 277.51# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

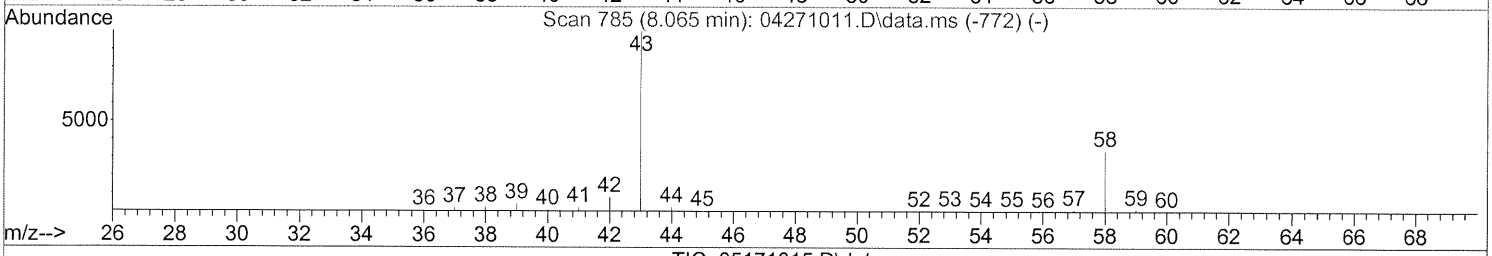
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171015.D\data.ms

(13) Acetone (T)

8.048min (-0.046) 59.68ng m

response 980450

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 300.55 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SH → IC

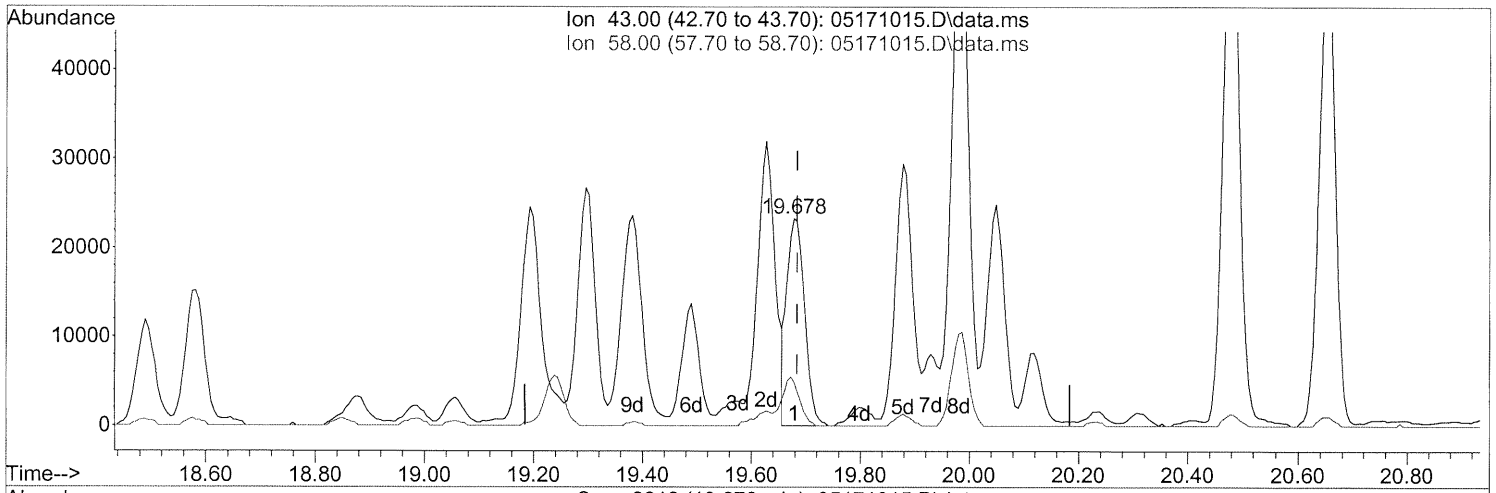
DA 5/19/10

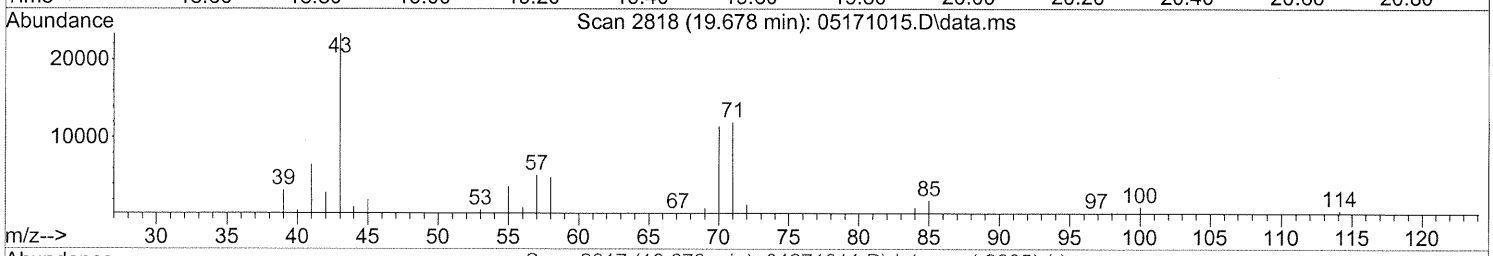
5/20/10

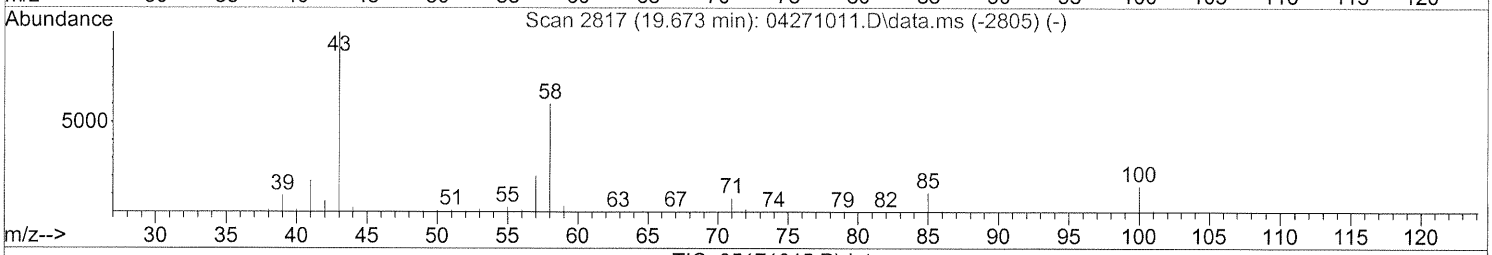
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171015.D\data.ms

(59) 2-Hexanone (T)

19.678min (-0.006) 1.17ng

response 52869

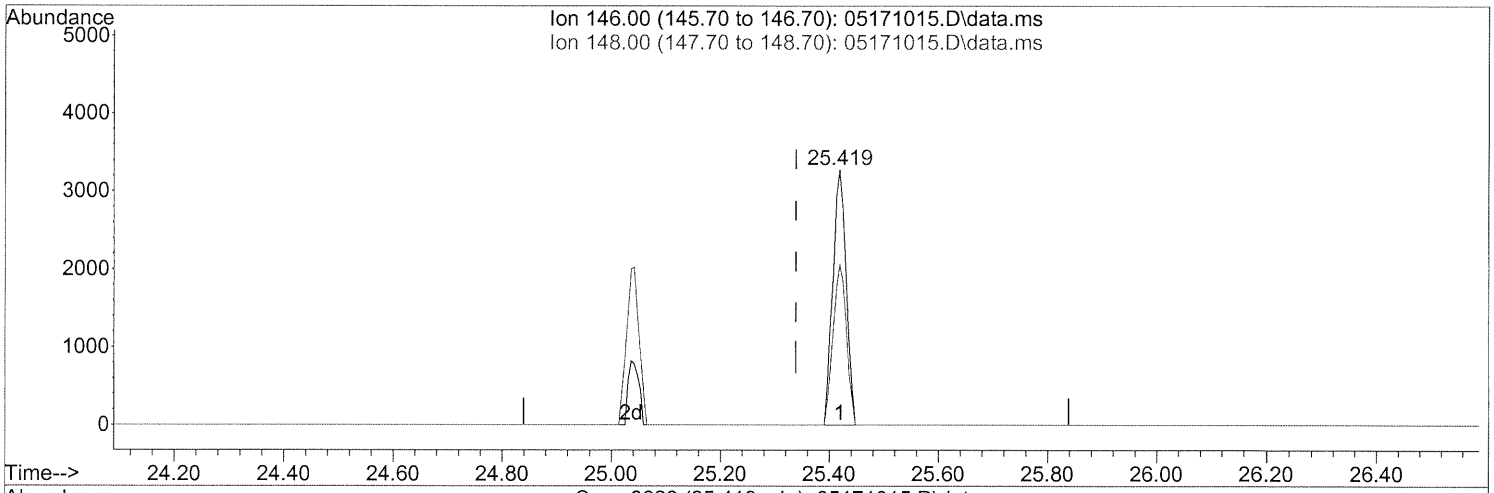
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 58.00 | 53.30 | 23.20# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

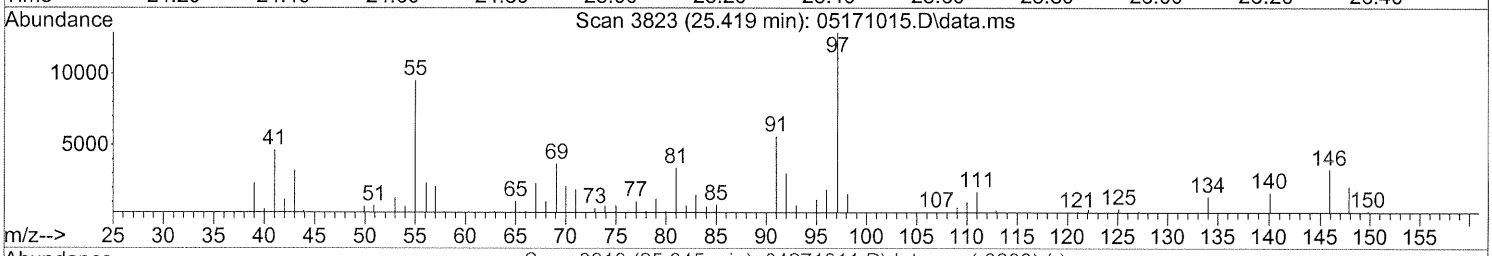
FP

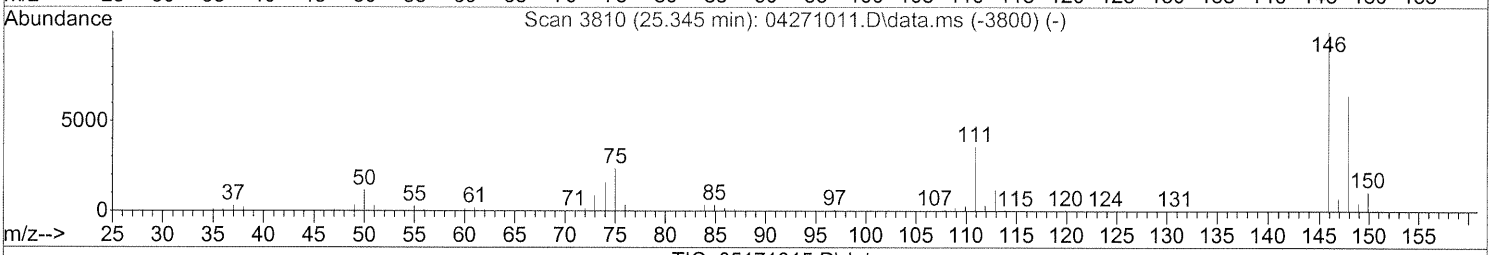
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171015.D\data.ms

(85) 1,3-Dichlorobenzene (T)

25.419min (+0.080) 0.09ng

response 5563

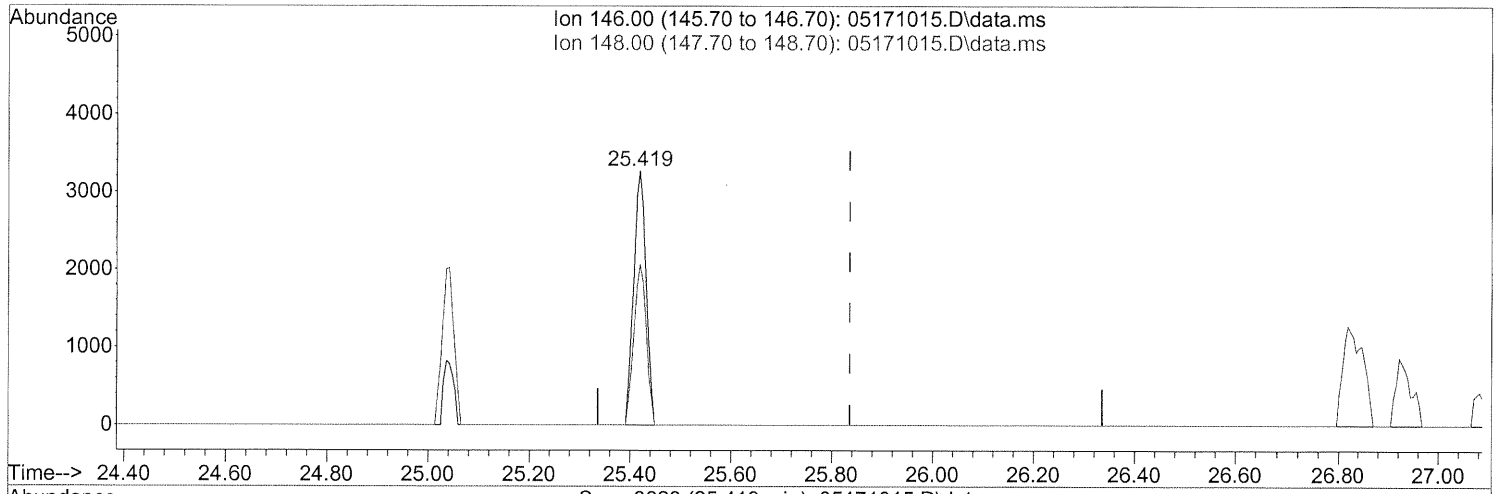
7P

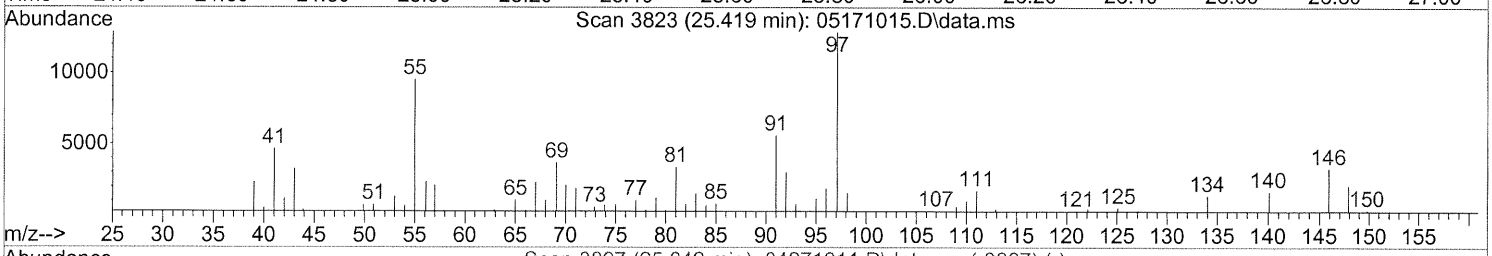
| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 63.70 | 62.88 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

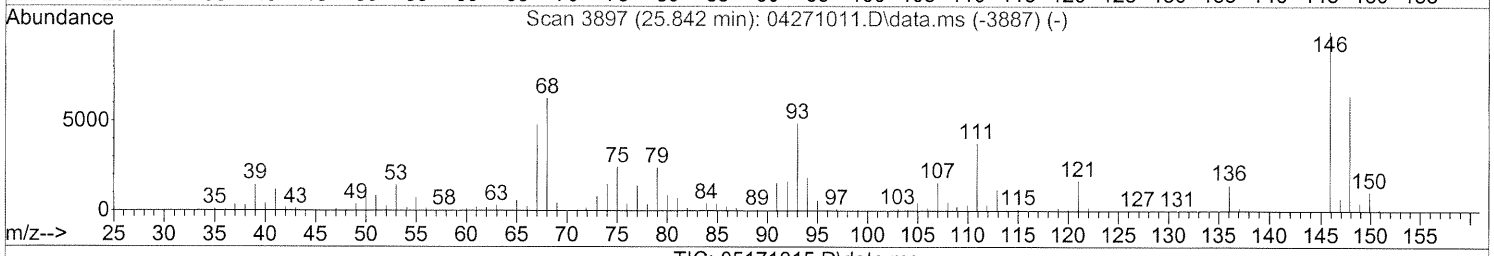
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171015.D\data.ms

(90) 1,2-Dichlorobenzene (T)

25.419min (-0.417) 0.10ng

response 5563

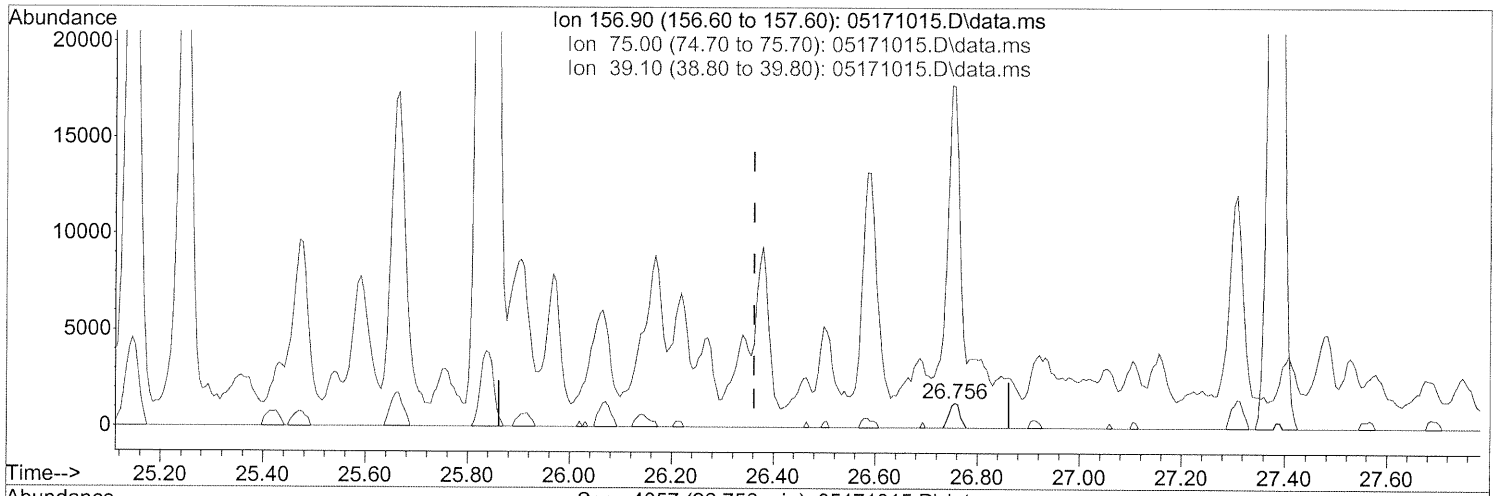
| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 63.60 | 62.88 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

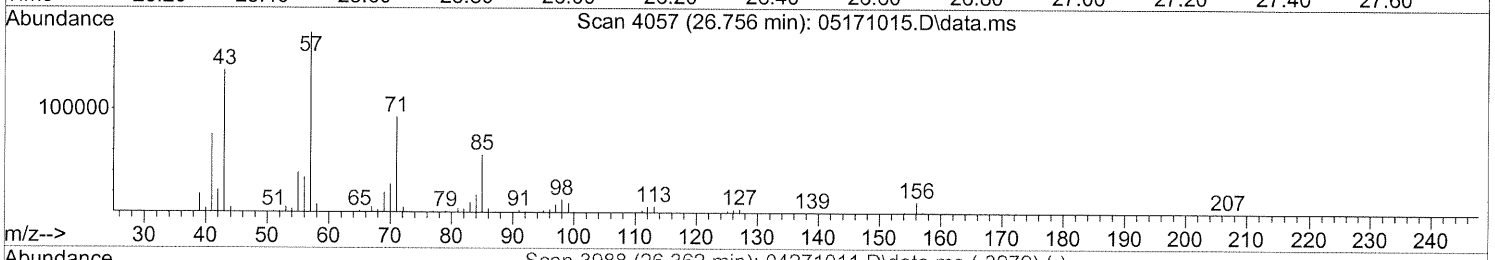
TP

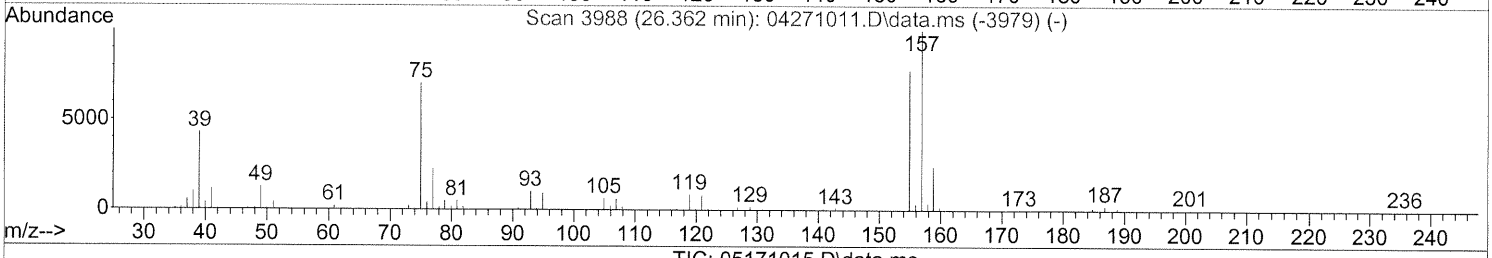
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171015.D\data.ms

(92) 1,2-Dibromo-3-Chloropropane (T)

26.756min (+0.394) 0.10ng

response 1864

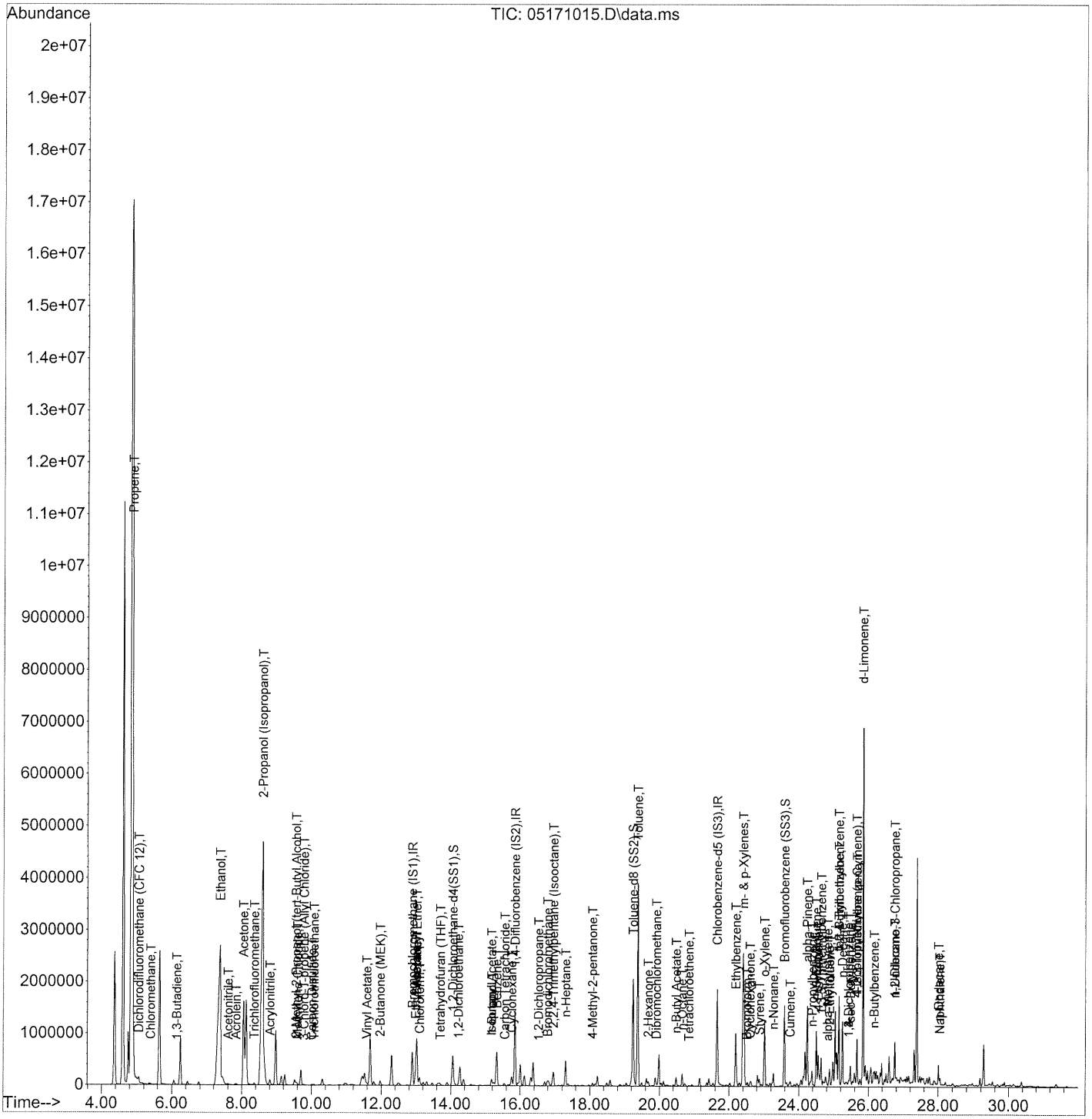
FP

| Ion | Exp% | Act% |
|---|---|---|
| 156.90 | 100 | 100 |
| 75.00 | 110.30 | 0.00# |
| 39.10 | 79.90 | 1430.63# |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 372572 | 25.000 | ng | | 0.01 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1782350 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 748580 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 558758 | 24.849 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.40% | | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1872035 | 24.795 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.16% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 625602 | 23.655 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 94.64% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 1094896 | 51.873 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 5.06 | 85 | 73447 | 1.480 | ng | | 99 |
| 4) Chloromethane | 5.40 | 50 | 19993 | 0.664 | ng | | 98 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.65 | 135 | 1409 | N.D. | | | |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 6.14 | 54 | 2159 | 0.088 | ng | | 90 |
| 8) Bromomethane | 6.64 | 94 | 317 | N.D. | | | |
| 9) Chloroethane | 6.99 | 64 | 763 | N.D. | | | |
| 10) Ethanol | 7.38 | 45 | 8238110 | 640.779 | ng | | 99 |
| 11) Acetonitrile | 7.61 | 41 | 12924 | 0.415 | ng | | 91 |
| 12) Acrolein | 7.83 | 56 | 30086 | 2.373 | ng | | 100 |
| 13) Acetone | 8.05 | 58 | 1061878 | 64.636 | ng | # | 77 |
| 14) Trichlorofluoromethane | 8.36 | 101 | 36671 | 0.812 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.60 | 45 | 12996625 | 271.523 | ng | | 100 |
| 16) Acrylonitrile | 8.81 | 53 | 12408 | 0.496 | ng | # | 7 |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.56 | 59 | 30038 | 0.532 | ng | # | 1 |
| 19) Methylene Chloride | 9.60 | 84 | 5441 | 0.220 | ng | # | 74 |
| 20) 3-Chloro-1-propene (Al... | 9.78 | 41 | 1745 | 0.070 | ng | # | 42 |
| 21) Trichlorotrifluoroethane | 10.07 | 151 | 7347 | 0.324 | ng | # | 74 |
| 22) Carbon Disulfide | 10.01 | 76 | 26872 | 0.337 | ng | | 97 |
| 23) trans-1,2-Dichloroethene | 11.01 | 61 | 88 | N.D. | | | |
| 24) 1,1-Dichloroethane | 11.47 | 63 | 1016 | N.D. | | | |
| 25) Methyl tert-Butyl Ether | 11.50 | 73 | 2848 | N.D. | | | |
| 26) Vinyl Acetate | 11.59 | 86 | 11565 | 2.023 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 39874 | 2.643 | ng | # | 70 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 13.02 | 87 | 8582 | 0.415 | ng | # | 1 |
| 30) Ethyl Acetate | 12.99 | 61 | 57191 | 7.136 | ng | | 82 |
| 31) n-Hexane | 13.02 | 57 | 584299 | 15.297 | ng | # | 96 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.10 | 83 | 138267 | 3.406 ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.70 | 72 | 3051 | 0.208 ng | # | 1 |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 14.22 | 62 | 29509 | 0.969 ng | | 100 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 635 | N.D. | | |
| 39) Isopropyl Acetate | 15.17 | 61 | 2263 | 0.165 ng | # | 1 |
| 40) 1-Butanol | 15.18 | 56 | 103376 | 4.809 ng | | 84 |
| 41) Benzene | 15.33 | 78 | 881902 | 8.691 ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 14557 | 0.467 ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 99993 | 2.647 ng | # | 81 |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | | |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 2895 | 0.131 ng | | 98 |
| 46) Bromodichloromethane | 16.79 | 83 | 52039 | 1.708 ng | | 82 |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | | |
| 48) 1,4-Dioxane | 16.83 | 88 | 897 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 293382 | 3.148 ng | | 94 |
| 50) Methyl Methacrylate | 17.11 | 100 | 461 | N.D. | | |
| 51) n-Heptane | 17.30 | 71 | 158465 | 6.565 ng | | 90 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 17752 | 0.924 ng | | 91 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 18.87 | 97 | 1046 | N.D. | | |
| 58) Toluene | 19.38 | 91 | 3858261 | 36.234 ng | | 98 |
| 59) 2-Hexanone | 19.68 | 43 | 52869 | 1.173 ng | # | 58 |
| 60) Dibromochloromethane | 19.91 | 129 | 16804 | 0.660 ng | | 100 |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.48 | 43 | 129875 | 2.524 ng | | 88 |
| 63) n-Octane | 20.65 | 57 | 47482 | 2.485 ng | # | 83 |
| 64) Tetrachloroethene | 20.85 | 166 | 4790 | 0.144 ng | | 97 |
| 65) Chlorobenzene | 21.70 | 112 | 1276 | N.D. | | |
| 66) Ethylbenzene | 22.19 | 91 | 971752 | 8.327 ng | | 95 |
| 67) m- & p-Xylenes | 22.40 | 91 | 2729213 | 29.596 ng | | 93 |
| 68) Bromoform | 22.51 | 173 | 3084 | 0.129 ng | | 99 |
| 69) Styrene | 22.87 | 104 | 85235 | 1.175 ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 941542 | 10.015 ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 103641 | 2.527 ng | | 91 |
| 72) 1,1,2,2-Tetrachloroethane | 23.02 | 83 | 1842 | N.D. | | |
| 74) Cumene | 23.75 | 105 | 54085 | 0.421 ng | | 95 |
| 75) alpha-Pinene | 24.24 | 93 | 763645 | 12.810 ng | | 93 |
| 76) n-Propylbenzene | 24.38 | 91 | 267503 | 1.795 ng | | 94 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 736422 | 6.259 ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 388111 | 3.274 ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 258222 | 2.669 ng | | 93 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171015.D
Acq On : 17 May 2010 21:06
Operator : LM
Sample : P1001650-003 (1000ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:53 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

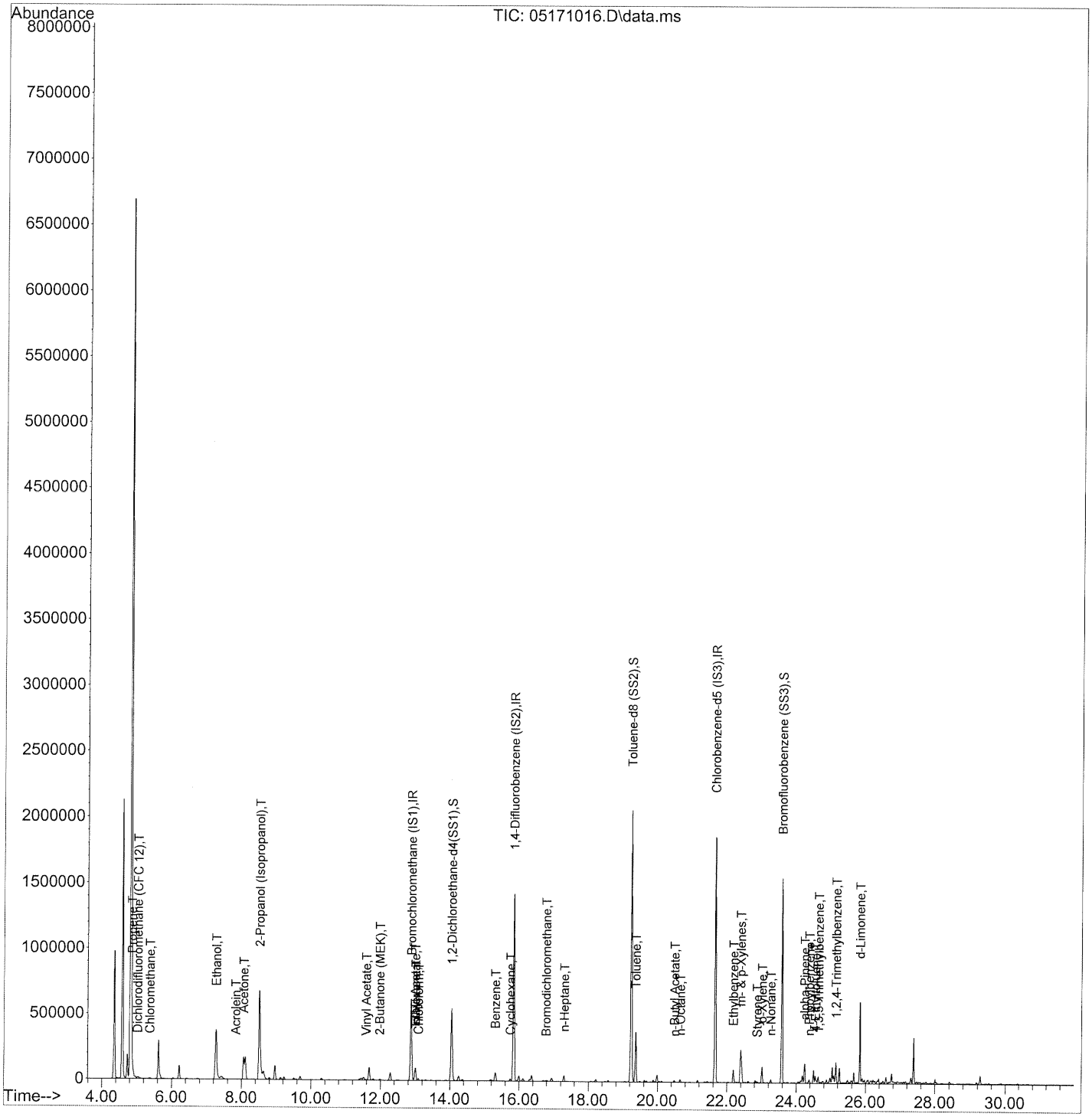
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 2698 | 0.050 ng | | 86 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 233799 | 1.915 ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 976121 | 9.758 ng | | 97 |
| 83) n-Decane | 25.25 | 57 | 441652 | 9.688 ng | | 88 |
| 84) Benzyl Chloride | 25.33 | 91 | 2555 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.42 | 146 | 5563 | 0.091 ng | | 99 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 5563 | 0.088 ng | | 99 |
| 87) sec-Butylbenzene | 25.48 | 105 | 18553 | 0.137 ng | # | 41 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 256976 | 1.989 ng | | 94 |
| 89) 1,2,3-Trimethylbenzene | 25.66 | 105 | 197830 | 1.962 ng | | 90 |
| 90) 1,2-Dichlorobenzene | 25.42 | 146 | 5563 | 0.096 ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 1798913 | 51.786 ng | | 82 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.76 | 157 | 1864 | 0.100 ng | # | 1 |
| 93) n-Undecane | 26.76 | 57 | 281969 | 6.246 ng | | 78 |
| 94) 1,2,4-Trichlorobenzene | 0.00 | 180 | 0 | N.D. | | |
| 95) Naphthalene | 28.05 | 128 | 97708 | 0.769 ng | | 97 |
| 96) n-Dodecane | 28.01 | 57 | 125334 | 2.678 ng | | 92 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.60 | 55 | 33957 | 1.112 ng | # | 74 |
| 99) tert-Butylbenzene | 25.15 | 119 | 123058 | 1.189 ng | # | 57 |
| 100) n-Butylbenzene | 26.16 | 91 | 51710 | 0.502 ng | # | 33 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 16:37:23 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 16:37:23 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 364693 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1763974 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 738630 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 547696 | 24.883 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 99.52% | | ✓ |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1846116 | 24.781 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 99.12% | | ✓ |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 614254 | 23.539 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.16% | | ✓ |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.86 | 42 | 83269 | 4.030 | ng | | 98 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 7290 | 0.150 | ng | # | 95 |
| 4) Chloromethane | 5.37 | 50 | 5490 | 0.186 | ng | | 95 |
| 10) Ethanol | 7.27 | 45 | 775275m | 61.605 | ng | | |
| 12) Acrolein | 7.84 | 56 | 2483 | 0.200 | ng | | 99 |
| 13) Acetone | 8.06 | 58 | 100615 | 6.257 | ng | # | 78 |
| 15) 2-Propanol (Isopropanol) | 8.51 | 45 | 1514333m | 32.321 | ng | | |
| 26) Vinyl Acetate | 11.59 | 86 | 998 | 0.178 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.98 | 72 | 4227 | 0.286 | ng | # | 73 |
| 30) Ethyl Acetate | 12.99 | 61 | 4773 | 0.608 | ng | | 77 |
| 31) n-Hexane | 13.01 | 57 | 54386 | 1.455 | ng | # | 96 |
| 32) Chloroform | 13.09 | 83 | 13328 | 0.335 | ng | | 98 |
| 41) Benzene | 15.31 | 78 | 84370 | 0.840 | ng | | 98 |
| 43) Cyclohexane | 15.75 | 84 | 9316 | 0.249 | ng | # | 81 |
| 46) Bromodichloromethane | 16.78 | 83 | 4807 | 0.159 | ng | | 82 |
| 51) n-Heptane | 17.30 | 71 | 14462 | 0.605 | ng | | 90 |
| 58) Toluene | 19.37 | 91 | 380616 | 3.623 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 11314 | 0.223 | ng | | 91 |
| 63) n-Octane | 20.66 | 57 | 4221 | 0.224 | ng | # | 81 |
| 66) Ethylbenzene | 22.19 | 91 | 91455 | 0.794 | ng | | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 261128 | 2.870 | ng | | 93 |
| 69) Styrene | 22.87 | 104 | 7731 | 0.108 | ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 89498 | 0.965 | ng | | 94 |
| 71) n-Nonane | 23.27 | 43 | 9593 | 0.237 | ng | | 94 |
| 75) alpha-Pinene | 24.24 | 93 | 70869 | 1.205 | ng | | 94 |
| 76) n-Propylbenzene | 24.37 | 91 | 25106 | 0.171 | ng | | 95 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 35480 | 0.303 | ng | | 94 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 24035 | 0.252 | ng | | 94 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 90086 | 0.913 | ng | | 95 |
| 91) d-Limonene | 25.84 | 68 | 157748 | 4.602 | ng | | 81 |



DM 5/19/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 19 16:37:23 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

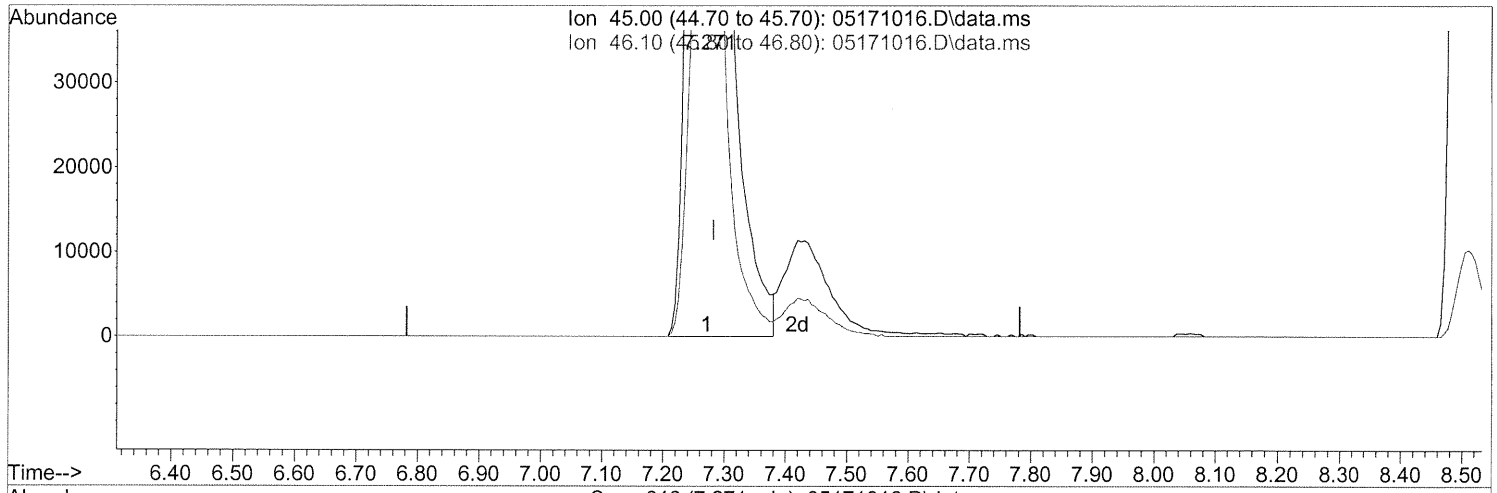
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

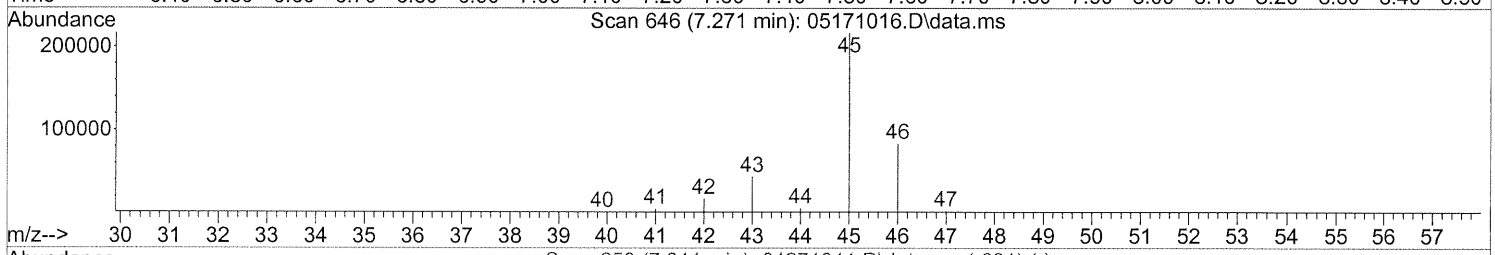
(#) = qualifier out of range (m) = manual integration (+) = signals summed

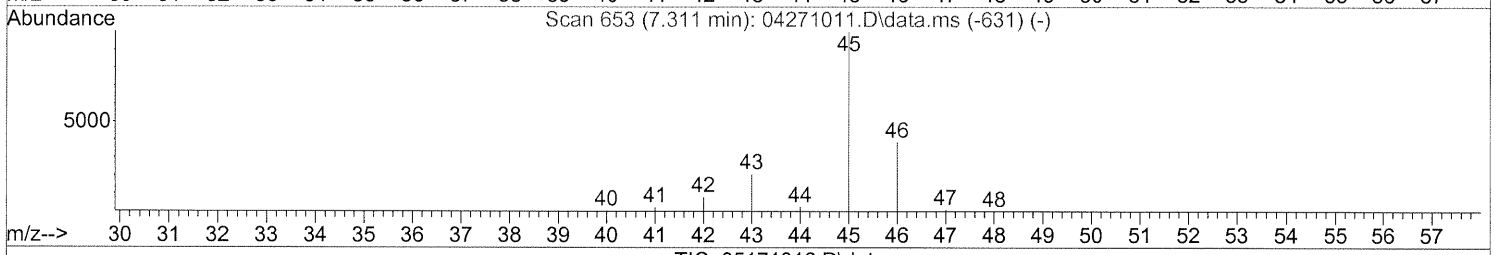
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171016.D\data.ms

(10) Ethanol (T)

7.271min (-0.011) 56.88ng

response 715766

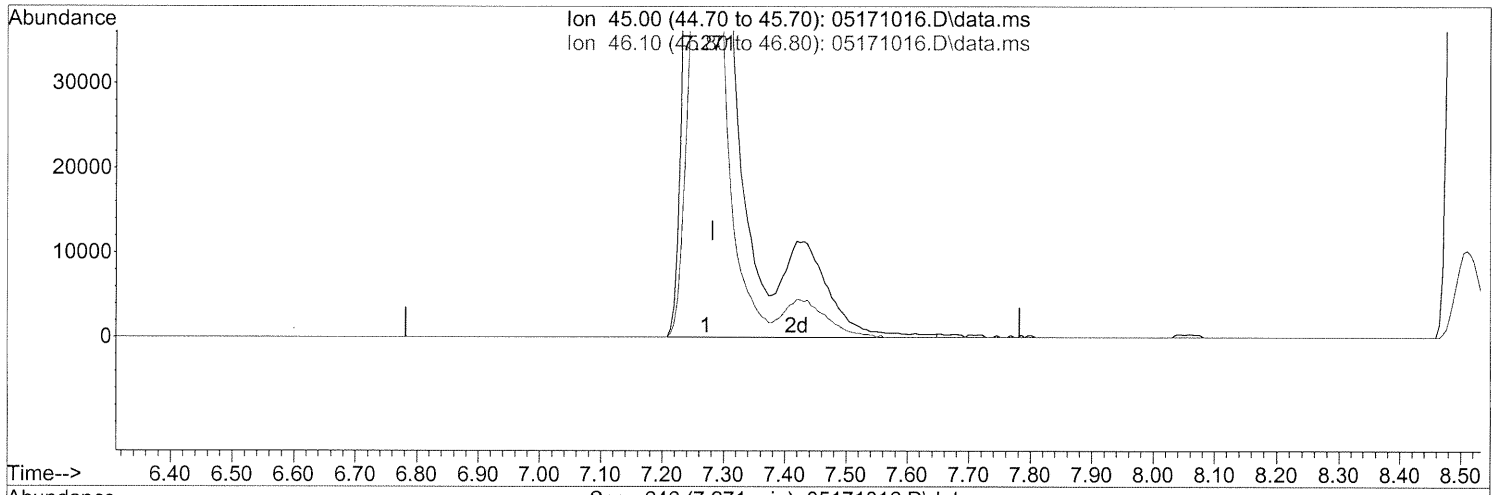
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.61 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

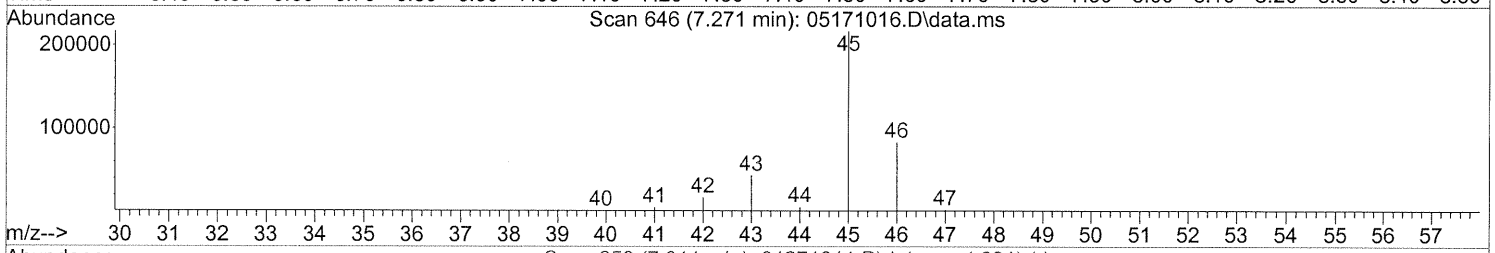
SP

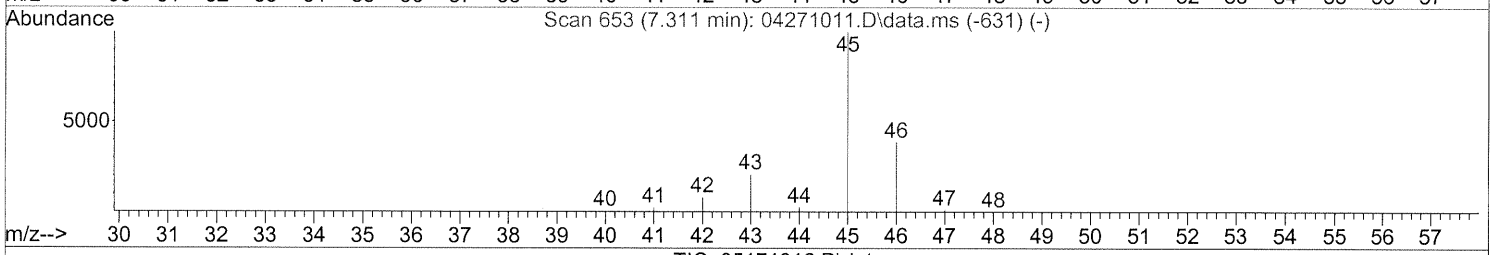
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171016.D\data.ms

(10) Ethanol (T)

7.271min (-0.011) 61.61ng m

response 775275

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 35.64 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP—7K

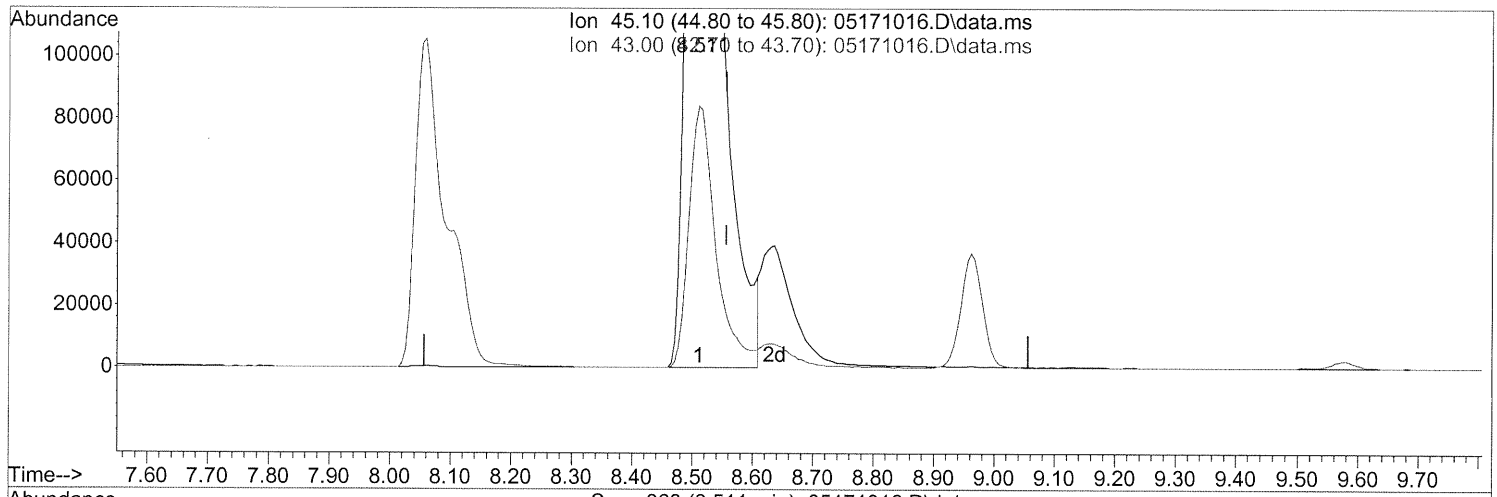
5/19/10

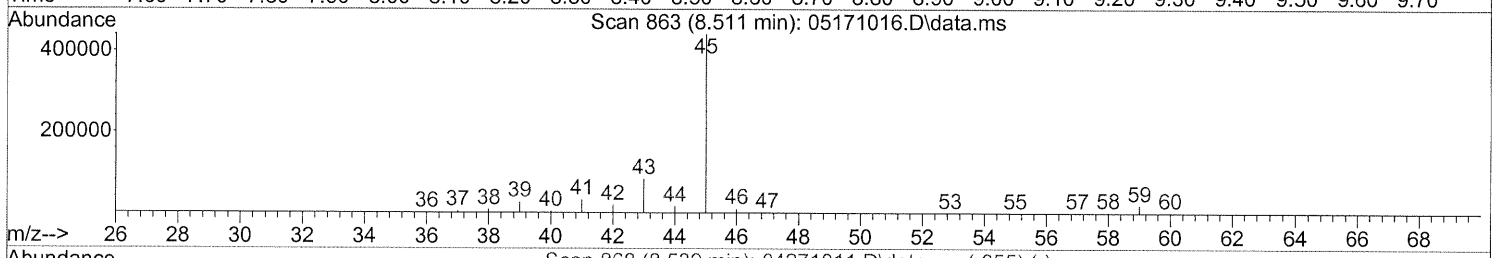
5/20/10

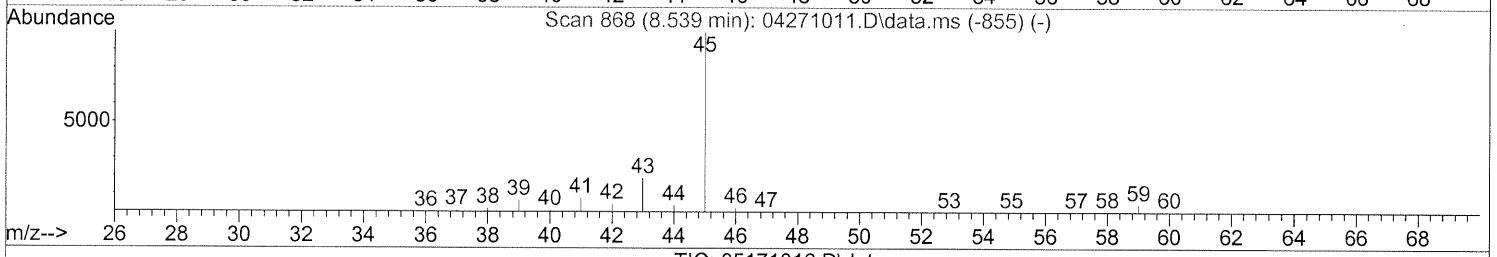
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171016.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.511min (-0.046) 29.23ng

response 1369717

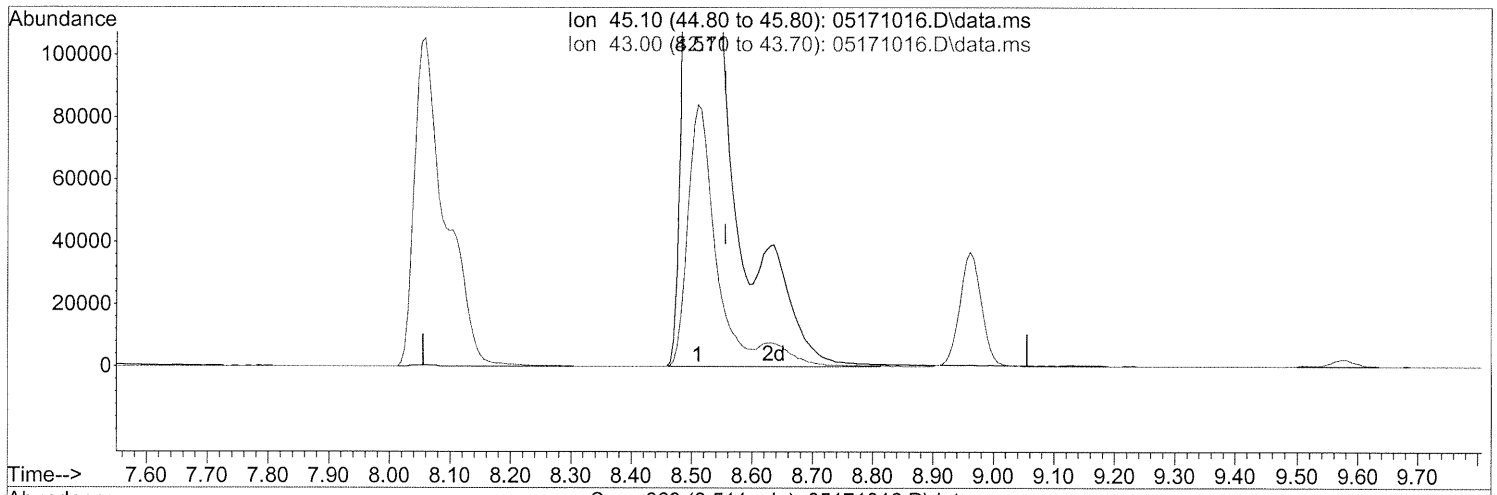
SP

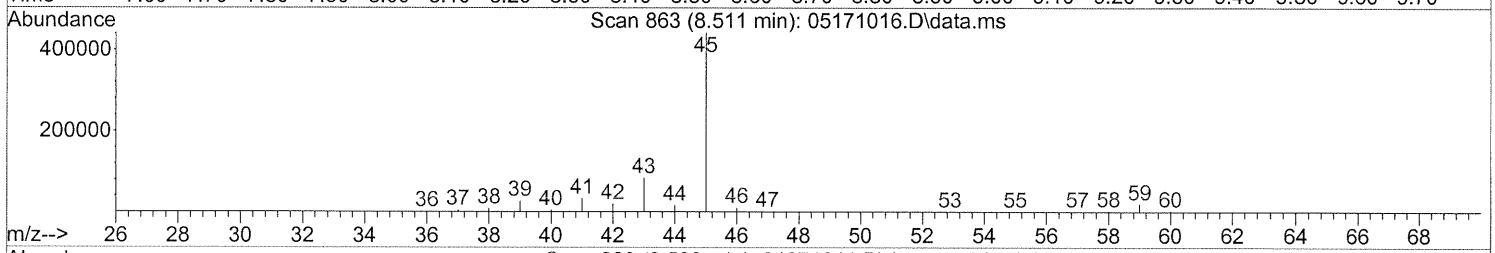
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 19.16 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

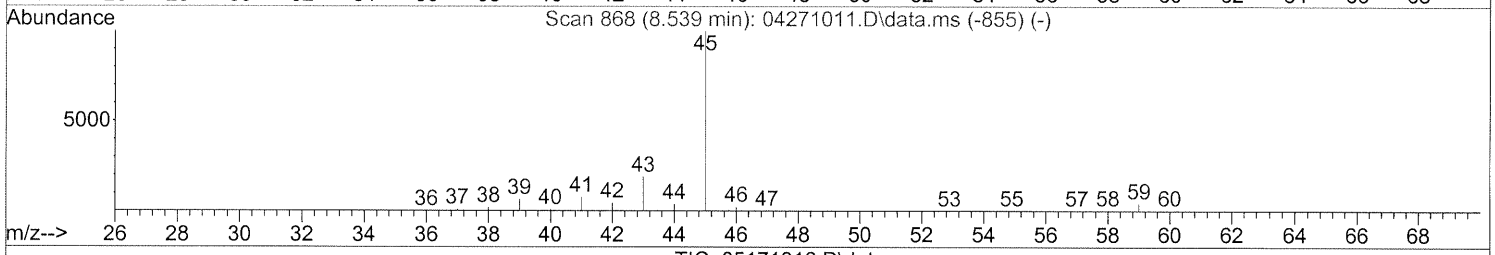
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171016.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.511min (-0.046) 32.32ng m

response 1514333

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 17.33 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → IC

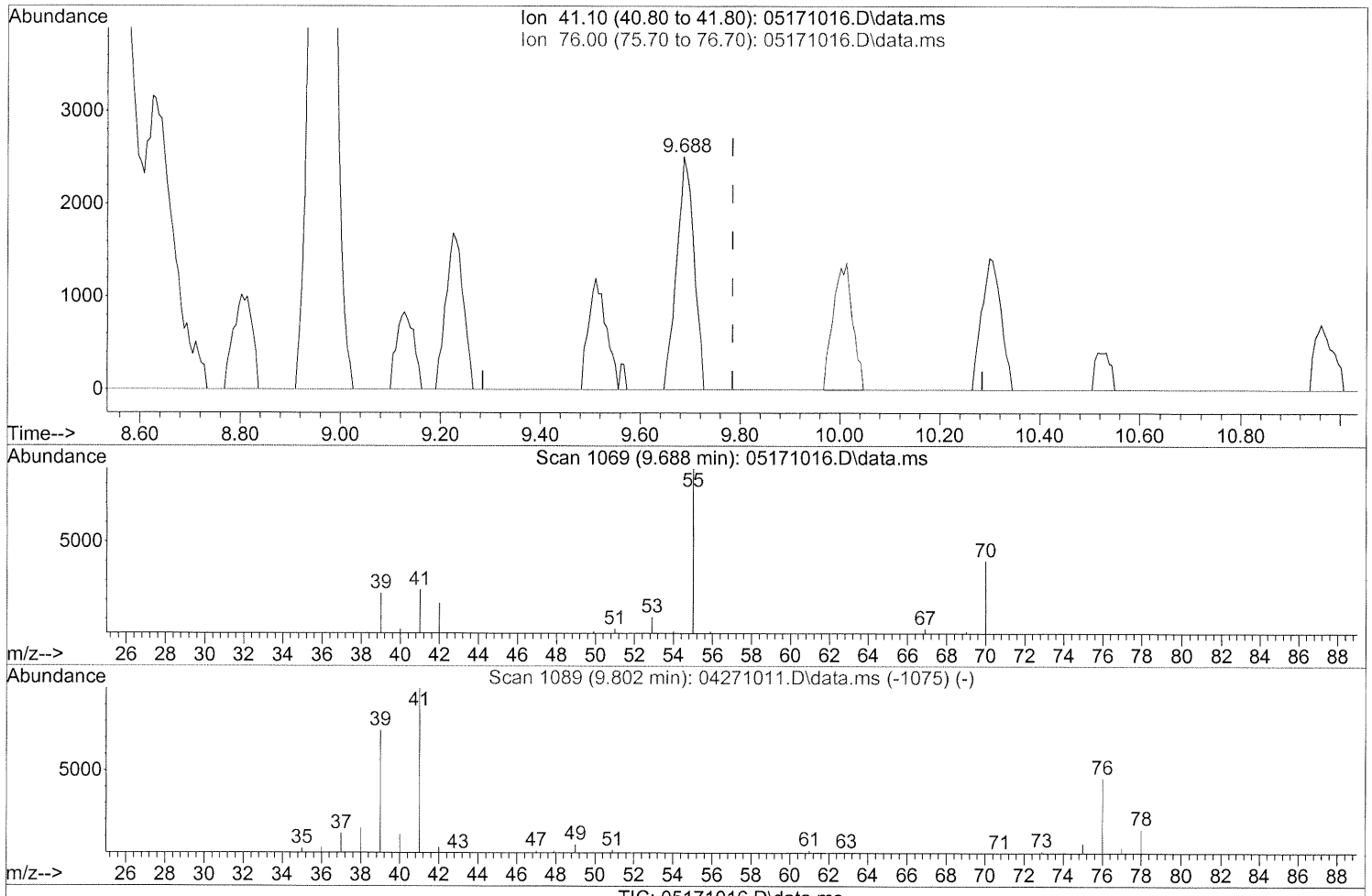
5/19/10

5/20/10

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171016.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.688min (-0.097) 0.25ng

response 6051

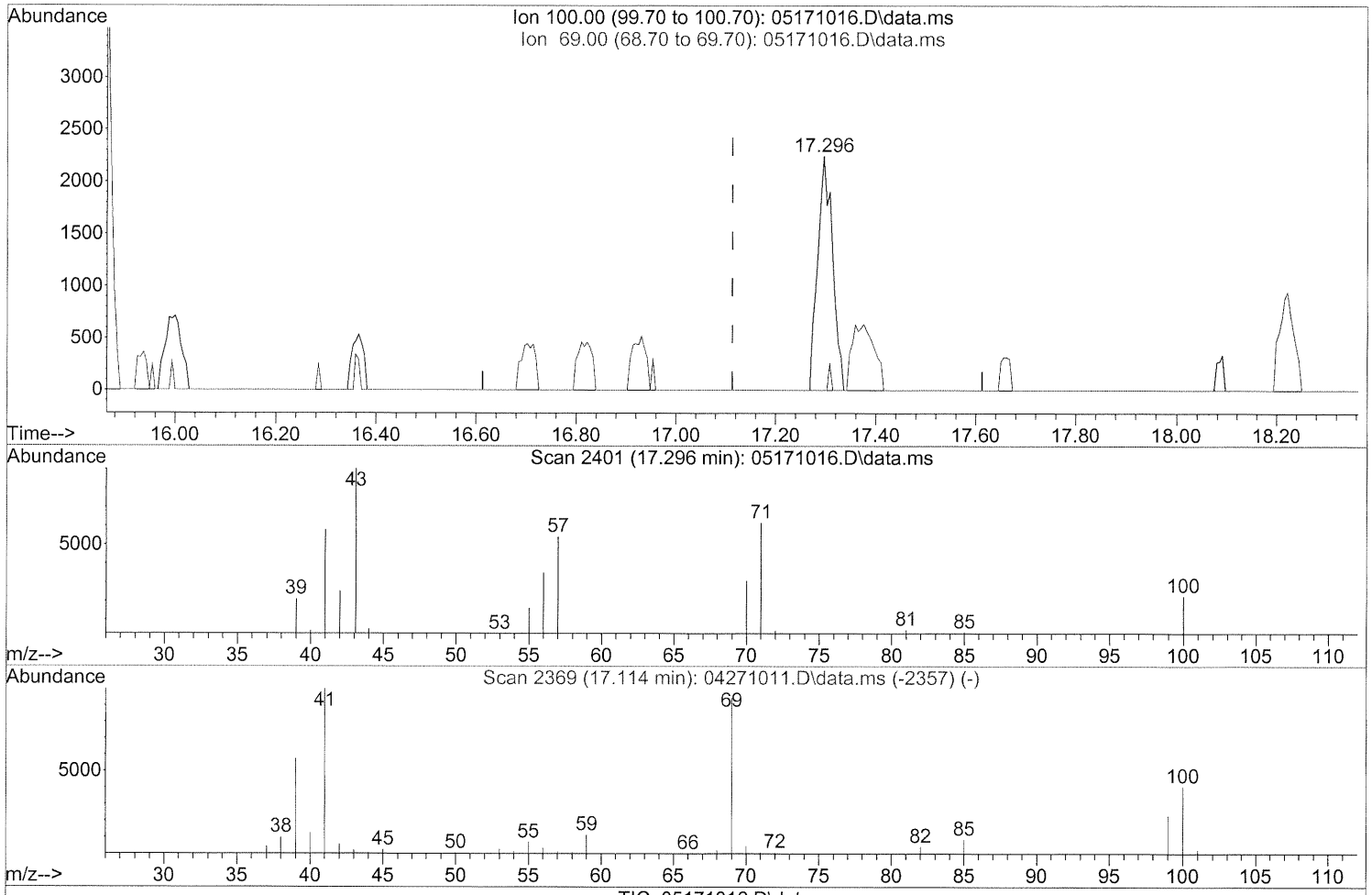
| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 76.00 | 32.80 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Tp

# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171016.D\data.ms

(50) Methyl Methacrylate (T)

17.296min (+0.183) 0.44ng

response 4676

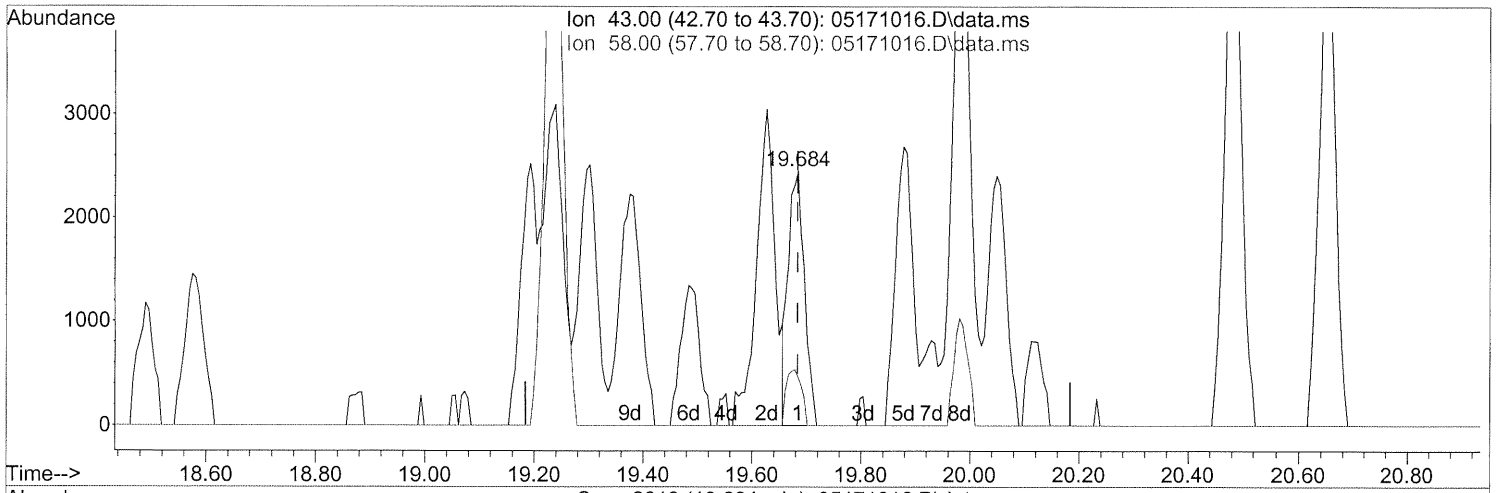
| Ion | Exp% | Act% |
|---|---|---|
| 100.00 | 100 | 100 |
| 69.00 | 311.50 | 1.88# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

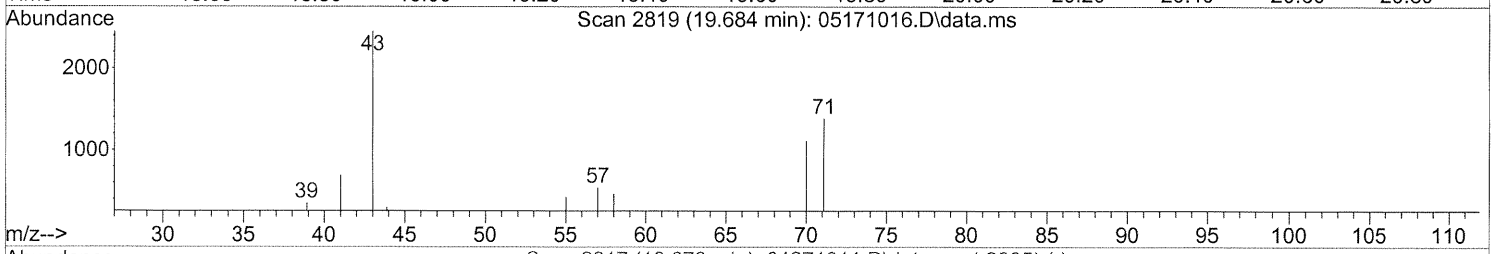
FP

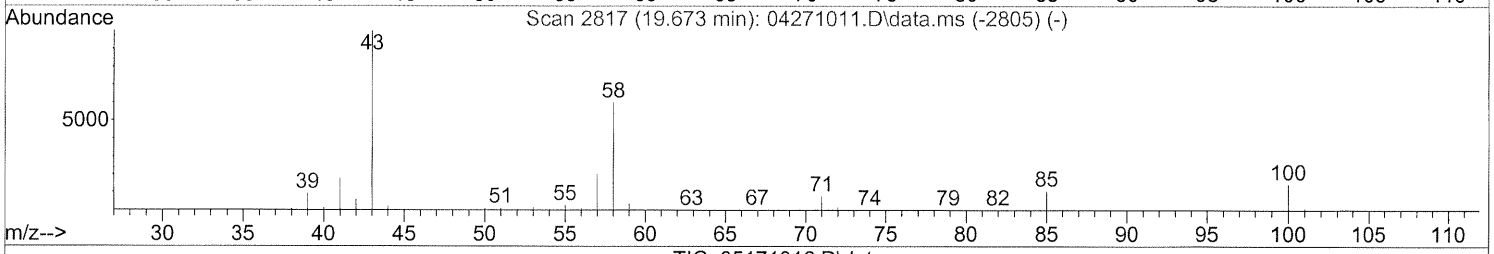
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171016.D\data.ms

(59) 2-Hexanone (T)

19.684min (+0.000) 0.11ng

response 5055

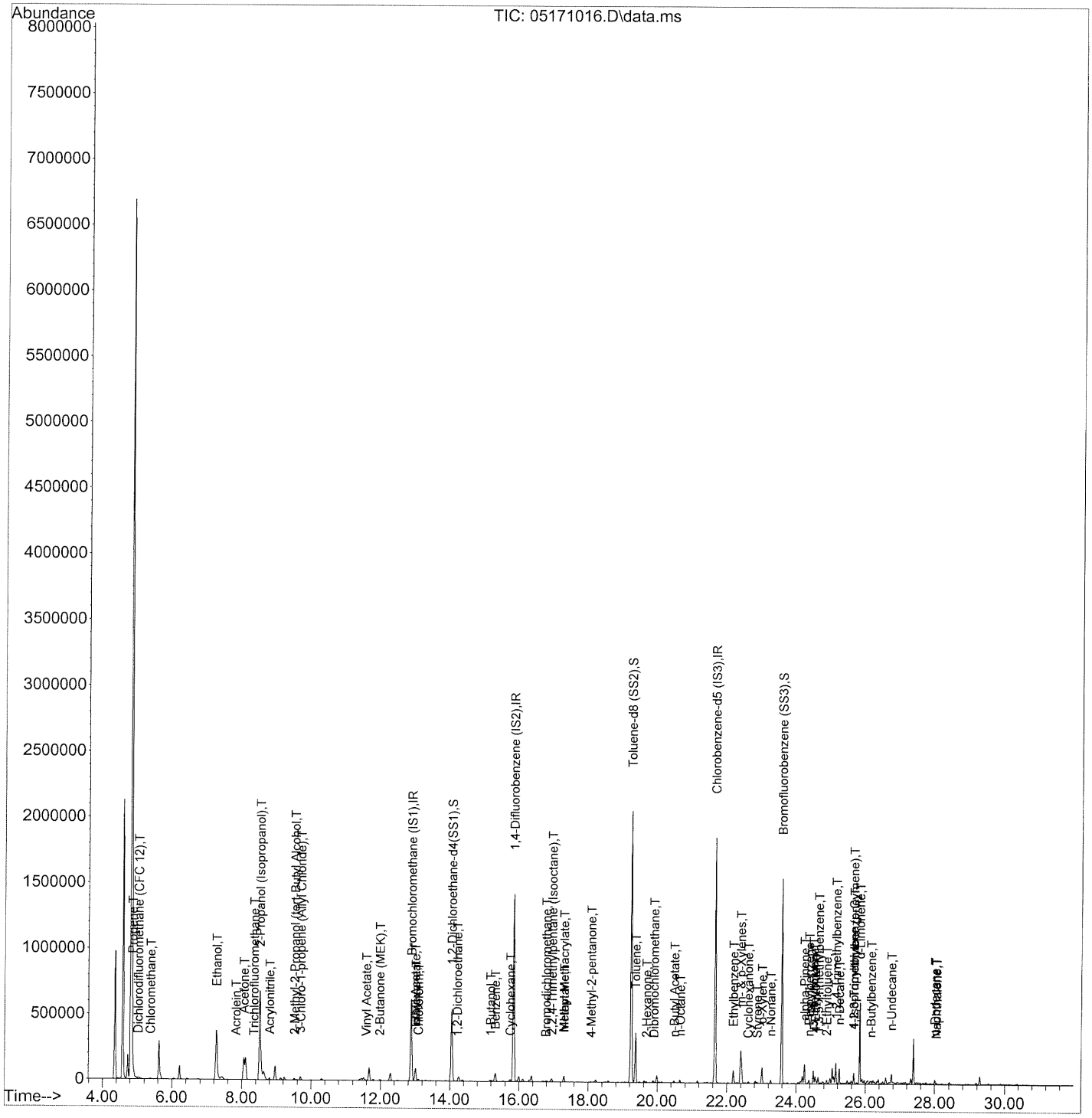
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 58.00 | 53.30 | 20.42# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 364693 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1763974 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 738630 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 547696 | 24.883 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.52% | | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1846116 | 24.781 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.12% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 614254 | 23.539 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 94.16% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.86 | 42 | 83269 | 4.030 | ng | | 98 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 7290 | 0.150 | ng | # | 95 |
| 4) Chloromethane | 5.37 | 50 | 5490 | 0.186 | ng | | 95 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 0.00 | 135 | 0 | N.D. | | | |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 0.00 | 54 | 0 | N.D. | | | |
| 8) Bromomethane | 0.00 | 94 | 0 | N.D. | | | |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | | | |
| 10) Ethanol | 7.27 | 45 | 715766 | 56.877 | ng | | 100 |
| 11) Acetonitrile | 7.61 | 41 | 1020 | N.D. | | | |
| 12) Acrolein | 7.84 | 56 | 2483 | 0.200 | ng | | 99 |
| 13) Acetone | 8.06 | 58 | 100615 | 6.257 | ng | # | 78 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 3425 | 0.077 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.51 | 45 | 1369717 | 29.234 | ng | | 100 |
| 16) Acrylonitrile | 8.80 | 53 | 1321 | 0.054 | ng | # | 7 |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.52 | 59 | 7432 | 0.134 | ng | | 73 |
| 19) Methylene Chloride | 9.59 | 84 | 831 | N.D. | | | |
| 20) 3-Chloro-1-propene (Al... | 9.69 | 41 | 6051 | 0.248 | ng | # | 42 |
| 21) Trichlorotrifluoroethane | 10.05 | 151 | 214 | N.D. | | | |
| 22) Carbon Disulfide | 10.01 | 76 | 3689 | N.D. | | | |
| 23) trans-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 24) 1,1-Dichloroethane | 0.00 | 63 | 0 | N.D. | | | |
| 25) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | | | |
| 26) Vinyl Acetate | 11.59 | 86 | 998 | 0.178 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.98 | 72 | 4227 | 0.286 | ng | # | 73 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 12.99 | 87 | 300 | N.D. | | | |
| 30) Ethyl Acetate | 12.99 | 61 | 4773 | 0.608 | ng | | 77 |
| 31) n-Hexane | 13.01 | 57 | 54386 | 1.455 | ng | # | 96 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.09 | 83 | 13328 | 0.335 ng | | 98 |
| 34) Tetrahydrofuran (THF) | 0.00 | 72 | 0 | N.D. | | |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 2524 | 0.085 ng | | 80 |
| 38) 1,1,1-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 39) Isopropyl Acetate | 0.00 | 61 | 0 | N.D. | | |
| 40) 1-Butanol | 15.18 | 56 | 9673 | 0.455 ng | | 86 |
| 41) Benzene | 15.31 | 78 | 84370 | 0.840 ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 1084 | N.D. | | |
| 43) Cyclohexane | 15.75 | 84 | 9316 | 0.249 ng | # | 81 |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | | |
| 45) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | | |
| 46) Bromodichloromethane | 16.78 | 83 | 4807 | 0.159 ng | | 82 |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | | |
| 48) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 27019 | 0.293 ng | | 91 |
| 50) Methyl Methacrylate | 17.30 | 100 | 4676 | 0.439 ng | # | 1 |
| 51) n-Heptane | 17.30 | 71 | 14462 | 0.605 ng | | 90 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 1418 | 0.075 ng | # | 85 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 58) Toluene | 19.37 | 91 | 380616 | 3.623 ng | | 99 |
| 59) 2-Hexanone | 19.68 | 43 | 5055 | 0.114 ng | # | 54 |
| 60) Dibromochloromethane | 19.90 | 129 | 1441 | 0.057 ng | | 88 |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.48 | 43 | 11314 | 0.223 ng | | 91 |
| 63) n-Octane | 20.66 | 57 | 4221 | 0.224 ng | # | 81 |
| 64) Tetrachloroethene | 20.84 | 166 | 91 | N.D. | | |
| 65) Chlorobenzene | 0.00 | 112 | 0 | N.D. | | |
| 66) Ethylbenzene | 22.19 | 91 | 91455 | 0.794 ng | | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 261128 | 2.870 ng | | 93 |
| 68) Bromoform | 0.00 | 173 | 0 | N.D. | | |
| 69) Styrene | 22.87 | 104 | 7731 | 0.108 ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 89498 | 0.965 ng | | 94 |
| 71) n-Nonane | 23.27 | 43 | 9593 | 0.237 ng | | 94 |
| 72) 1,1,2,2-Tetrachloroethane | 23.08 | 83 | 87 | N.D. | | |
| 74) Cumene | 23.75 | 105 | 5968 | N.D. | | |
| 75) alpha-Pinene | 24.24 | 93 | 70869 | 1.205 ng | | 94 |
| 76) n-Propylbenzene | 24.37 | 91 | 25106 | 0.171 ng | | 95 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 68815 | 0.593 ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 35480 | 0.303 ng | | 94 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 24035 | 0.252 ng | | 94 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171016.D
Acq On : 17 May 2010 21:48
Operator : LM
Sample : P1001650-003 dil (100ml)
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 18 04:02:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 25.04 | 118 | 1719 | N.D. | | |
| 81) 2-Ethyltoluene | 24.88 | 105 | 21700 | 0.180 ng | | 96 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 90086 | 0.913 ng | | 95 |
| 83) n-Decane | 25.25 | 57 | 40605 | 0.903 ng | | 87 |
| 84) Benzyl Chloride | 25.42 | 91 | 1003 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.43 | 146 | 297 | N.D. | | |
| 86) 1,4-Dichlorobenzene | 25.43 | 146 | 297 | N.D. | | |
| 87) sec-Butylbenzene | 25.48 | 105 | 1687 | N.D. | | |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 24033 | 0.189 ng | | 95 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 18318 | 0.184 ng | | 92 |
| 90) 1,2-Dichlorobenzene | 25.43 | 146 | 297 | N.D. | | |
| 91) d-Limonene | 25.84 | 68 | 157748 | 4.602 ng | | 81 |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 93) n-Undecane | 26.75 | 57 | 24152 | 0.542 ng | # | 66 |
| 94) 1,2,4-Trichlorobenzene | 0.00 | 180 | 0 | N.D. | | |
| 95) Naphthalene | 28.05 | 128 | 8825 | 0.070 ng | | 97 |
| 96) n-Dodecane | 28.01 | 57 | 11587 | 0.251 ng | | 94 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.61 | 55 | 3962 | 0.131 ng | # | 78 |
| 99) tert-Butylbenzene | 25.59 | 119 | 2394 | N.D. | | |
| 100) n-Butylbenzene | 26.16 | 91 | 5316 | 0.052 ng | # | 61 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110357**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P1001650-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01309

Date Collected: 5/9/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.7 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | ND | 0.83 | ND | 0.48 | |
| 75-71-8 | **Dichlorodifluoromethane (CFC 12)** | **2.0** | 0.83 | **0.41** | 0.17 | |
| 74-87-3 | **Chloromethane** | **0.38** | 0.33 | **0.18** | 0.16 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.83 | ND | 0.12 | |
| 75-01-4 | Vinyl Chloride | ND | 0.17 | ND | 0.065 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.33 | ND | 0.15 | |
| 74-83-9 | Bromomethane | ND | 0.17 | ND | 0.043 | |
| 75-00-3 | Chloroethane | ND | 0.17 | ND | 0.063 | |
| 64-17-5 | Ethanol | ND | 8.3 | ND | 4.4 | |
| 75-05-8 | Acetonitrile | ND | 0.83 | ND | 0.49 | |
| 107-02-8 | Acrolein | ND | 3.3 | ND | 1.4 | |
| 67-64-1 | **Acetone** | **9.7** | 8.3 | **4.1** | 3.5 | |
| 75-69-4 | **Trichlorofluoromethane** | **1.0** | 0.17 | **0.18** | 0.029 | |
| 67-63-0 | 2-Propanol (Isopropyl Alcohol) | ND | 1.7 | ND | 0.67 | |
| 107-13-1 | Acrylonitrile | ND | 0.83 | ND | 0.38 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.17 | ND | 0.042 | |
| 75-09-2 | Methylene Chloride | ND | 0.83 | ND | 0.24 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.17 | ND | 0.053 | |
| 76-13-1 | **Trichlorotrifluoroethane** | **0.48** | 0.17 | **0.062** | 0.022 | |
| 75-15-0 | Carbon Disulfide | ND | 8.3 | ND | 2.7 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.17 | ND | 0.042 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.17 | ND | 0.041 | |
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 0.17 | ND | 0.046 | |
| 108-05-4 | Vinyl Acetate | ND | 8.3 | ND | 2.3 | |
| 78-93-3 | 2-Butanone (MEK) | ND | 8.3 | ND | 2.8 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Res Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110357** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P1001650-004

Test Code: EPA TO-15 Date Collected: 5/9/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 5/11/10
Analyst: Liliana Marghitoiu Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01309

Initial Pressure (psig): -3.7 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.17 | ND | 0.042 | |
| 141-78-6 | Ethyl Acetate | ND | 0.83 | ND | 0.23 | |
| 110-54-3 | n-Hexane | ND | 0.83 | ND | 0.23 | |
| 67-66-3 | Chloroform | ND | 0.17 | ND | 0.034 | |
| 109-99-9 | Tetrahydrofuran (THF) | ND | 0.83 | ND | 0.28 | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.17 | ND | 0.041 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.17 | ND | 0.030 | |
| 71-43-2 | **Benzene** | **0.22** | 0.17 | **0.070** | 0.052 | |
| 56-23-5 | **Carbon Tetrachloride** | **0.43** | 0.17 | **0.068** | 0.026 | |
| 110-82-7 | Cyclohexane | ND | 0.83 | ND | 0.24 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.17 | ND | 0.036 | |
| 75-27-4 | Bromodichloromethane | ND | 0.17 | ND | 0.025 | |
| 79-01-6 | Trichloroethene | ND | 0.17 | ND | 0.031 | |
| 123-91-1 | 1,4-Dioxane | ND | 0.83 | ND | 0.23 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.83 | ND | 0.20 | |
| 142-82-5 | n-Heptane | ND | 0.83 | ND | 0.20 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.83 | ND | 0.18 | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.83 | ND | 0.20 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.83 | ND | 0.18 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.17 | ND | 0.030 | |
| 108-88-3 | Toluene | ND | 0.83 | ND | 0.22 | |
| 591-78-6 | 2-Hexanone | ND | 0.83 | ND | 0.20 | |
| 124-48-1 | Dibromochloromethane | ND | 0.17 | ND | 0.019 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.17 | ND | 0.021 | |
| 123-86-4 | n-Butyl Acetate | ND | 0.83 | ND | 0.17 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Rev Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110357**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P1001650-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01309

Date Collected: 5/9/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.7 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | n-Octane | ND | 0.83 | ND | 0.18 | |
| 127-18-4 | Tetrachloroethene | ND | 0.17 | ND | 0.024 | |
| 108-90-7 | Chlorobenzene | ND | 0.17 | ND | 0.036 | |
| 100-41-4 | Ethylbenzene | ND | 0.83 | ND | 0.19 | |
| 179601-23-1 | m,p-Xylenes | ND | 0.83 | ND | 0.19 | |
| 75-25-2 | Bromoform | ND | 0.83 | ND | 0.080 | |
| 100-42-5 | Styrene | ND | 0.83 | ND | 0.19 | |
| 95-47-6 | o-Xylene | ND | 0.83 | ND | 0.19 | |
| 111-84-2 | n-Nonane | ND | 0.83 | ND | 0.16 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.17 | ND | 0.024 | |
| 98-82-8 | Cumene | ND | 0.83 | ND | 0.17 | |
| 80-56-8 | alpha-Pinene | ND | 0.83 | ND | 0.15 | |
| 103-65-1 | n-Propylbenzene | ND | 0.83 | ND | 0.17 | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.83 | ND | 0.17 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.83 | ND | 0.17 | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 0.83 | ND | 0.17 | |
| 100-44-7 | Benzyl Chloride | ND | 0.83 | ND | 0.16 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.17 | ND | 0.027 | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.17 | ND | 0.027 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.17 | ND | 0.027 | |
| 5989-27-5 | d-Limonene | ND | 0.83 | ND | 0.15 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.83 | ND | 0.085 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.83 | ND | 0.11 | |
| 91-20-3 | Naphthalene | ND | 0.83 | ND | 0.16 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.83 | ND | 0.077 | |

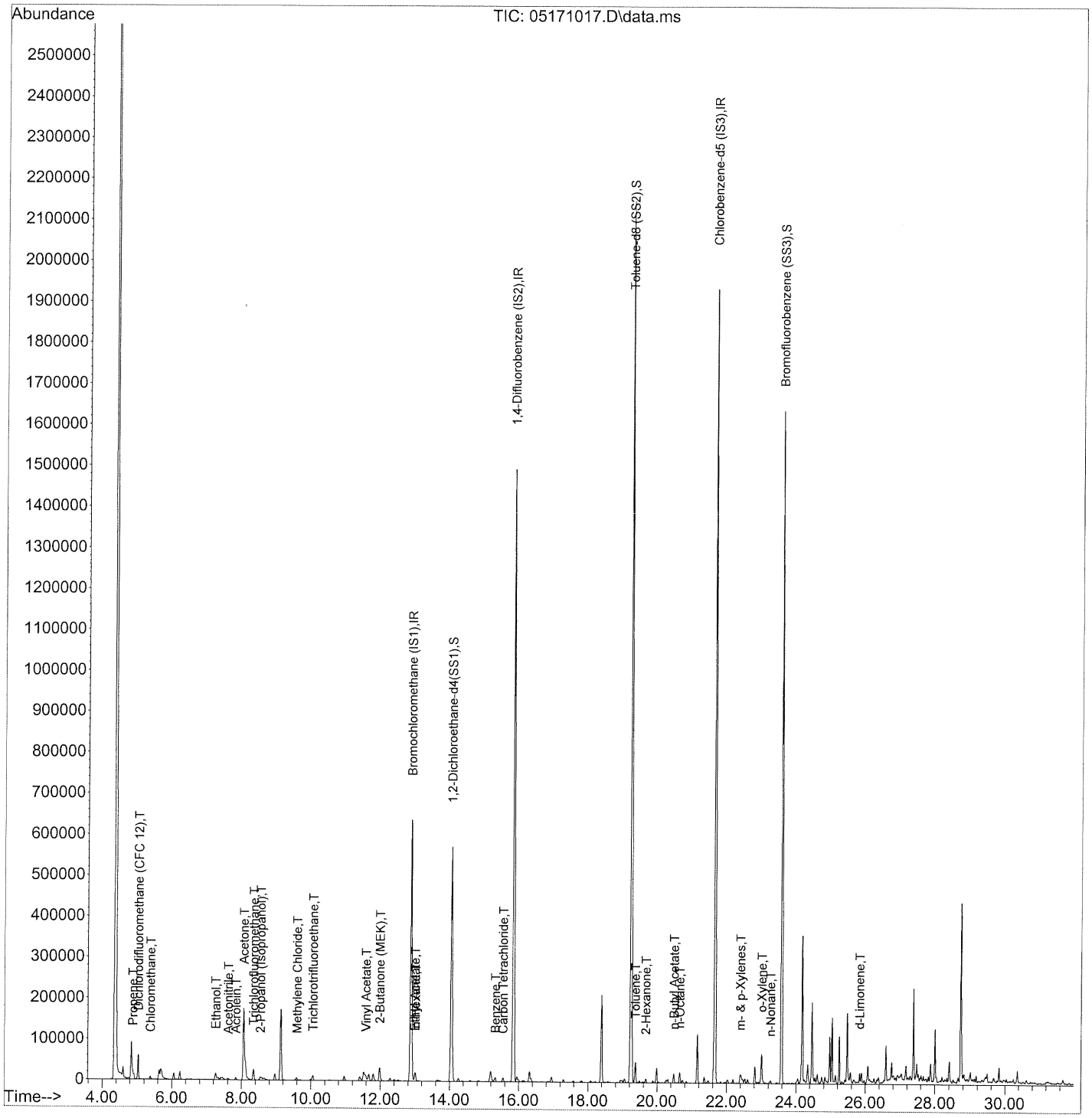
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Re Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 19 16:48:57 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



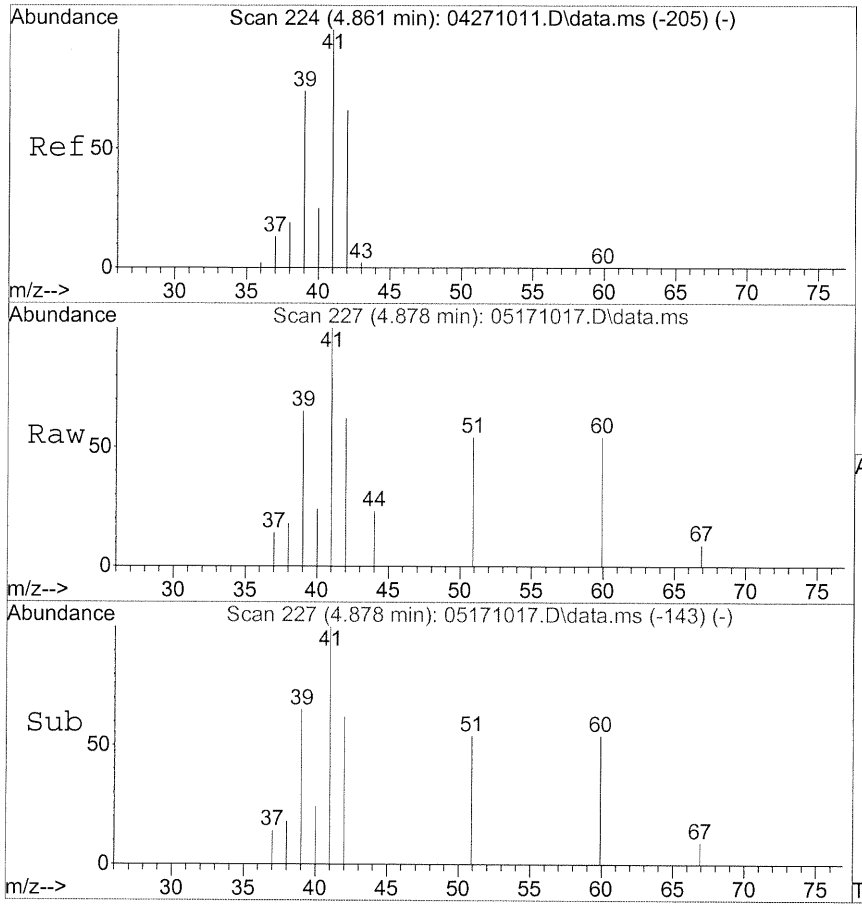
Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 19 16:48:57 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 378765 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1833578 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 772951 | 25.000 | ng | | 0.00 |
| System Monitoring Compounds | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 573404 | 25.083 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 100.32% | | ✓ |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1934850 | 24.819 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 99.28% | | ✓ |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 642282 | 23.520 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.08% | | ✓ |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 7239 | 0.337 | ng | # | 74 |
| 3) Dichlorodifluoromethan... | 5.04 | 85 | 62415 | 1.237 | ng | | 100 |
| 4) Chloromethane | 5.38 | 50 | 7012 | 0.229 | ng | | 98 |
| 10) Ethanol | 7.26 | 45 | 51919m | 3.972 | ng | | |
| 11) Acetonitrile | 7.61 | 41 | 5588 | 0.176 | ng | | 92 |
| 12) Acrolein | 7.83 | 56 | 6505 | 0.505 | ng | | 99 |
| 13) Acetone | 8.06 | 58 | 98414m | 5.892 | ng | | |
| 14) Trichlorofluoromethane | 8.35 | 101 | 28556 | 0.622 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.54 | 45 | 28417m | 0.584 | ng | | |
| 19) Methylene Chloride | 9.60 | 84 | 2647 | 0.105 | ng | # | 77 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 6659 | 0.289 | ng | # | 78 |
| 26) Vinyl Acetate | 11.59 | 86 | 5625 | 0.968 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.98 | 72 | 16868 | 1.100 | ng | # | 71 |
| 30) Ethyl Acetate | 13.00 | 61 | 909 | 0.112 | ng | | 90 |
| 31) n-Hexane | 13.01 | 57 | 10623 | 0.274 | ng | | 99 |
| 41) Benzene | 15.32 | 78 | 14212 | 0.136 | ng | | 97 |
| 42) Carbon Tetrachloride | 15.54 | 117 | 8332 | 0.260 | ng | | 99 |
| 58) Toluene | 19.37 | 91 | 46060 | 0.419 | ng | | 99 |
| 59) 2-Hexanone | 19.67 | 43 | 7780 | 0.167 | ng | | 90 |
| 62) n-Butyl Acetate | 20.48 | 43 | 20421 | 0.384 | ng | | 94 |
| 63) n-Octane | 20.65 | 57 | 5230 | 0.265 | ng | | 88 |
| 67) m- & p-Xylenes | 22.40 | 91 | 22402 | 0.235 | ng | | 91 |
| 70) o-Xylene | 23.01 | 91 | 9339 | 0.096 | ng | | 87 |
| 71) n-Nonane | 23.27 | 43 | 4680 | 0.111 | ng | | 90 |
| 91) d-Limonene | 25.84 | 68 | 6138 | 0.171 | ng | # | 74 |

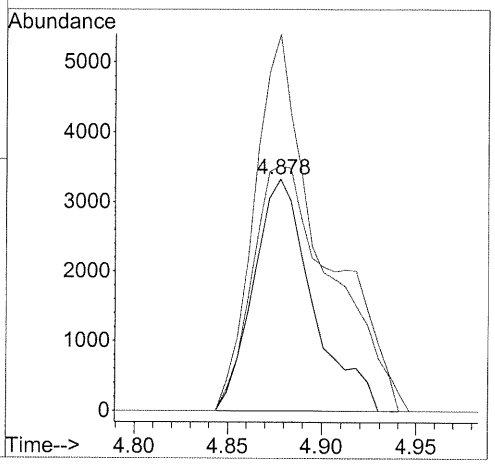
(#) = qualifier out of range (m) = manual integration (+) = signals summed

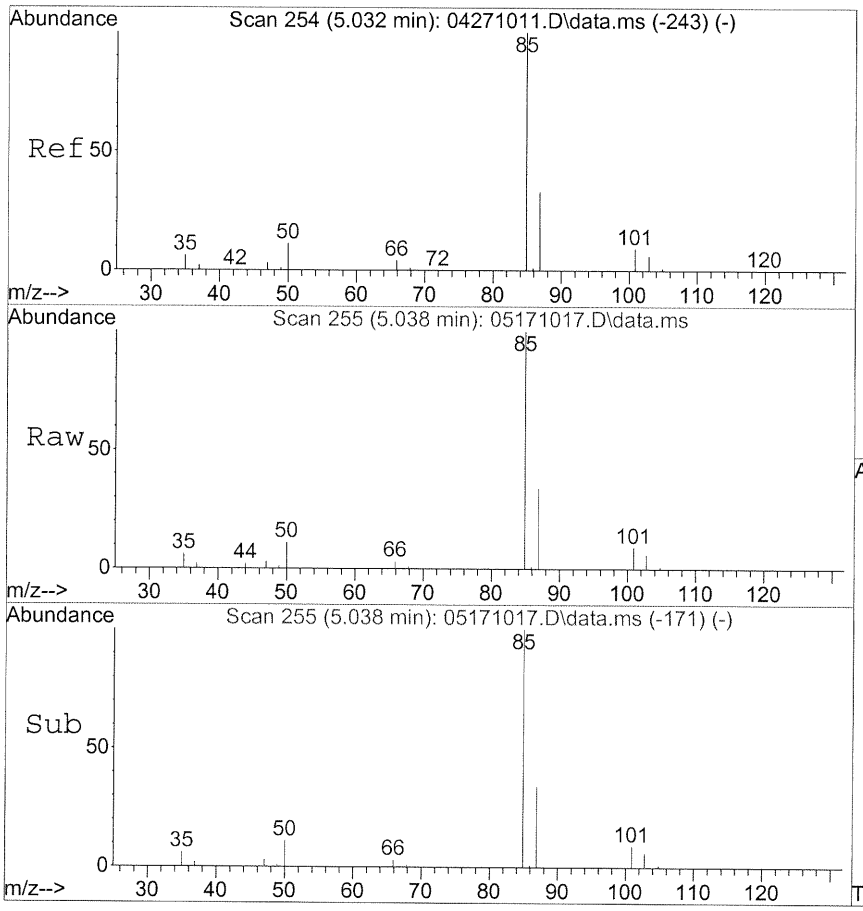



#2
Propene
Concen: 0.34 ng
RT: 4.88 min Scan# 227
Delta R.T. -0.023 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 42 Resp: 7239

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 39 | 151.1 | 92.2 | 132.2# |
| 41 | 176.7 | 133.9 | 173.9# |

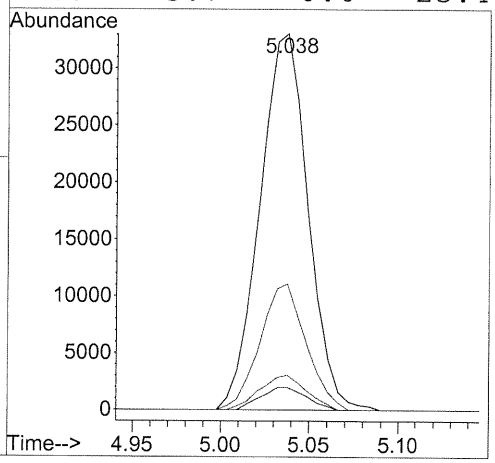


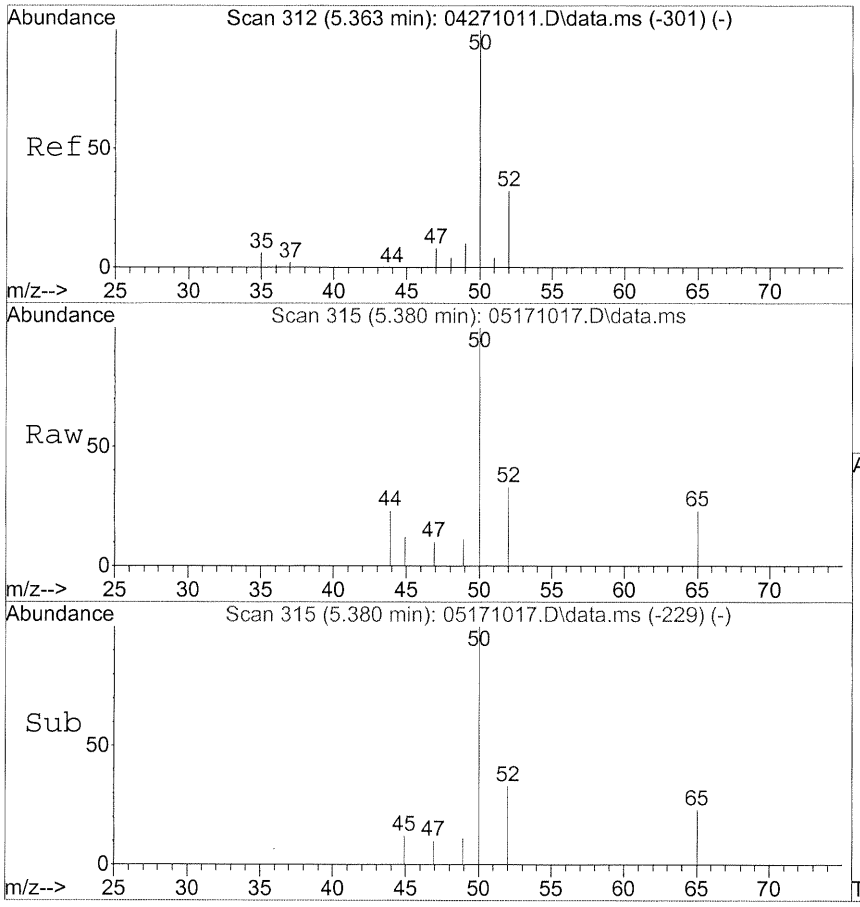




#3
Dichlorodifluoromethane (CFC
Concen: 1.24 ng
RT: 5.04 min Scan# 255
Delta R.T. -0.023 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 85 Resp: 62415

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 32.0 | 12.0 | 52.0 |
| 101 | 8.9 | 0.0 | 28.5 |
| 103 | 5.7 | 0.0 | 25.4 |

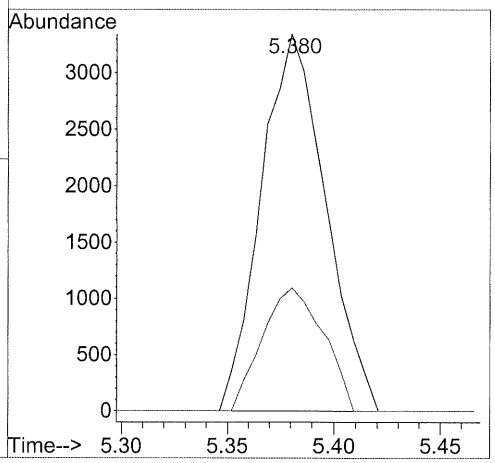


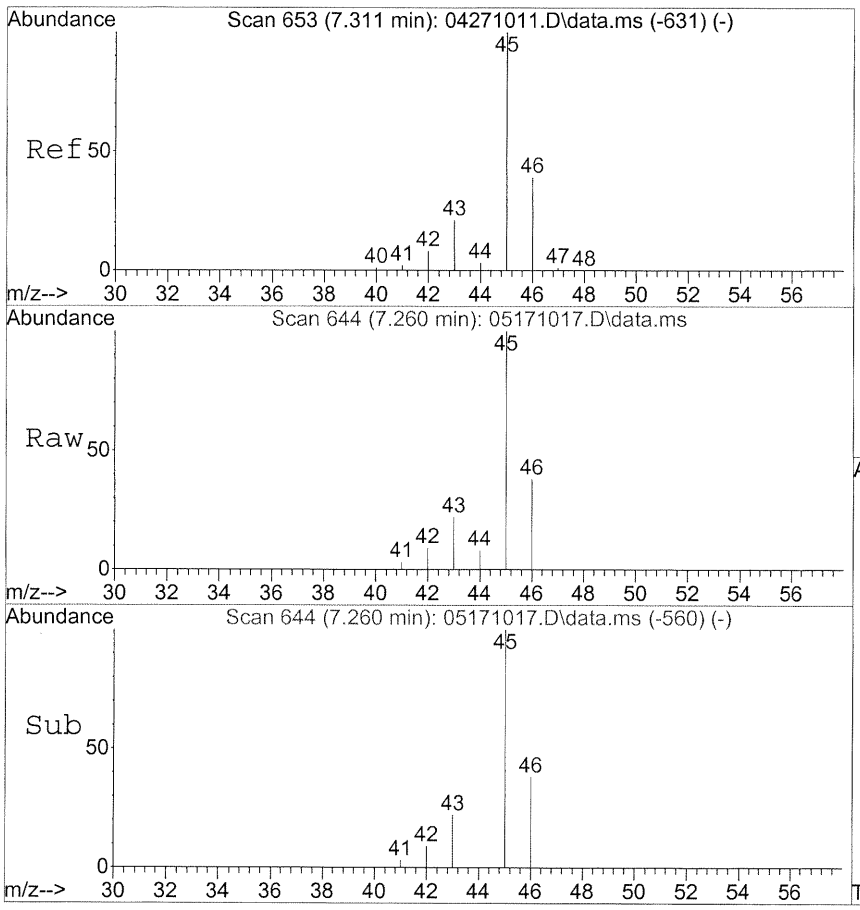



#4
Chloromethane
Concen: 0.23 ng
RT: 5.38 min Scan# 315
Delta R.T. -0.011 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 50 Resp: 7012

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 31.1 | 12.1 | 52.1 |

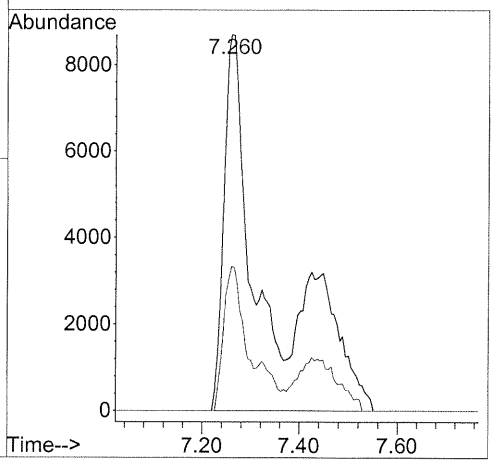


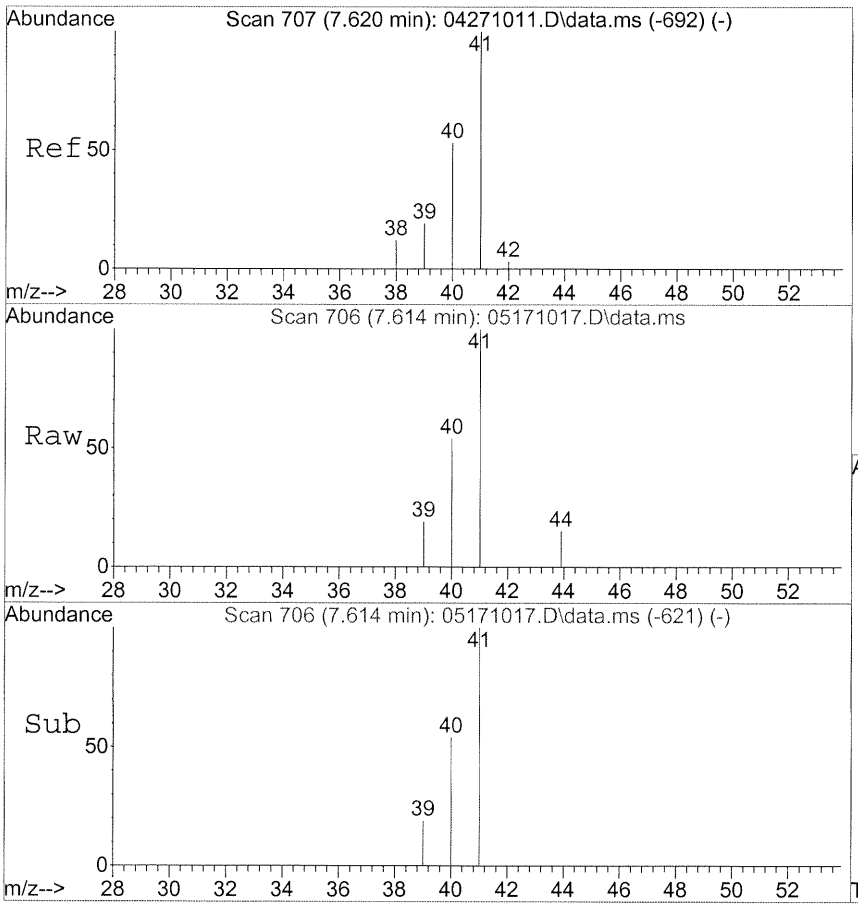




#10
Ethanol
Concen: 3.97 ng m
RT: 7.26 min Scan# 644
Delta R.T. -0.023 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 45 Resp: 51919

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 24.4 | 18.4 | 58.4 |

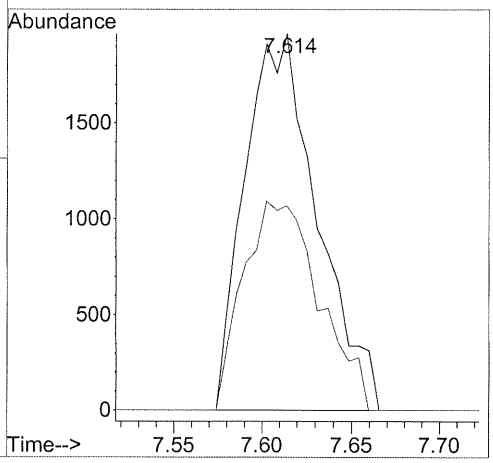


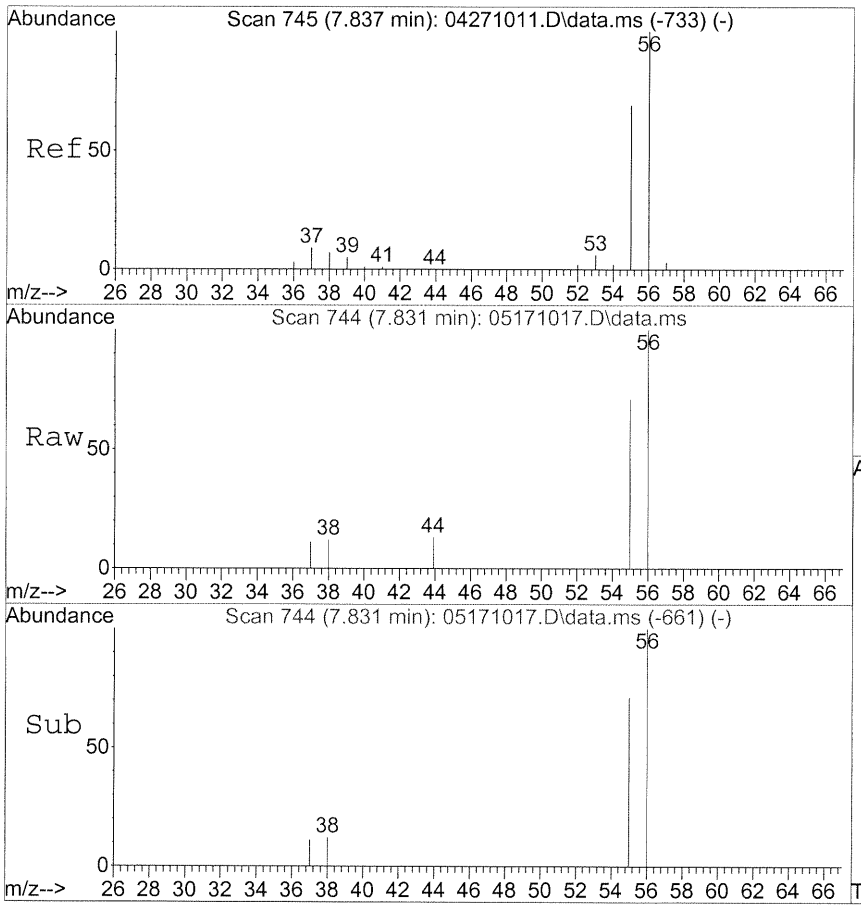



#11
Acetonitrile
Concen: 0.18 ng
RT: 7.61 min Scan# 706
Delta R.T. -0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 41 Resp: 5588

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 40 | 58.4 | 32.7 | 72.7 |

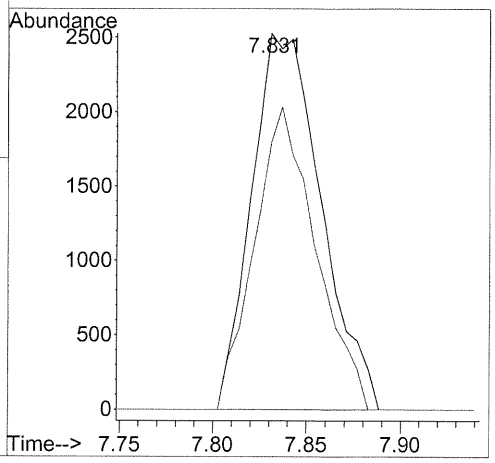


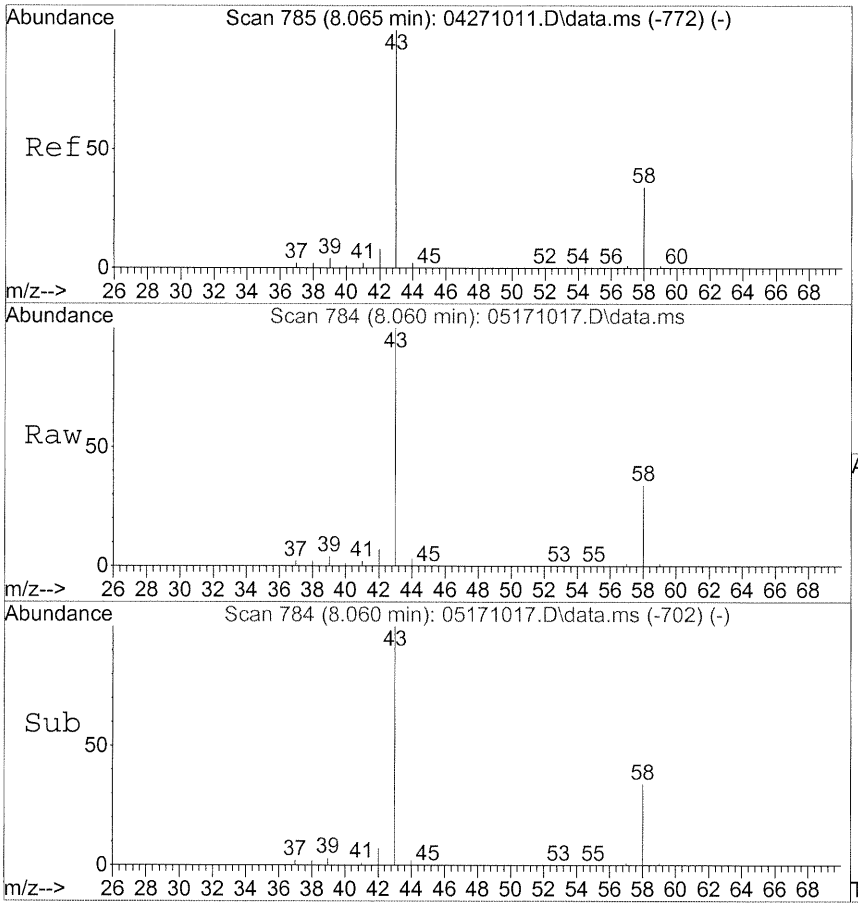




#12
Acrolein
Concen: 0.50 ng
RT: 7.83 min Scan# 744
Delta R.T. -0.028 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 56 Resp: 6505

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 55 | 70.9 | 50.5 | 90.5 |

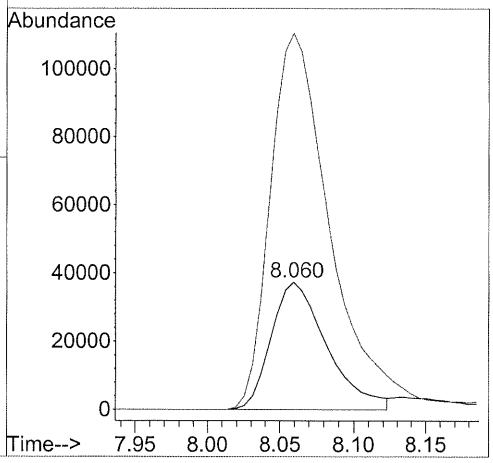


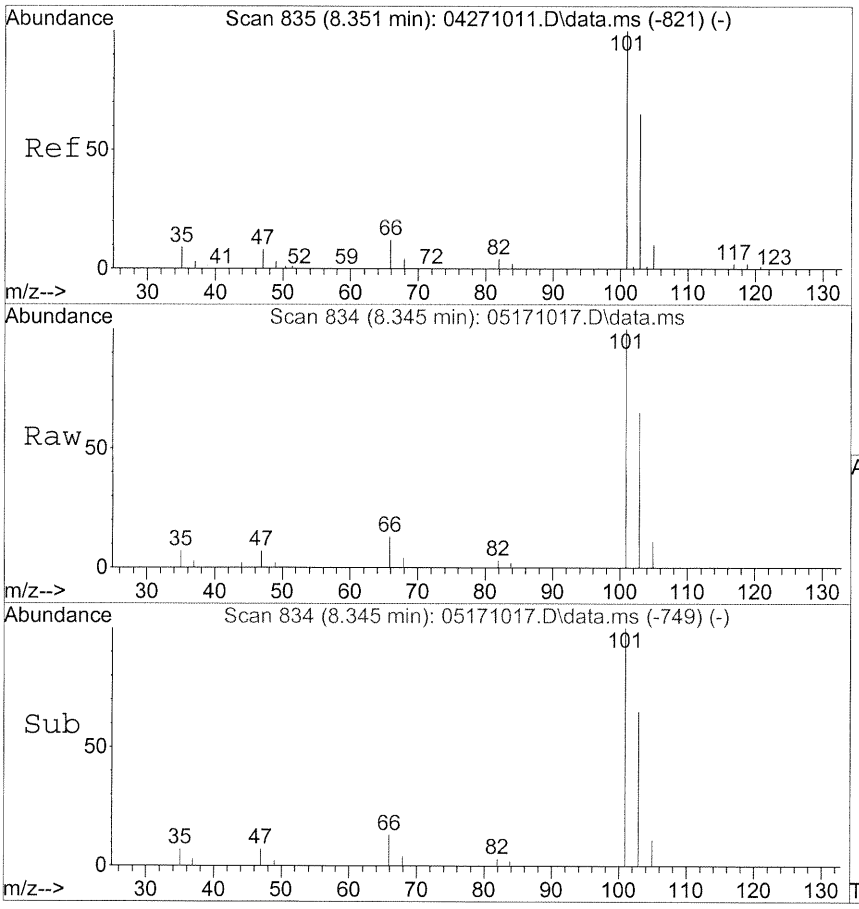



#13
Acetone
Concen: 5.89 ng m
RT: 8.06 min Scan# 784
Delta R.T. -0.034 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 58 Resp: 98414

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 328.1 | 295.0 | 355.0 |

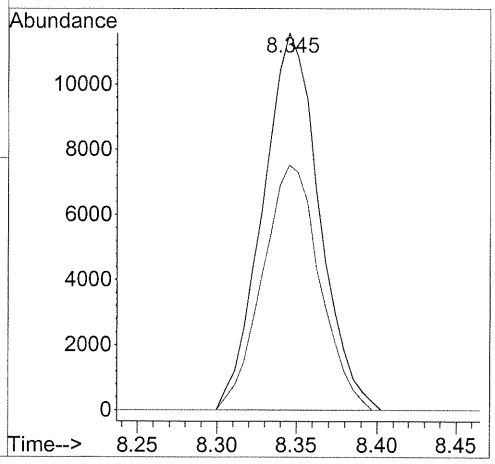


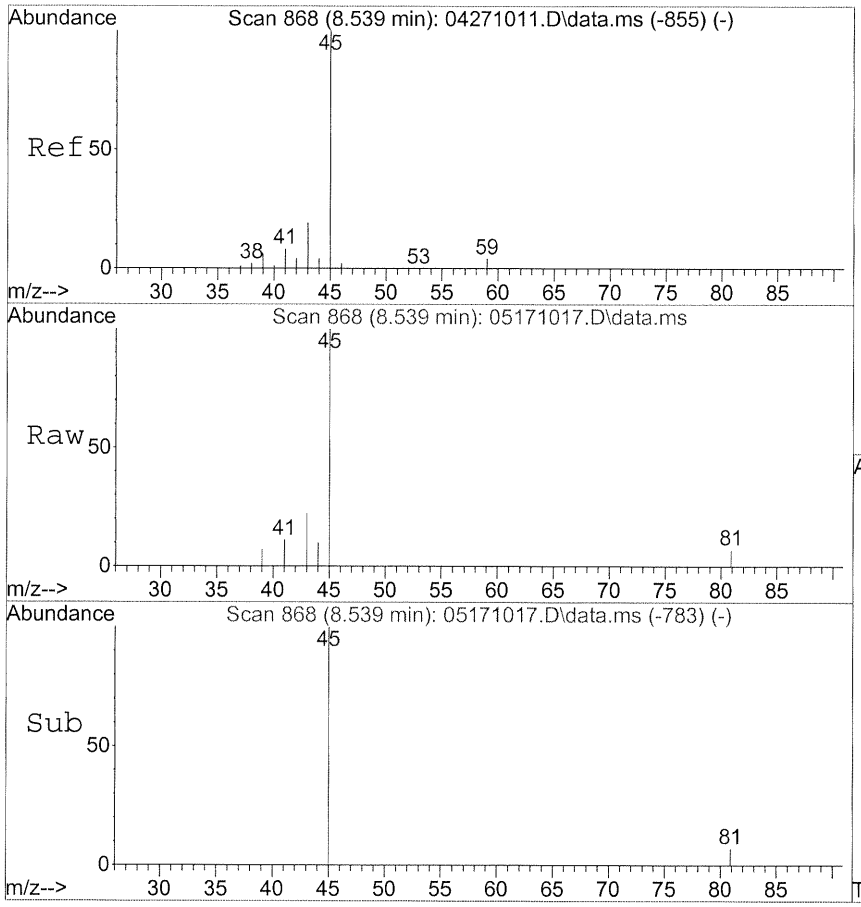




#14
Trichlorofluoromethane
Concen: 0.62 ng
RT: 8.35 min Scan# 834
Delta R.T. -0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion:101 Resp: 28556

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 65.5 | 43.8 | 83.8 |

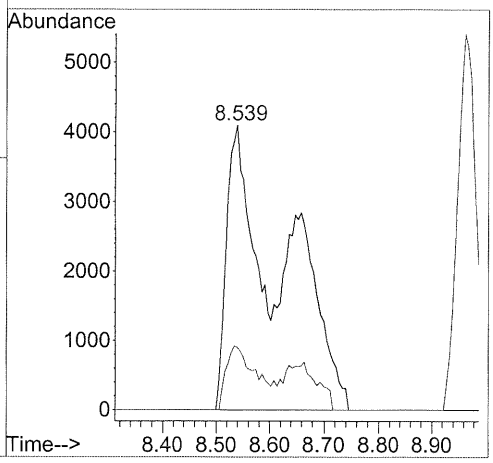


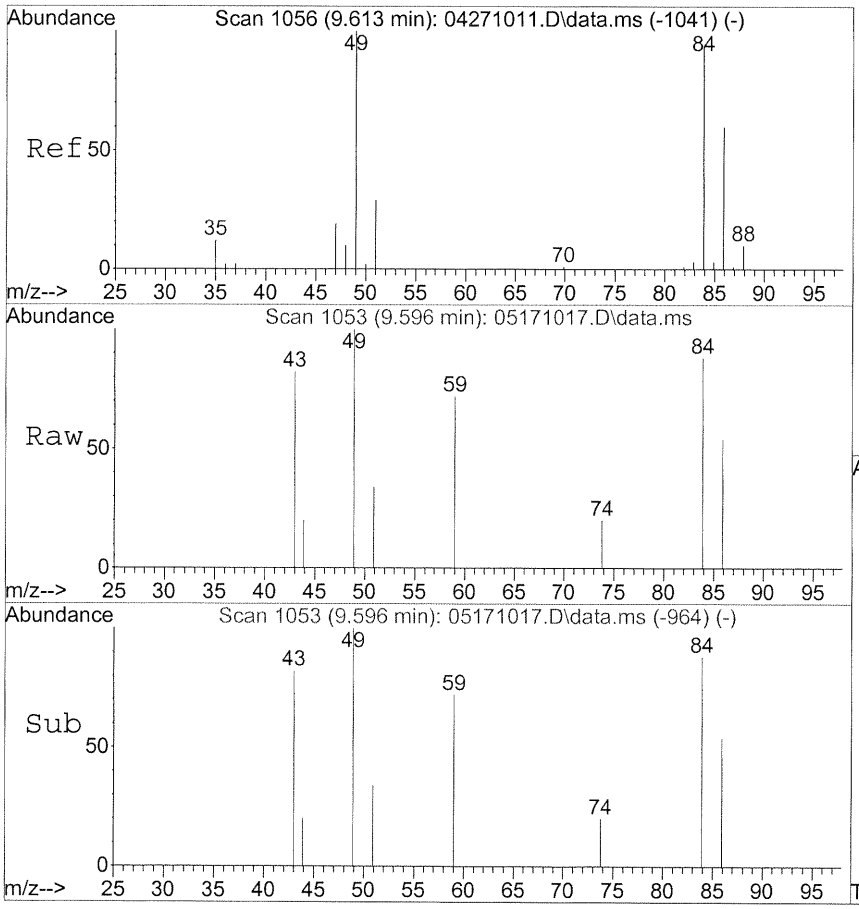



#15
2-Propanol (Isopropanol)
Concen: 0.58 ng m
RT: 8.54 min Scan# 868
Delta R.T. -0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 45 Resp: 28417

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 14.2 | 0.0 | 39.2 |

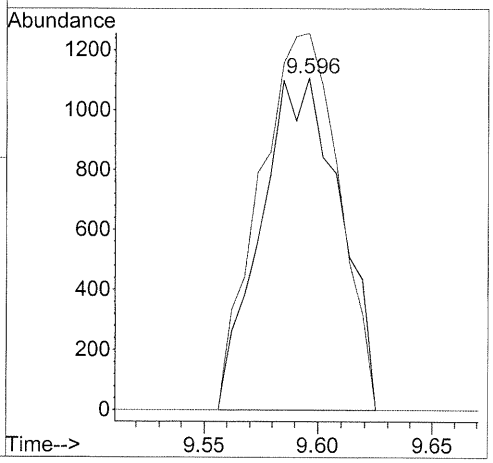


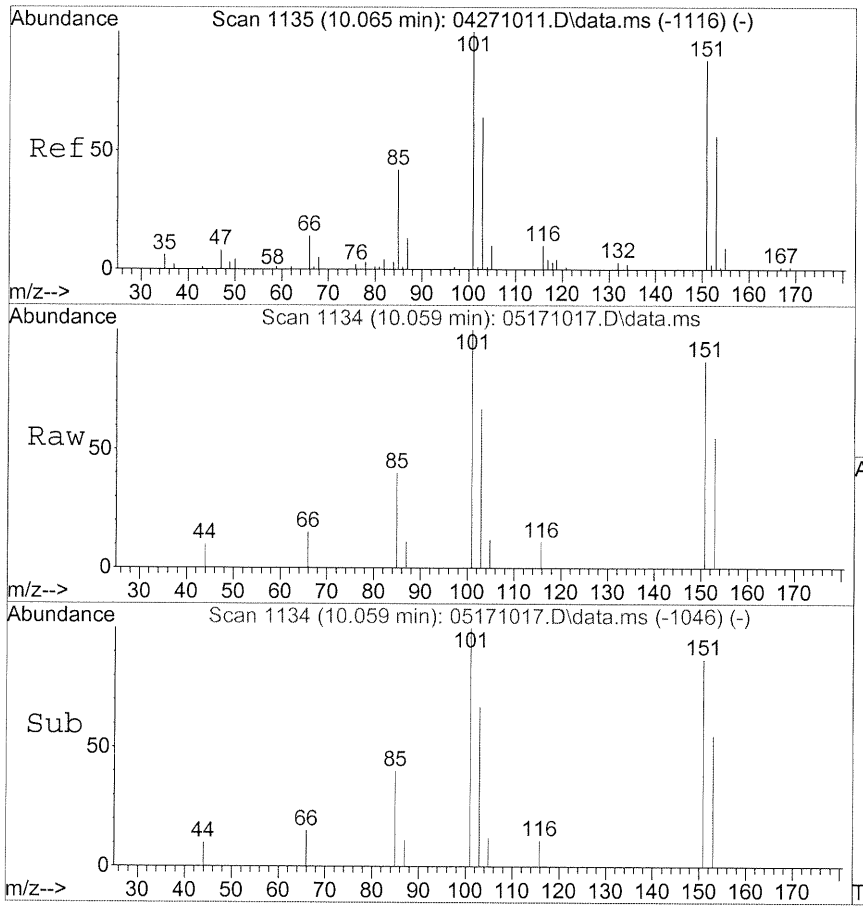




#19
Methylene Chloride
Concen: 0.11 ng
RT: 9.60 min Scan# 1053
Delta R.T. 0.006 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 84 Resp: 2647

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 114.0 | 116.6 | 166.6# |

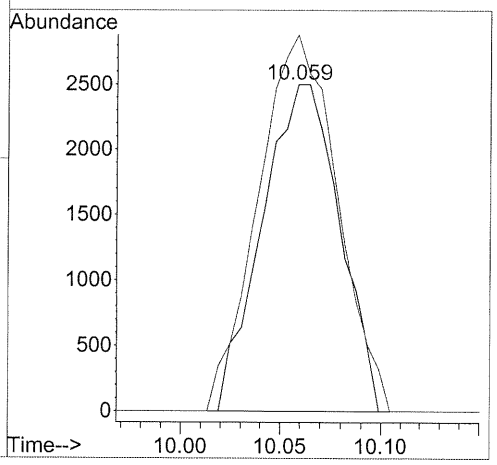


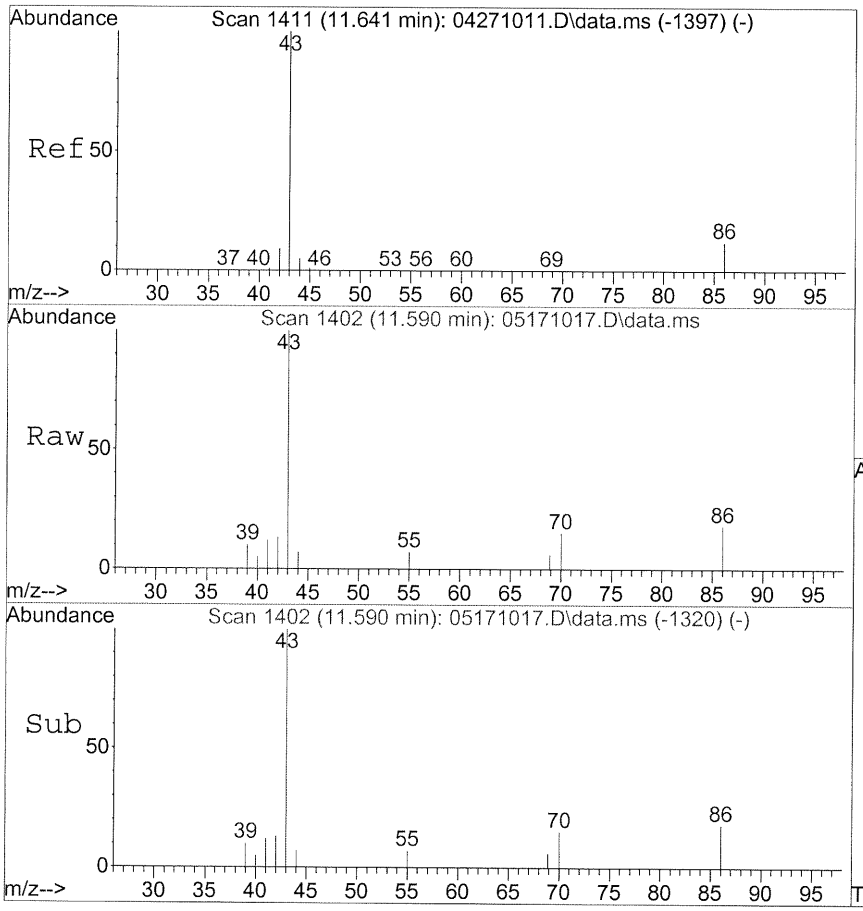



#21
Trichlorotrifluoroethane
Concen: 0.29 ng
RT: 10.06 min Scan# 1134
Delta R.T. 0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion:151 Resp: 6659

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 151 | 100 | | |
| 101 | 118.2 | 125.6 | 165.6# |

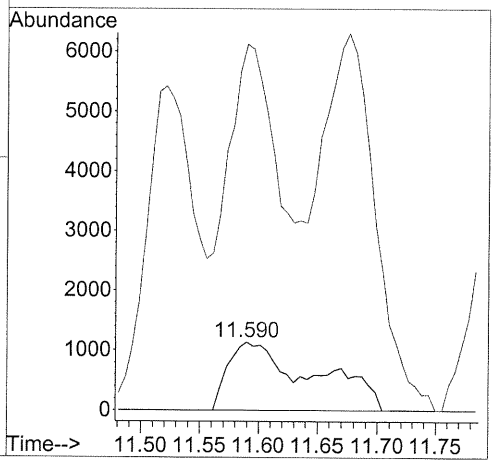


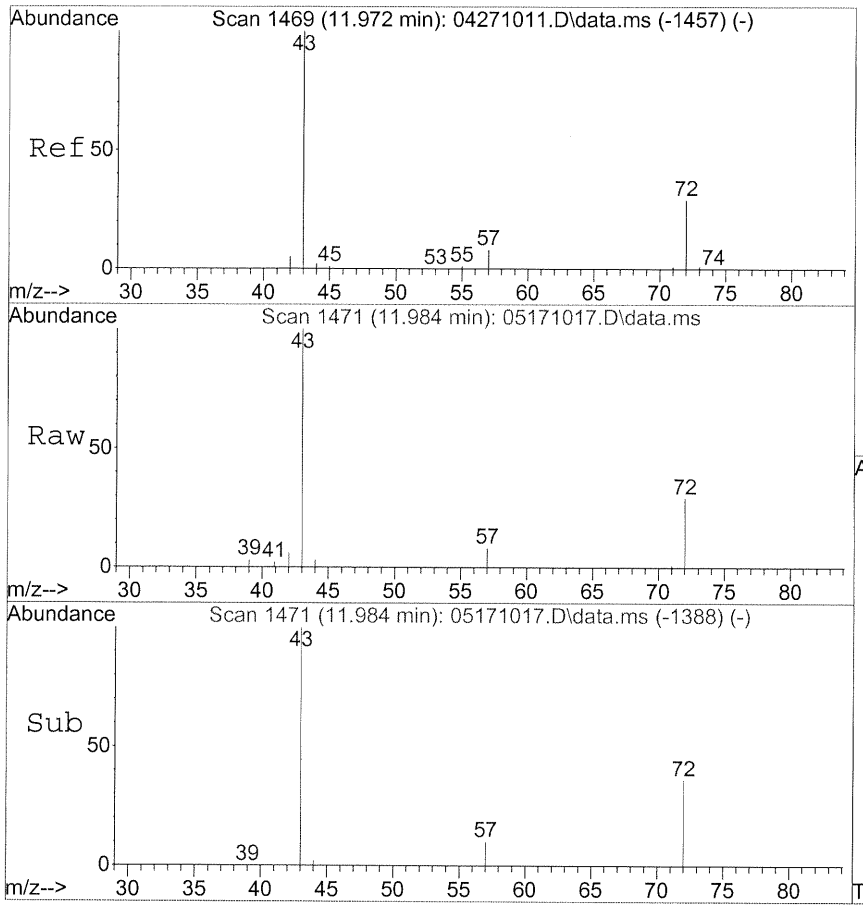




#26
Vinyl Acetate
Concen: 0.97 ng
RT: 11.59 min Scan# 1402
Delta R.T. -0.034 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 86 Resp: 5625

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 86 | 100 | | |
| 43 | 388.4 | 1285.5 | 1325.5# |

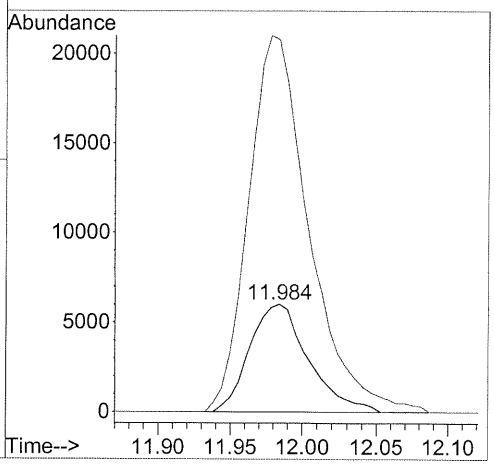


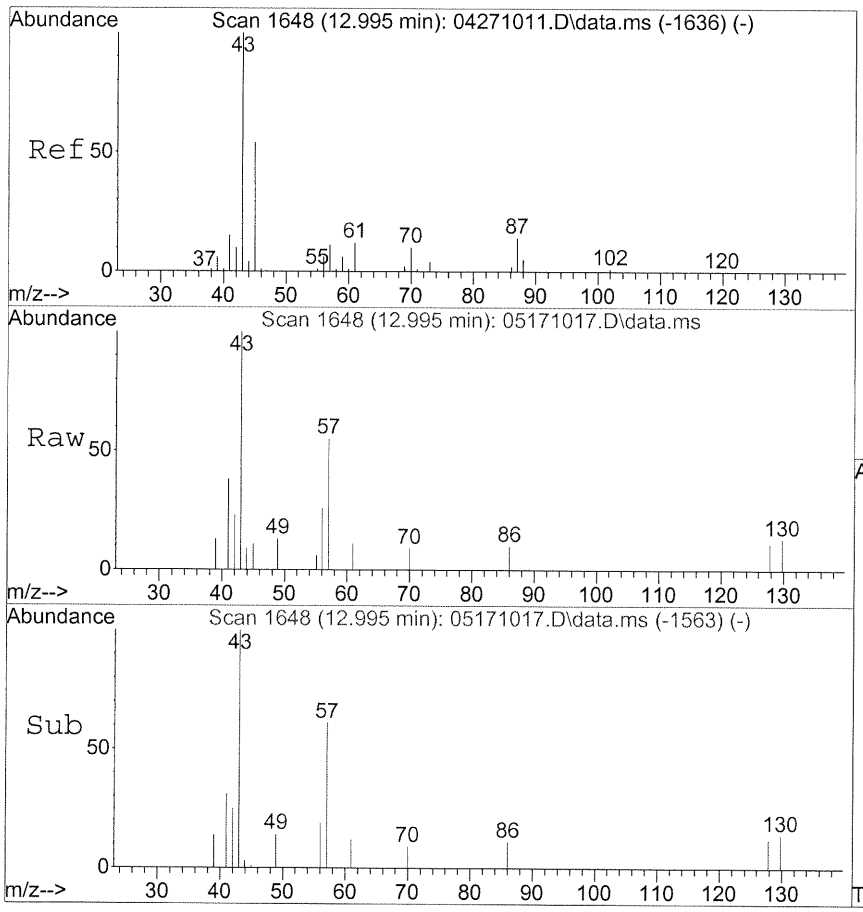



#27
2-Butanone (MEK)
Concen: 1.10 ng
RT: 11.98 min Scan# 1471
Delta R.T. -0.028 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 72 Resp: 16868

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 359.9 | 412.3 | 452.3# |

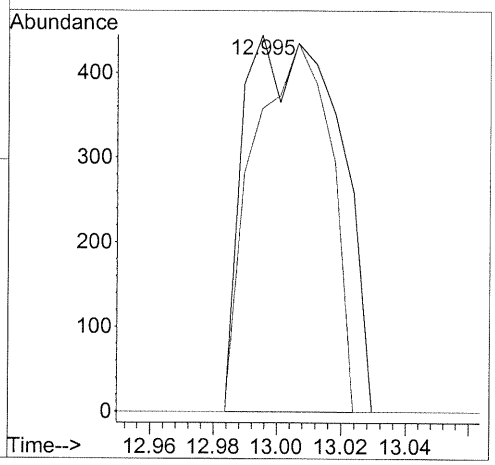


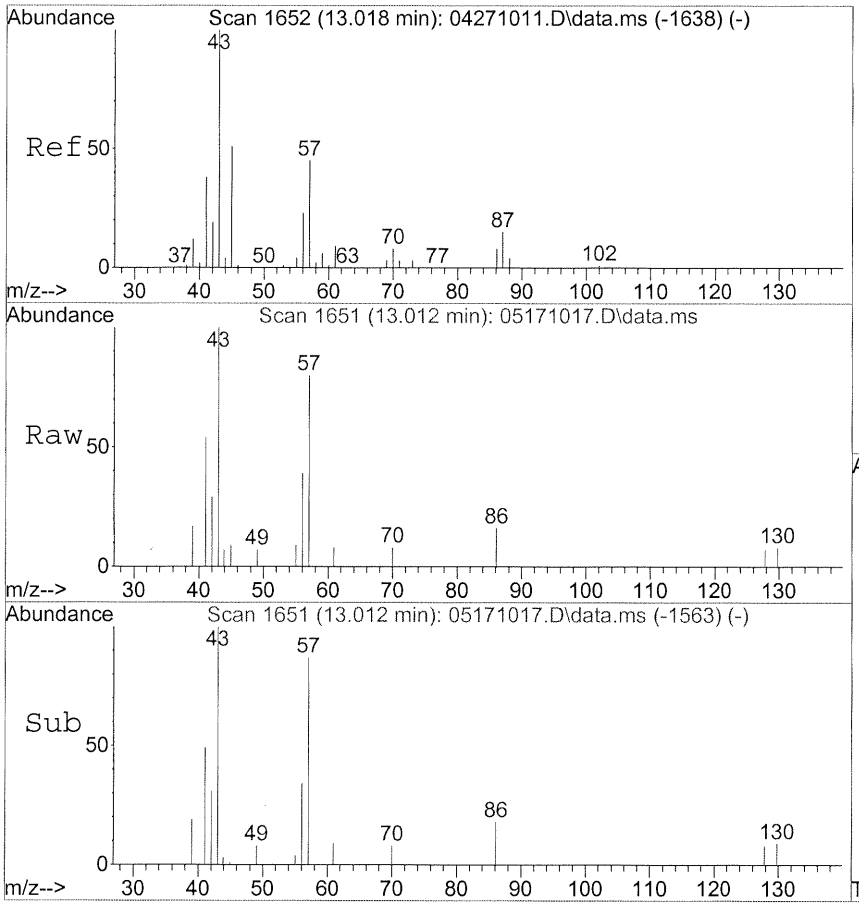




#30
Ethyl Acetate
Concen: 0.11 ng
RT: 13.00 min Scan# 1648
Delta R.T. -0.017 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 61 Resp: 909

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 70 | 80.3 | 52.2 | 92.2 |

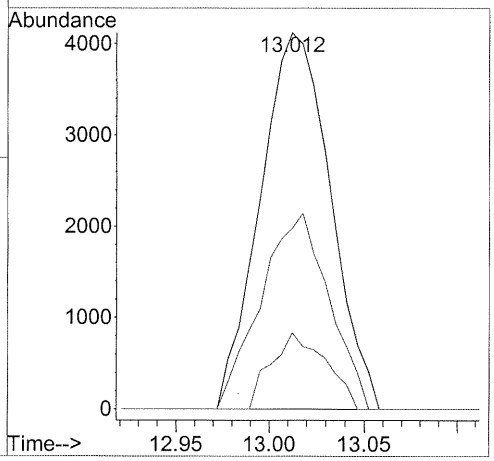


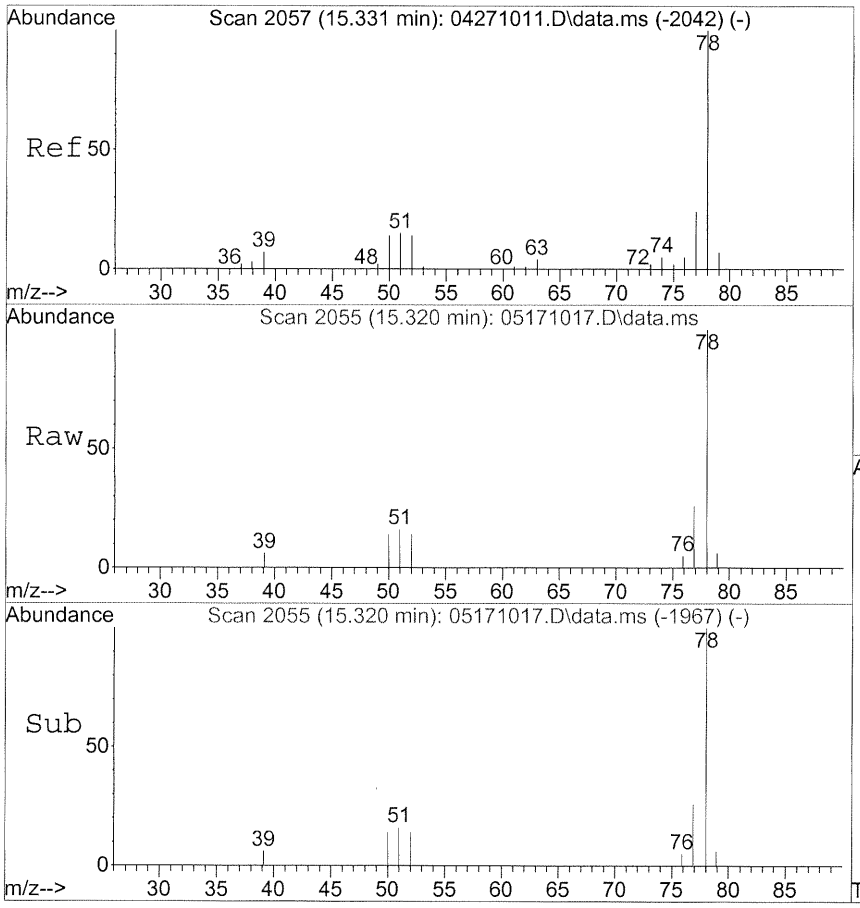



#31
n-Hexane
Concen: 0.27 ng
RT: 13.01 min Scan# 1651
Delta R.T. 0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 57 Resp: 10623

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 50.5 | 40.0 | 60.0 |
| 86 | 15.7 | 11.5 | 17.3 |

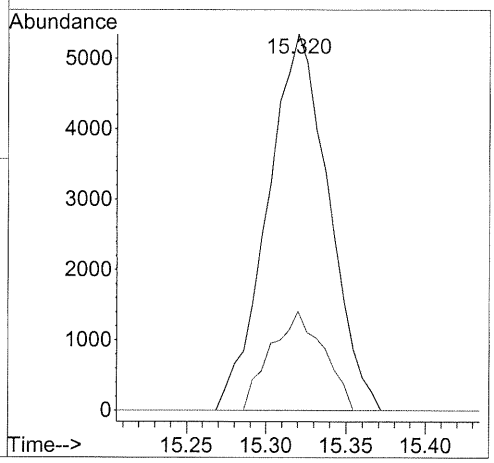


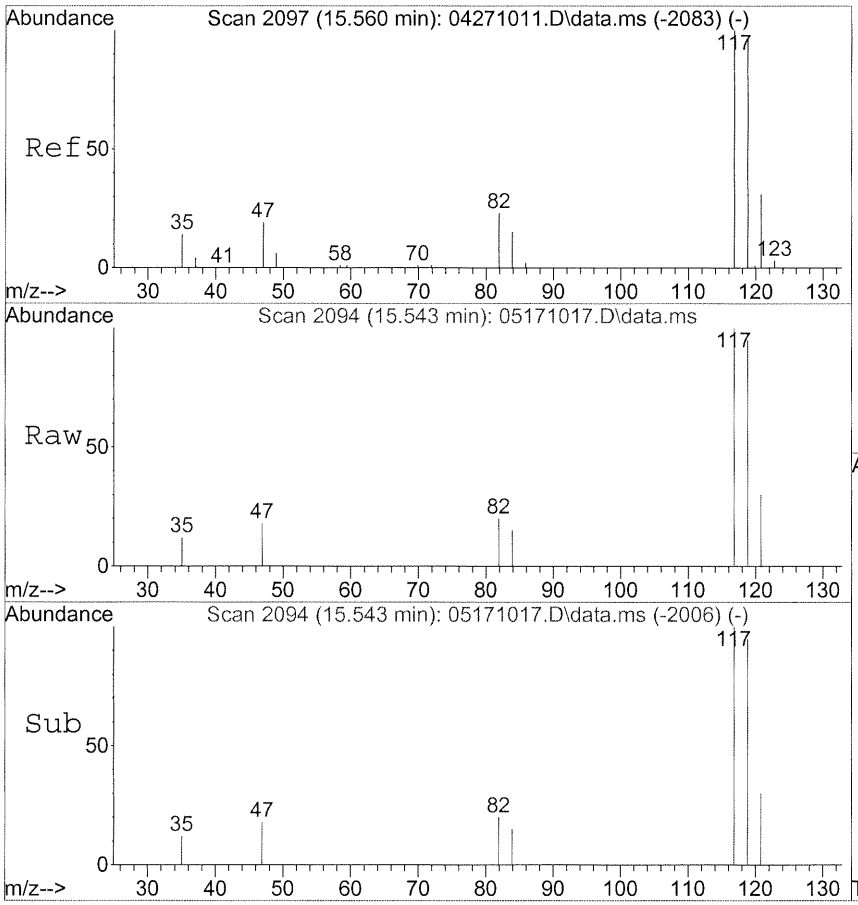




#41
Benzene
Concen: 0.14 ng
RT: 15.32 min Scan# 2055
Delta R.T. 0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 78 Resp: 14212

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 22.7 | 4.4 | 44.4 |

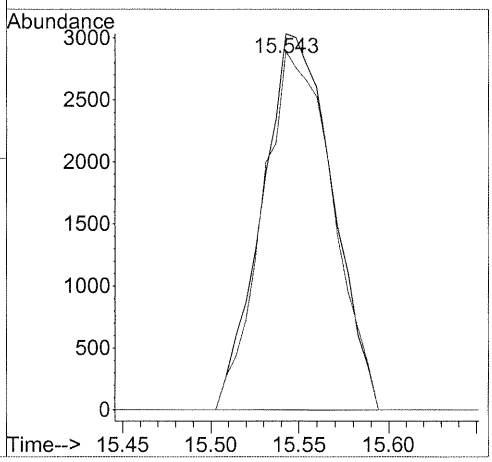


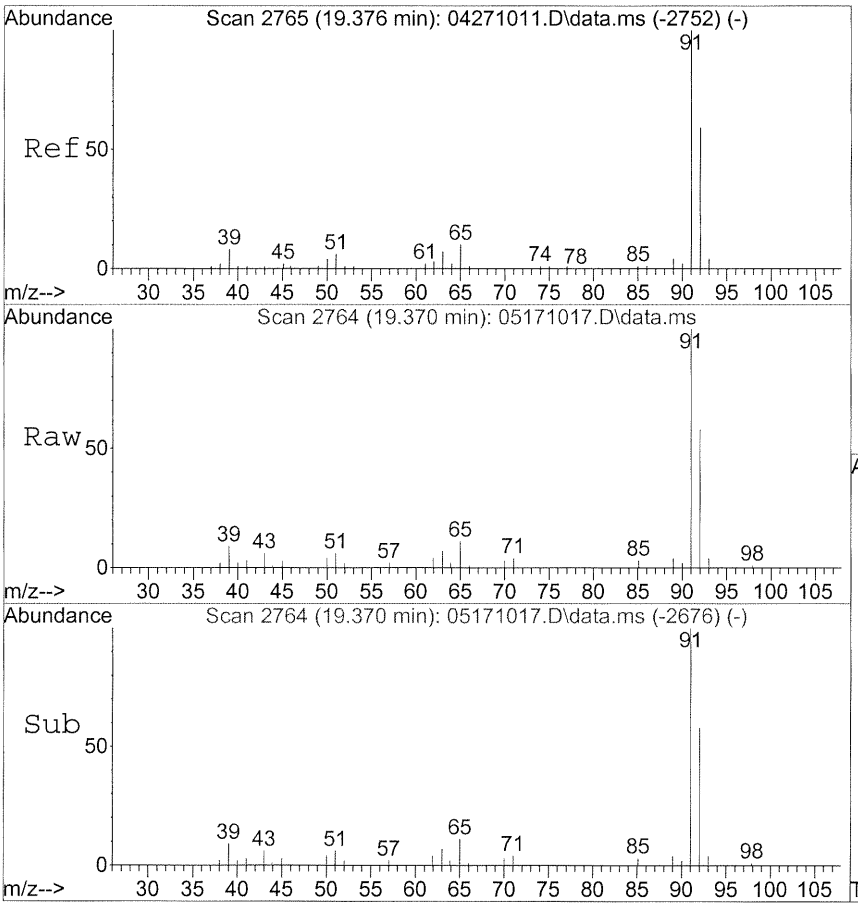



#42
Carbon Tetrachloride
Concen: 0.26 ng
RT: 15.54 min Scan# 2094
Delta R.T. 0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion:117 Resp: 8332

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 95.0 | 75.8 | 115.8 |

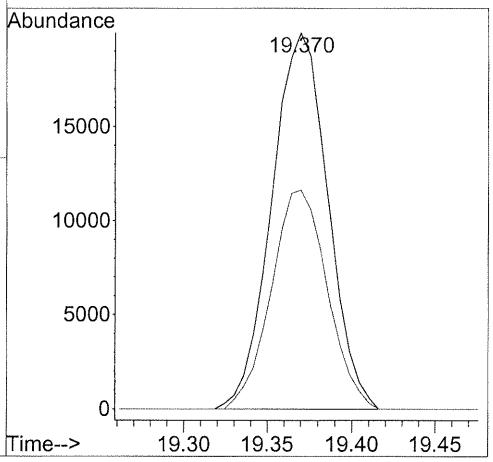


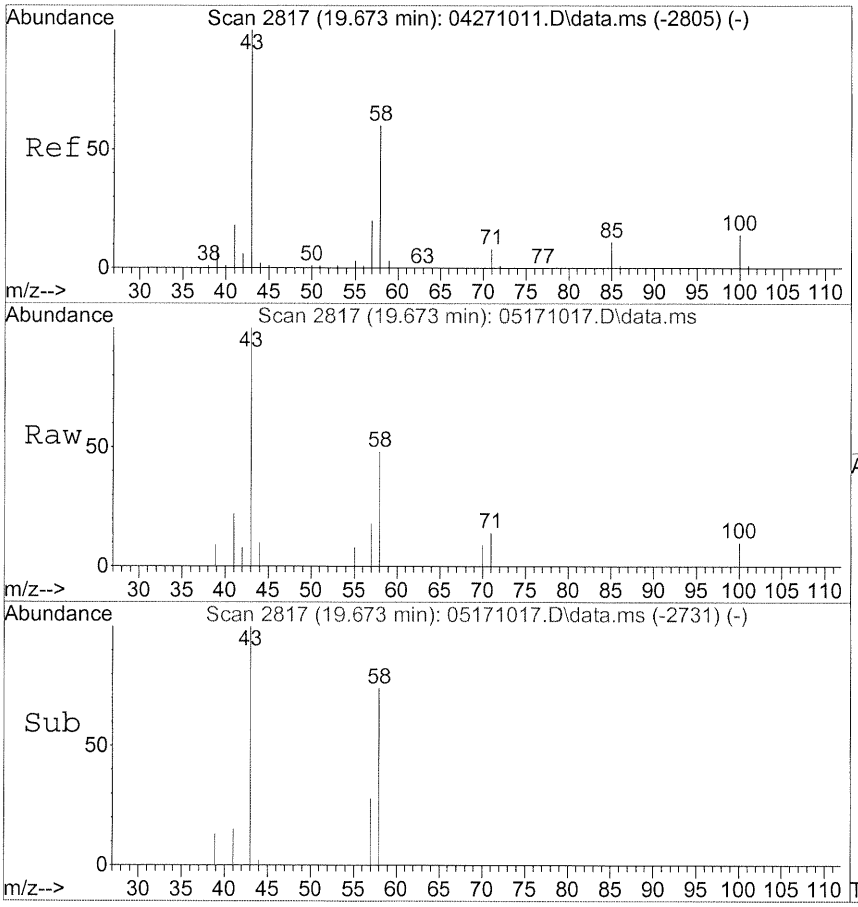




#58
Toluene
Concen: 0.42 ng
RT: 19.37 min Scan# 2764
Delta R.T. 0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 91 Resp: 46060

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 58.3 | 37.6 | 77.6 |

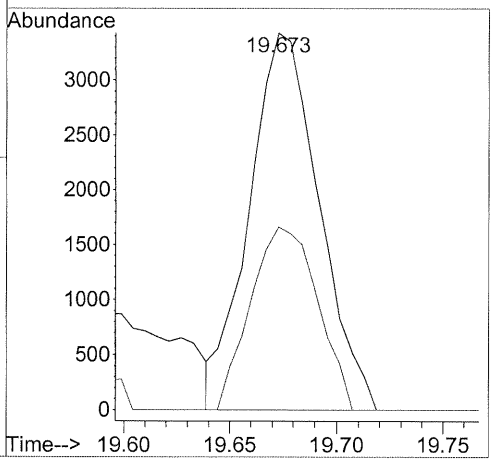


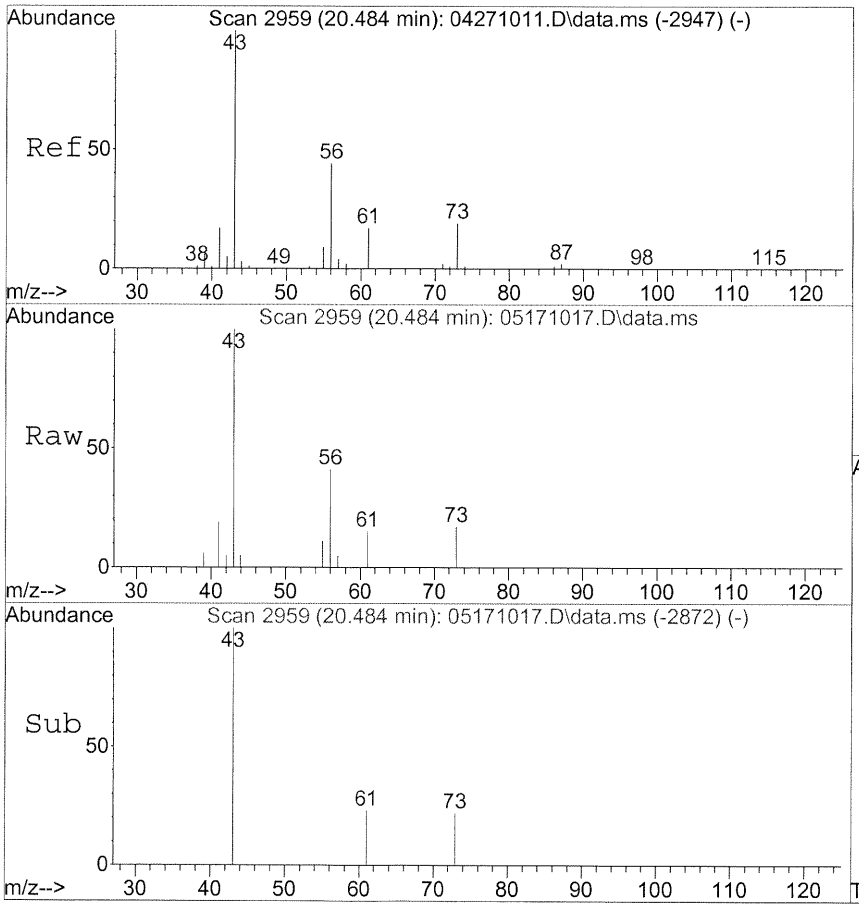



#59
2-Hexanone
Concen: 0.17 ng
RT: 19.67 min Scan# 2817
Delta R.T. -0.011 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 43 Resp: 7780

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 58 | 46.4 | 33.3 | 73.3 |

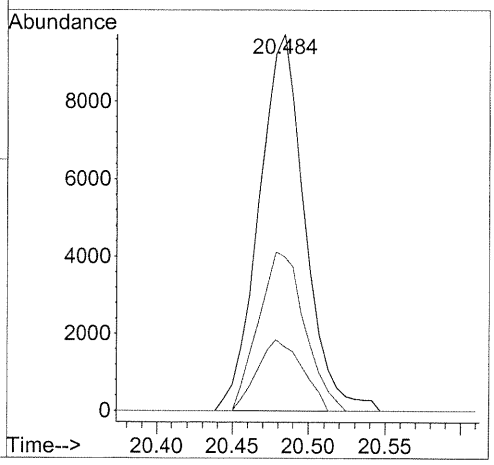


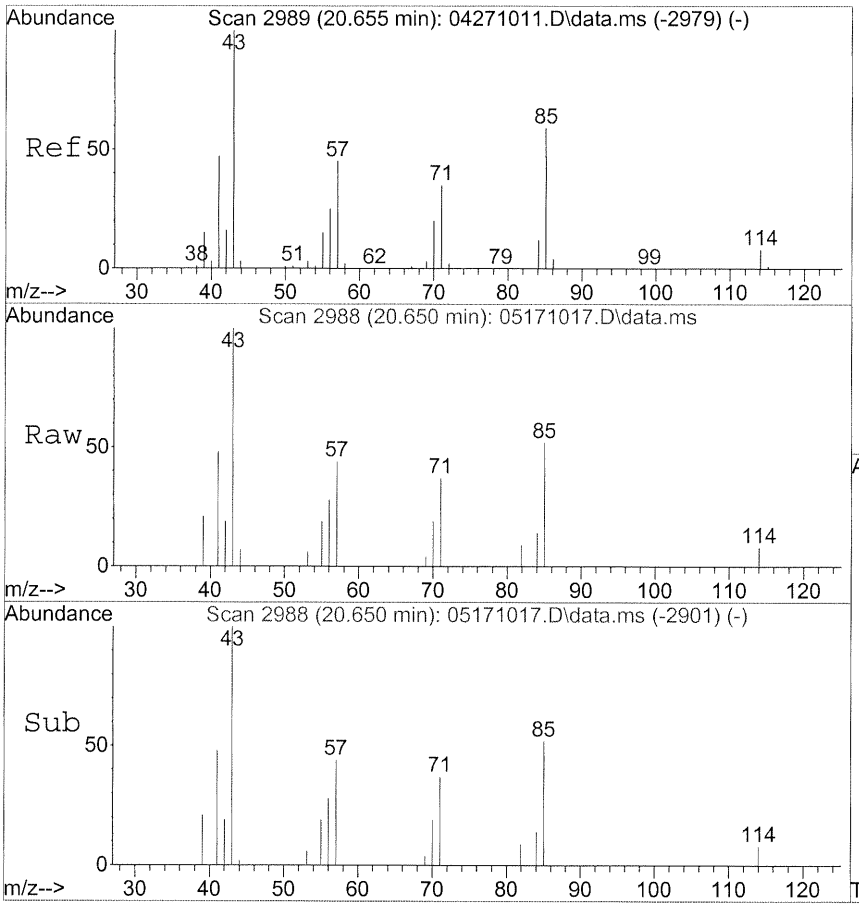




#62
n-Butyl Acetate
Concen: 0.38 ng
RT: 20.48 min Scan# 2959
Delta R.T. -0.006 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 43 Resp: 20421

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 56 | 42.6 | 19.7 | 59.7 |
| 73 | 18.5 | 0.0 | 34.2 |

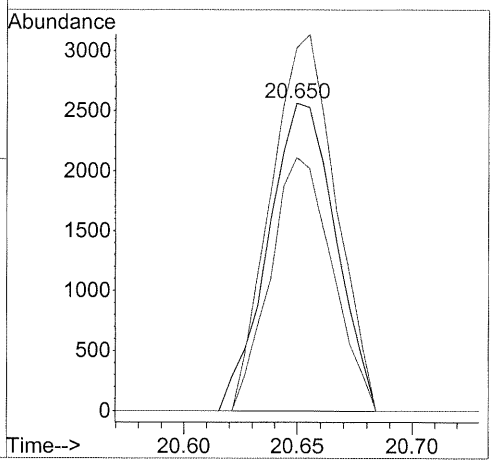


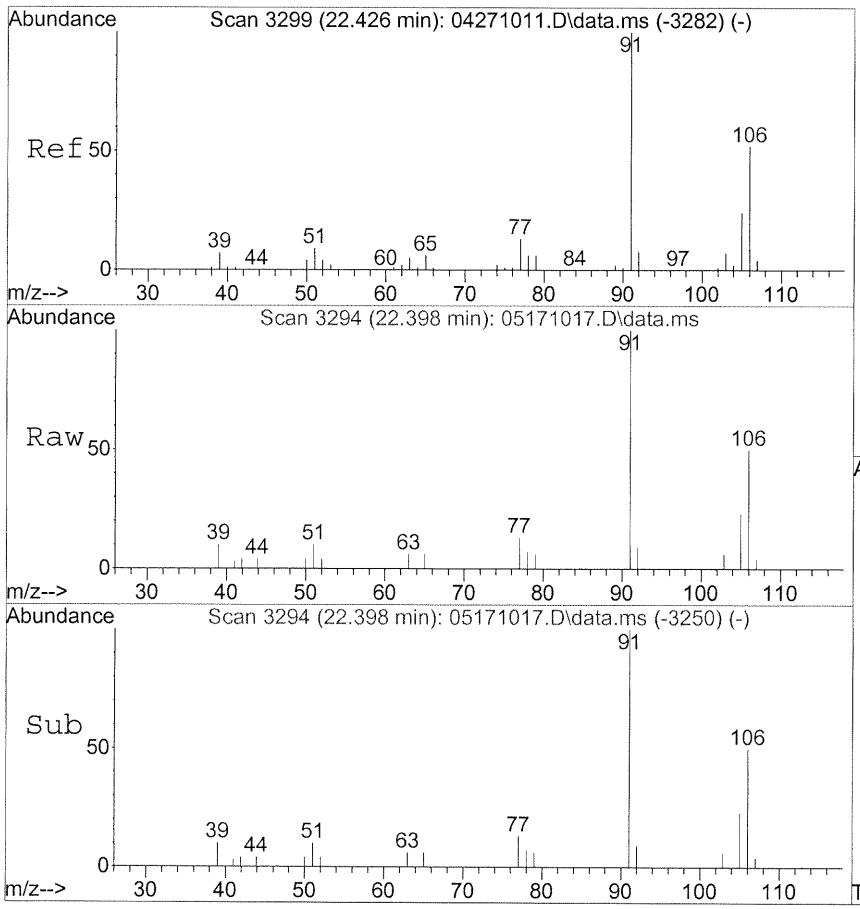



#63
n-Octane
Concen: 0.27 ng
RT: 20.65 min Scan# 2988
Delta R.T. -0.006 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 57 Resp: 5230

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 85 | 117.6 | 81.8 | 122.8 |
| 71 | 75.7 | 55.0 | 82.6 |

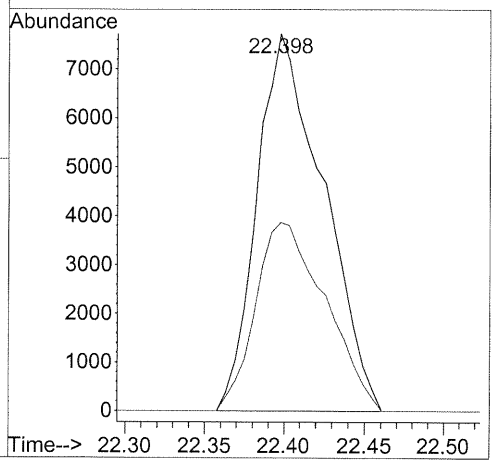


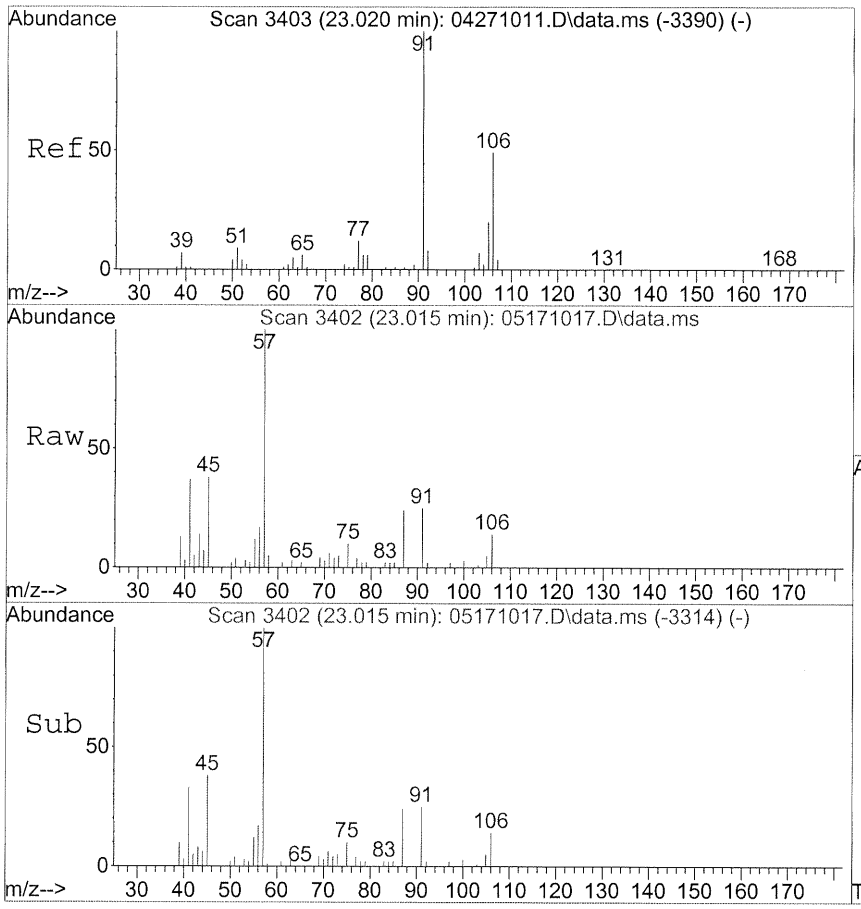




#67
m- & p-Xylenes
Concen: 0.24 ng
RT: 22.40 min Scan# 3294
Delta R.T. 0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 91 Resp: 22402

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 52.6 | 26.8 | 66.8 |

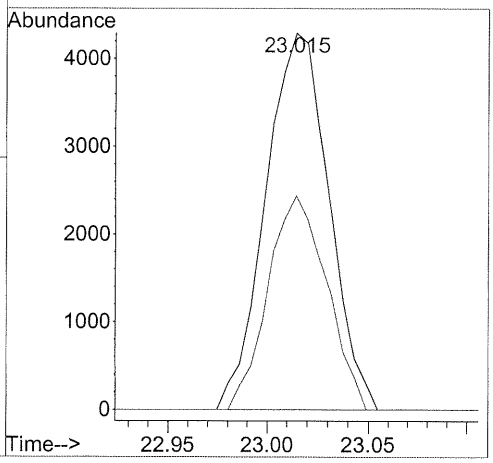


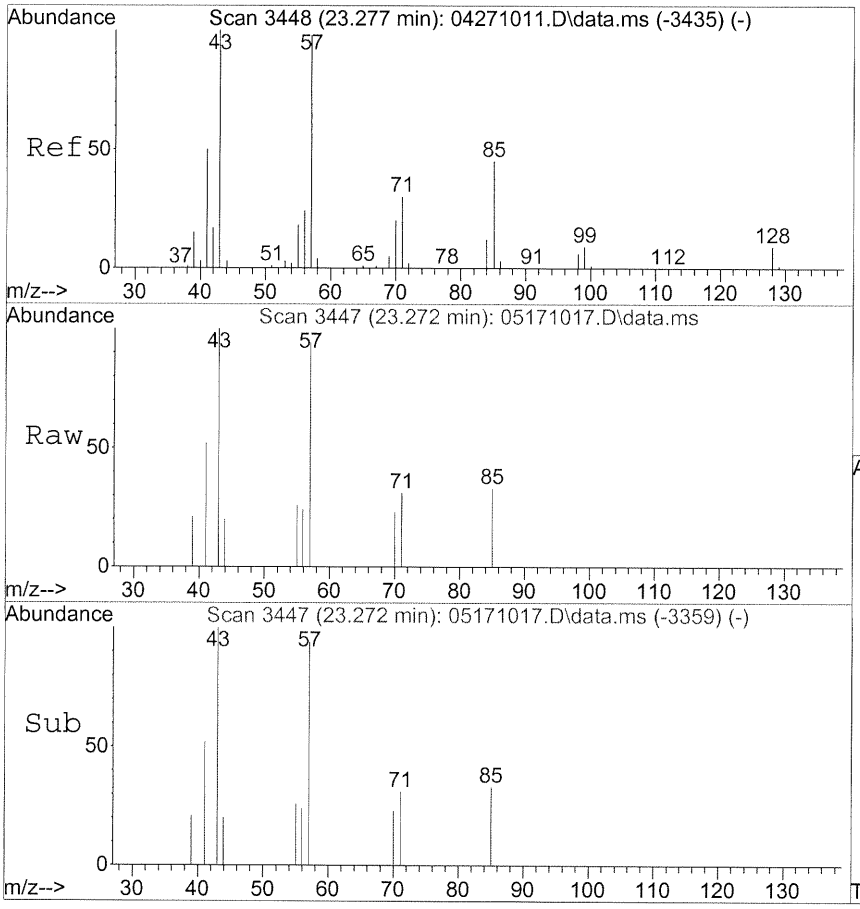



#70
o-Xylene
Concen: 0.10 ng
RT: 23.01 min Scan# 3402
Delta R.T. 0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 91 Resp: 9339

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 52.8 | 24.4 | 64.4 |

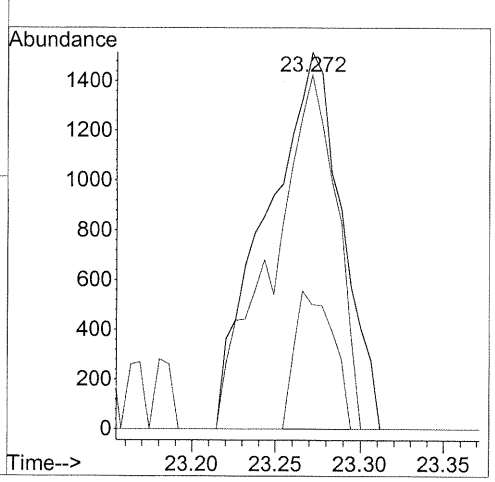


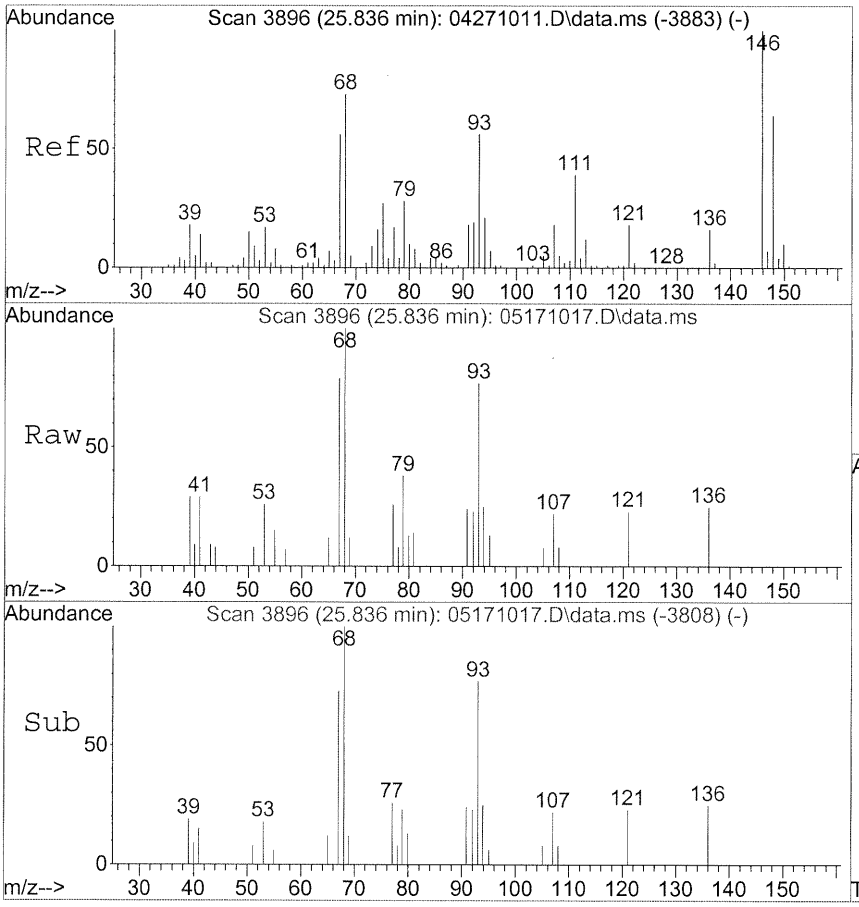




#71
n-Nonane
Concen: 0.11 ng
RT: 23.27 min Scan# 3447
Delta R.T. 0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 43 Resp: 4680

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 80.1 | 65.6 | 105.6 |
| 85 | 18.6 | 9.9 | 49.9 |

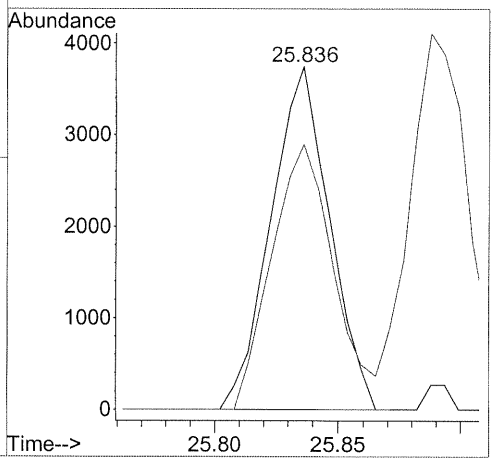





#91
d-Limonene
Concen: 0.17 ng
RT: 25.84 min Scan# 3896
Delta R.T. 0.000 min
Lab File: 05171017.D
Acq: 17 May 2010 22:30

Tgt Ion: 68 Resp: 6138

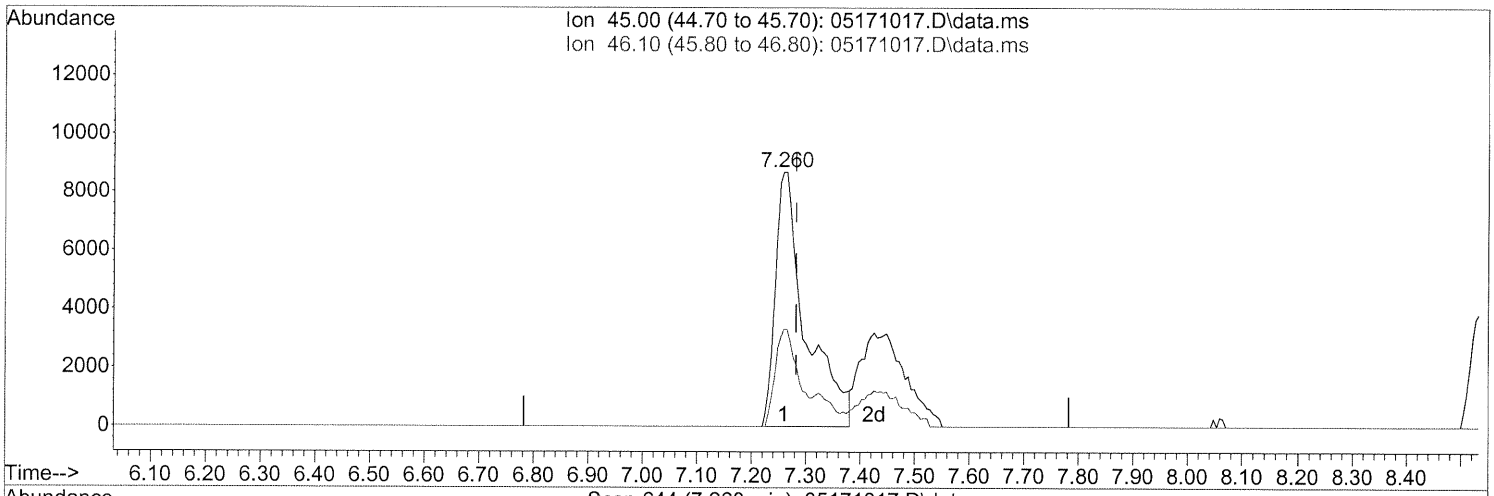
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 68 | 100 | | |
| 93 | 82.1 | 42.0 | 82.0# |

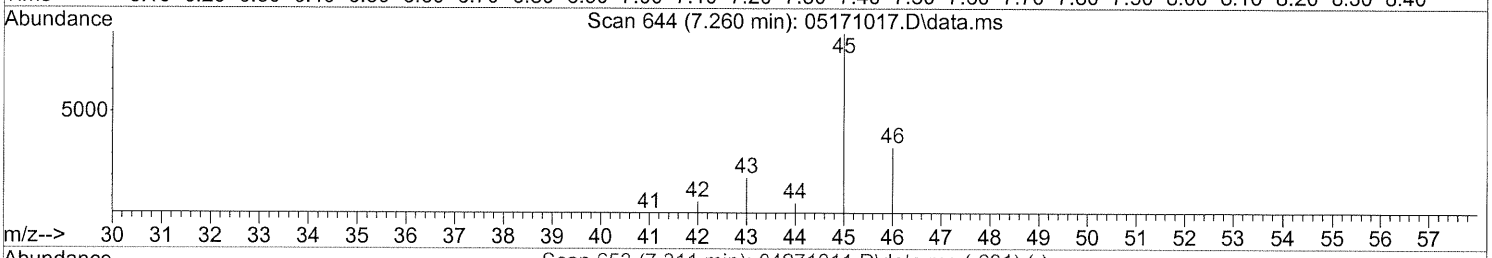


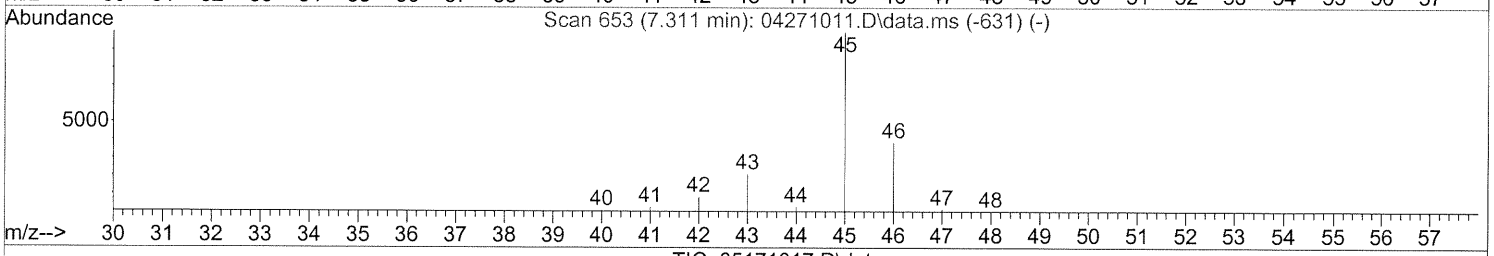
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171017.D\data.ms

(10) Ethanol (T)

7.260min (-0.023) 2.55ng

response 33382

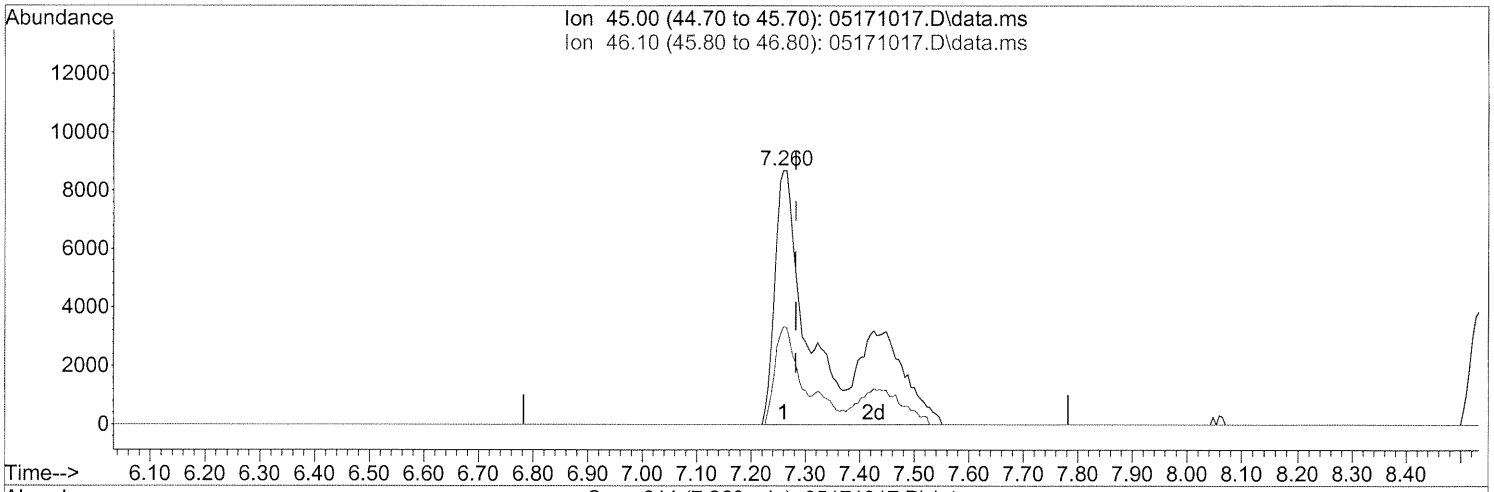
SP

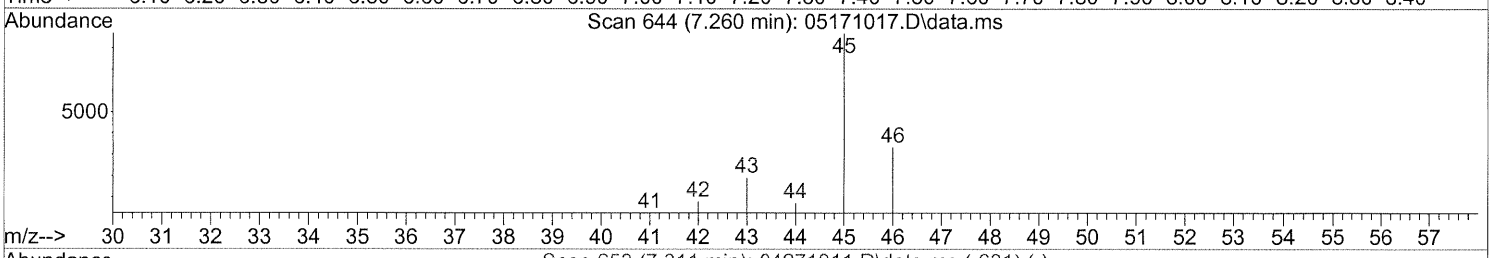
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 37.95 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

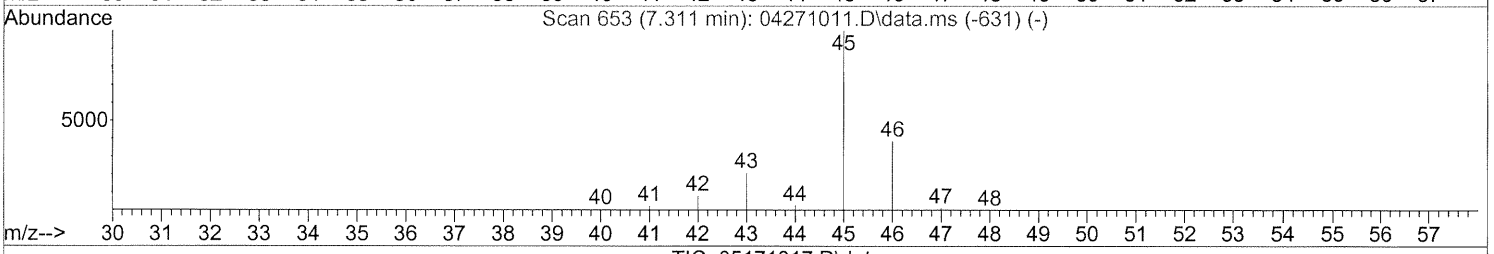
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171017.D\data.ms

(10) Ethanol (T)

7.260min (-0.023) 3.97ng m

response 51919

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 24.40 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → IC

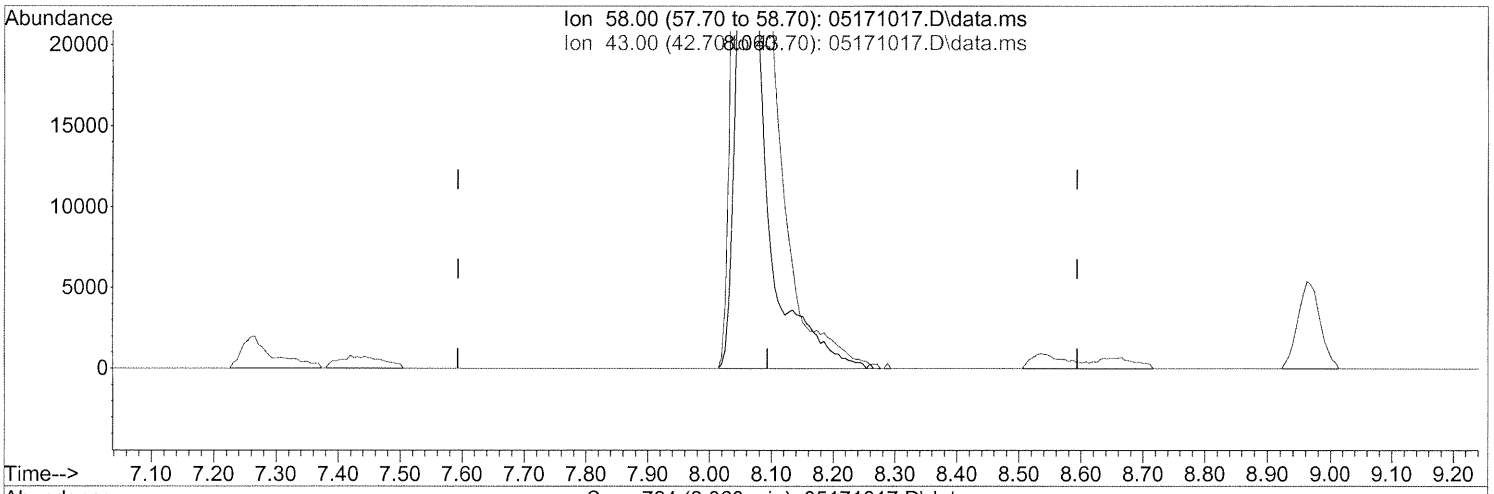
MSA 5/19/10

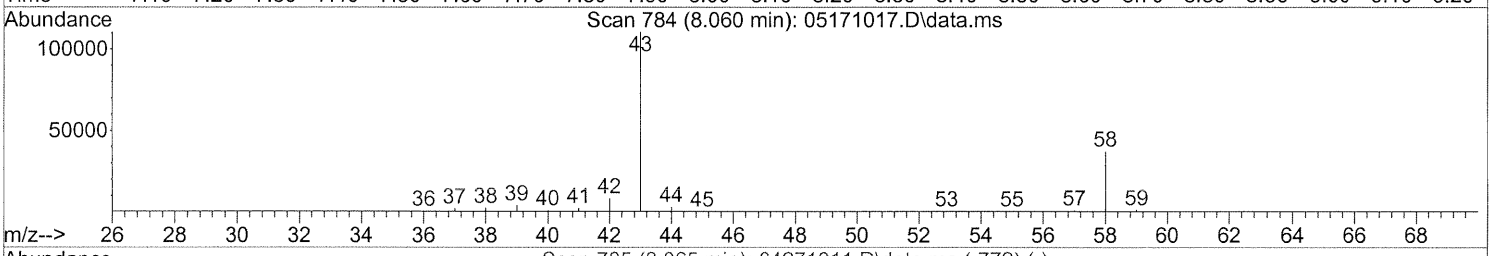
5/20/10

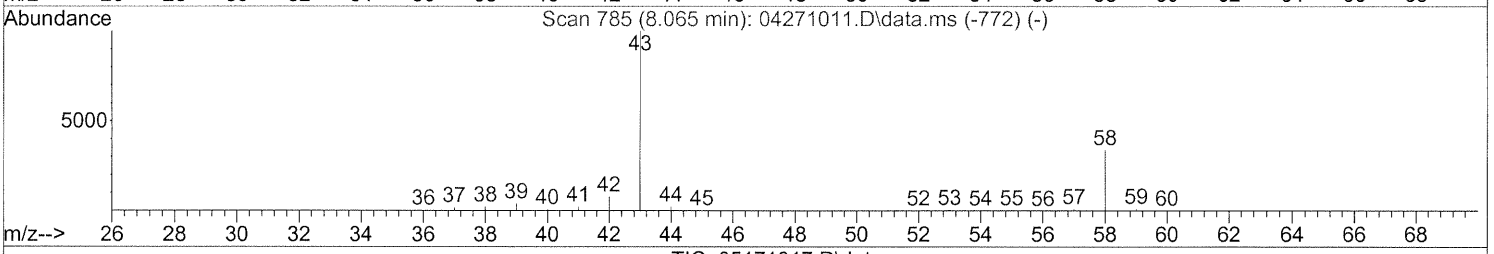
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171017.D\data.ms

(13) Acetone (T)

8.060min (-0.034) 6.66ng

response 111240

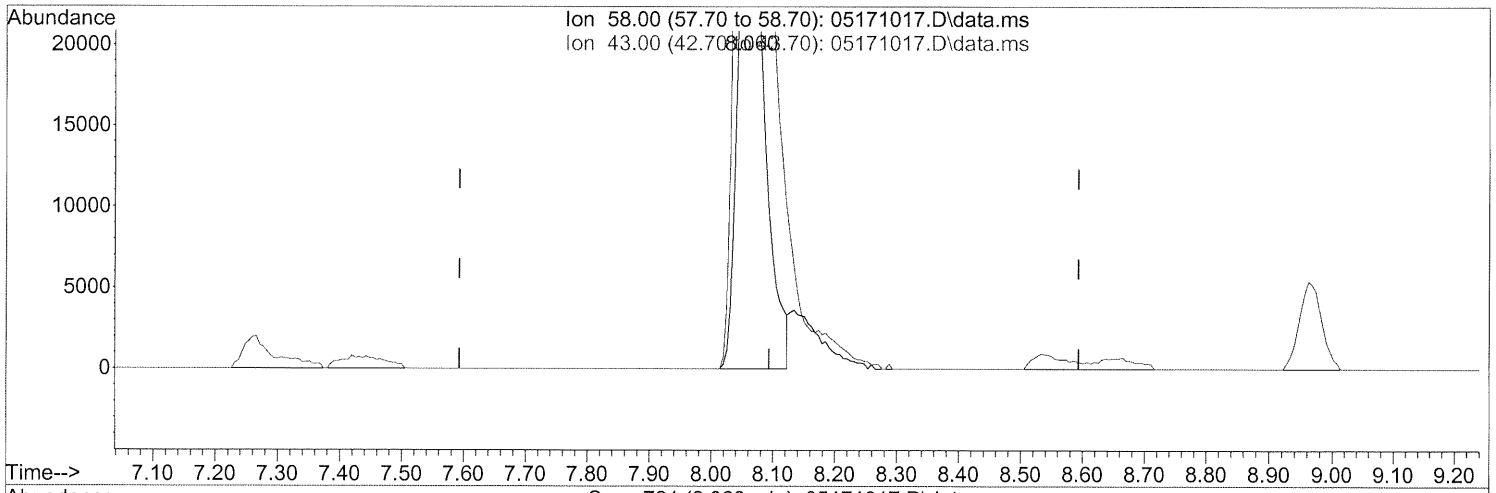
SH

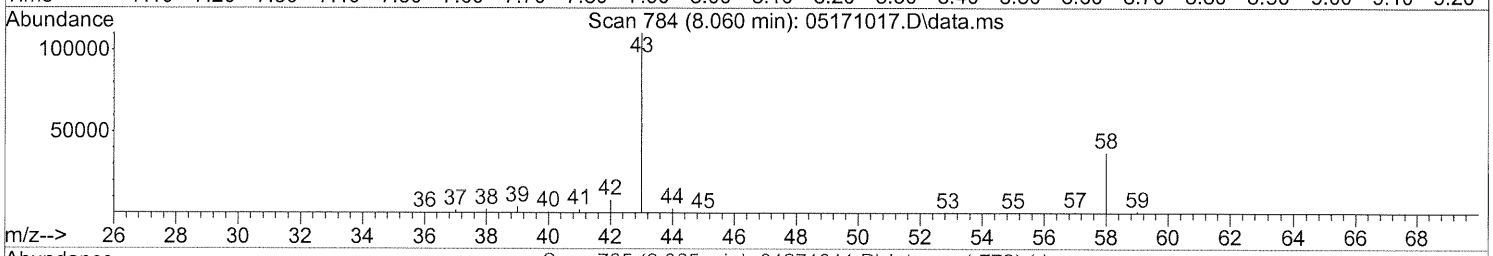
| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 290.29# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

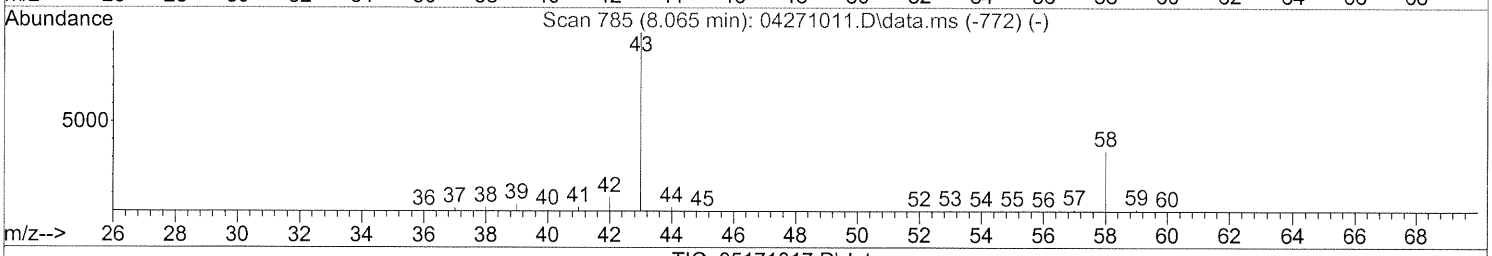
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171017.D\data.ms

(13) Acetone (T)

8.060min (-0.034) 5.89ng m

response 98414

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 328.13 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SH → IC

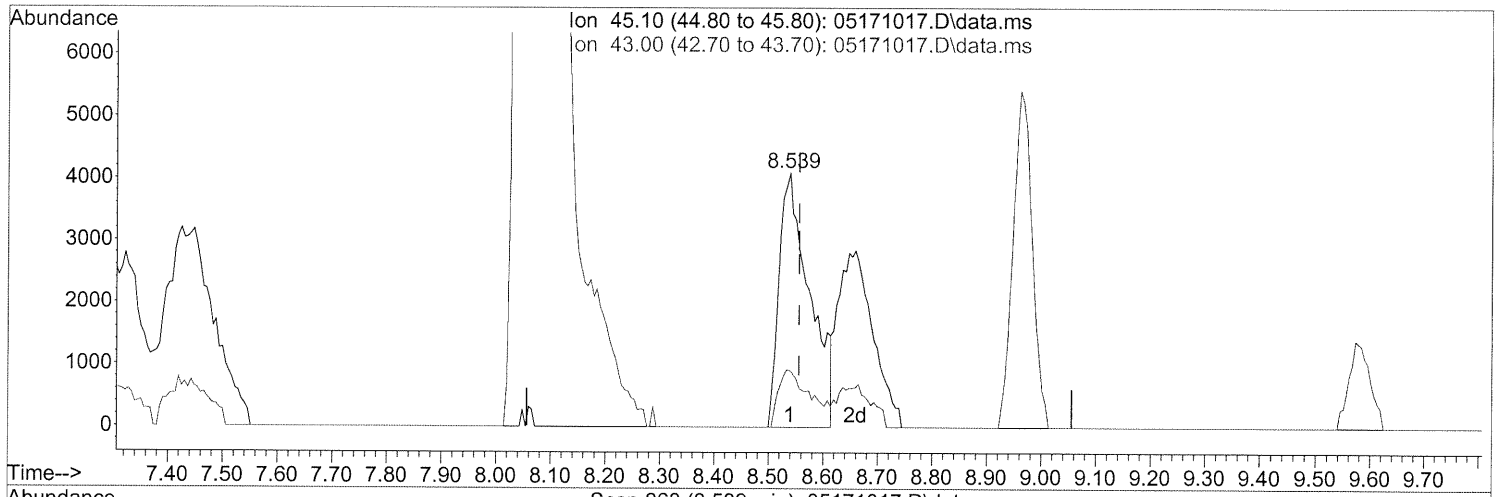
1st 5/19/10

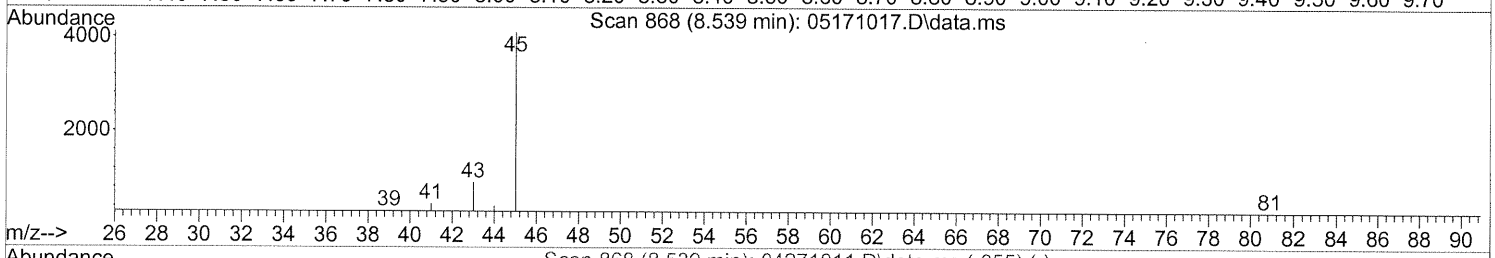
5/20/10

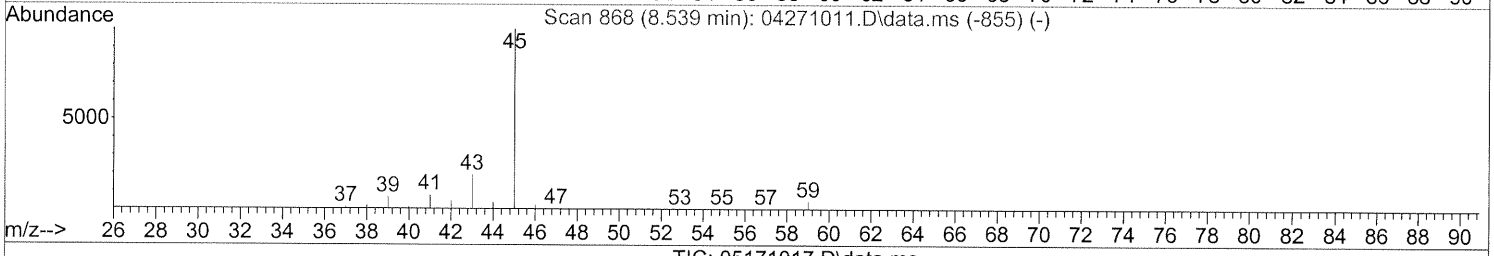
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171017.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.539min (-0.017) 0.33ng

response 15824

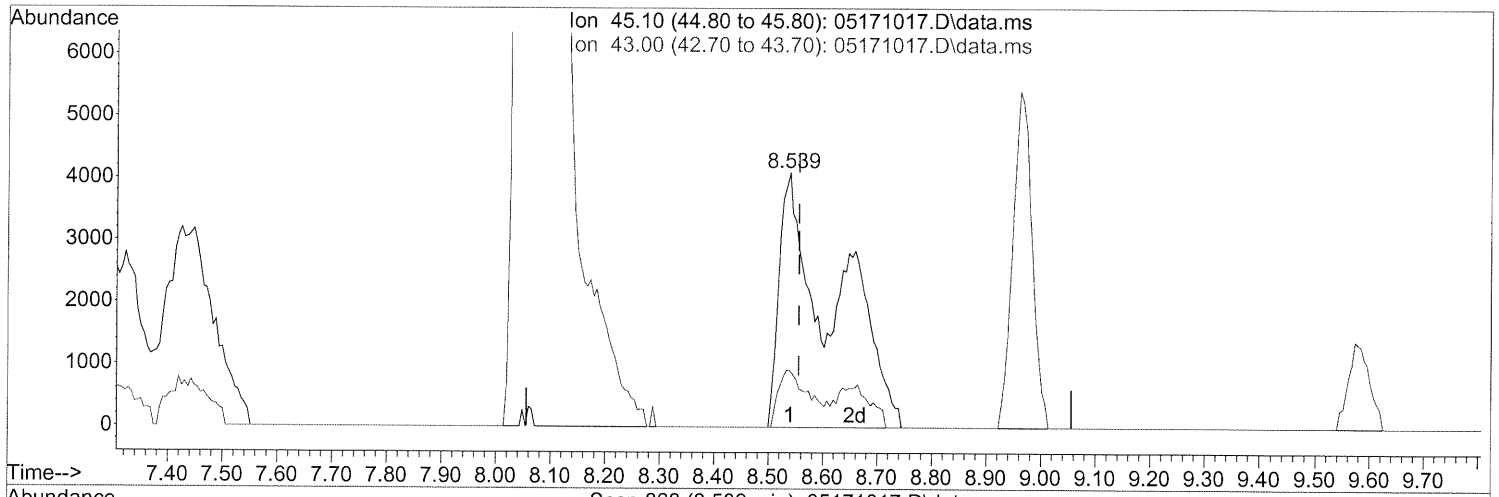
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 25.49 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

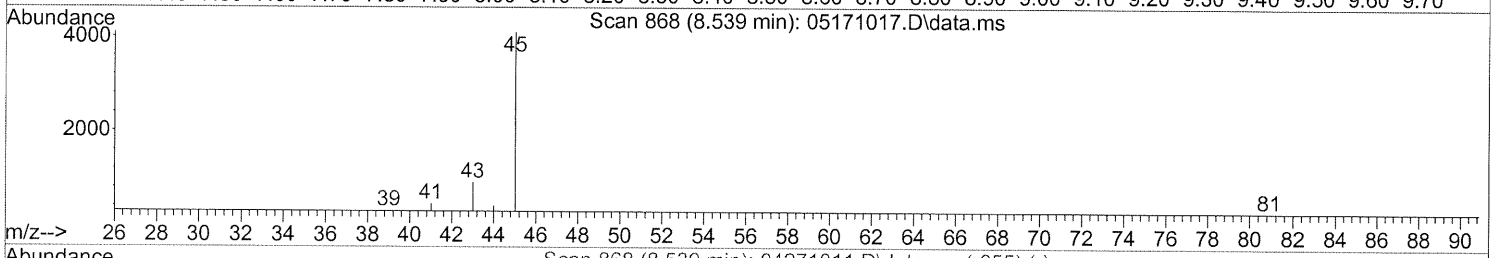
SP

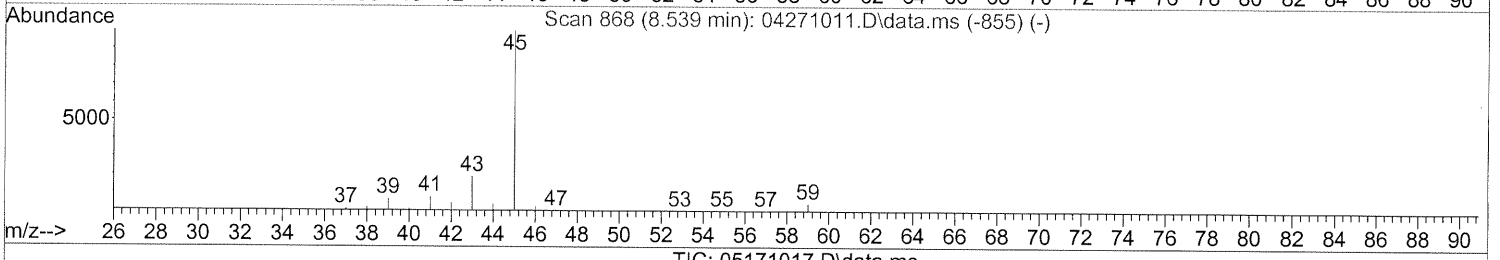
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171017.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.539min (-0.017) 0.58ng m

response 28417

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 14.19 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP—7 1C

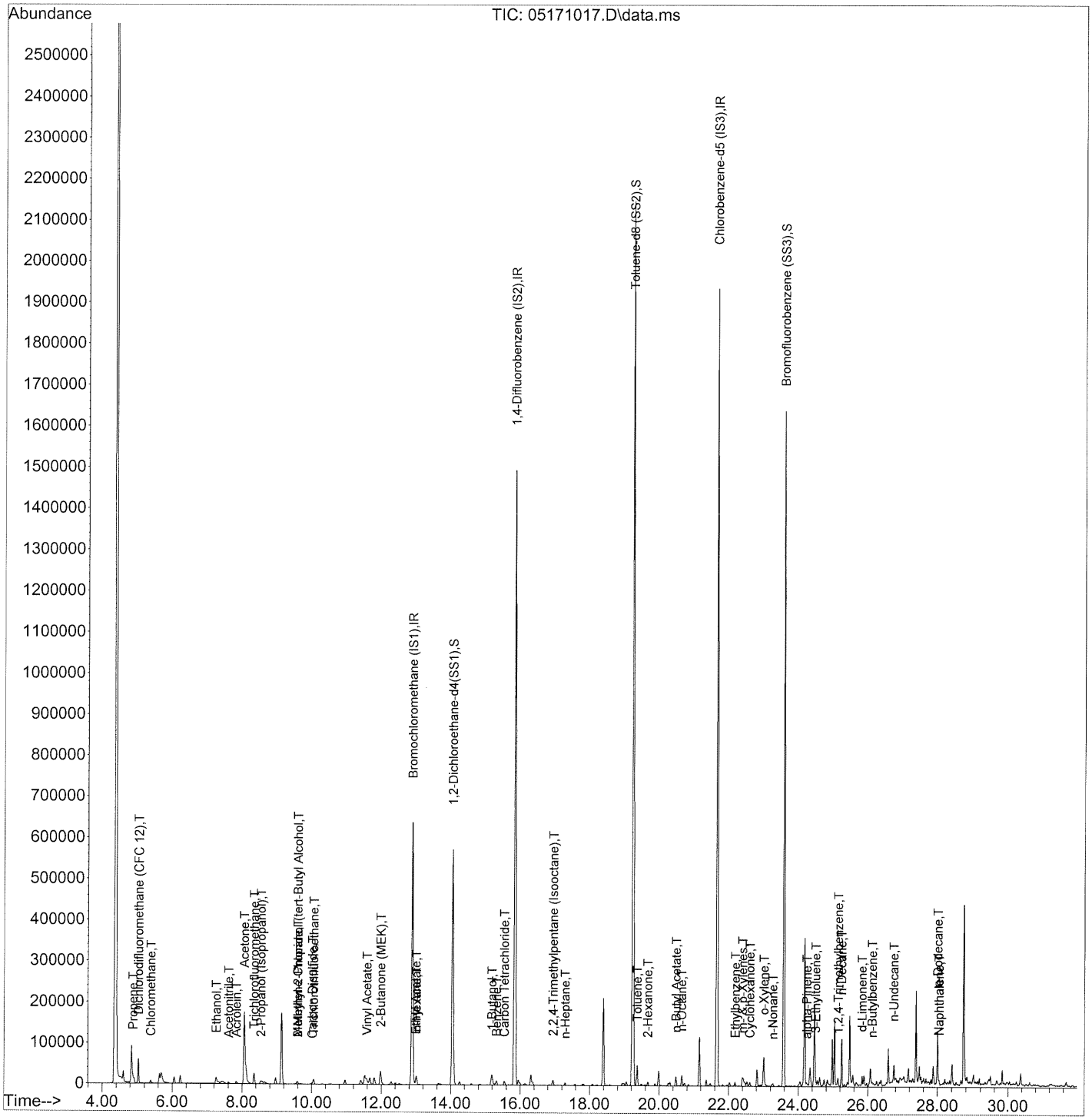
5/19/10

5/20/10

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 378765 | 25.000 | ng | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1833578 | 25.000 | ng | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 772951 | 25.000 | ng | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 573404 | 25.083 | ng | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 100.32% | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1934850 | 24.819 | ng | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.28% | | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 642282 | 23.520 | ng | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 94.08% | | | |

| Target Compounds | | | | | | | Qvalue |
|---|---|---|---|---|---|---|---|
| 2) Propene | 4.88 | 42 | 7239 | 0.337 | ng | # | 74 |
| 3) Dichlorodifluoromethan... | 5.04 | 85 | 62415 | 1.237 | ng | | 100 |
| 4) Chloromethane | 5.38 | 50 | 7012 | 0.229 | ng | | 98 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.64 | 135 | 1381 | N.D. | | | |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 0.00 | 54 | 0 | N.D. | | | |
| 8) Bromomethane | 0.00 | 94 | 0 | N.D. | | | |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | | | |
| 10) Ethanol | 7.26 | 45 | 33382 | 2.554 | ng | | 99 |
| 11) Acetonitrile | 7.61 | 41 | 5588 | 0.176 | ng | | 92 |
| 12) Acrolein | 7.83 | 56 | 6505 | 0.505 | ng | | 99 |
| 13) Acetone | 8.06 | 58 | 111240 | 6.660 | ng | # | 83 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 28556 | 0.622 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.54 | 45 | 15824 | 0.325 | ng | | 86 |
| 16) Acrylonitrile | 0.00 | 53 | 0 | N.D. | | | |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.60 | 59 | 6255 | 0.109 | ng | # | 62 |
| 19) Methylene Chloride | 9.60 | 84 | 2647 | 0.105 | ng | # | 77 |
| 20) 3-Chloro-1-propene (Al... | 9.61 | 41 | 106 | N.D. | | | |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 6659 | 0.289 | ng | # | 78 |
| 22) Carbon Disulfide | 10.01 | 76 | 6790 | 0.084 | ng | # | 75 |
| 23) trans-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 24) 1,1-Dichloroethane | 0.00 | 63 | 0 | N.D. | | | |
| 25) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | | | |
| 26) Vinyl Acetate | 11.59 | 86 | 5625 | 0.968 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.98 | 72 | 16868 | 1.100 | ng | # | 71 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 0.00 | 87 | 0 | N.D. | | | |
| 30) Ethyl Acetate | 13.00 | 61 | 909 | 0.112 | ng | | 90 |
| 31) n-Hexane | 13.01 | 57 | 10623 | 0.274 | ng | | 99 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.10 | 83 | 1700 | N.D. | | |
| 34) Tetrahydrofuran (THF) | 13.72 | 72 | 90 | N.D. | | |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 176 | N.D. | | |
| 38) 1,1,1-Trichloroethane | 14.62 | 97 | 219 | N.D. | | |
| 39) Isopropyl Acetate | 0.00 | 61 | 0 | N.D. | | |
| 40) 1-Butanol | 15.19 | 56 | 27569 | 1.247 ng | # | 75 |
| 41) Benzene | 15.32 | 78 | 14212 | 0.136 ng | | 97 |
| 42) Carbon Tetrachloride | 15.54 | 117 | 8332 | 0.260 ng | | 99 |
| 43) Cyclohexane | 15.76 | 84 | 679 | N.D. | | |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | | |
| 45) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | | |
| 46) Bromodichloromethane | 0.00 | 83 | 0 | N.D. | | |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | | |
| 48) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 15250 | 0.159 ng | | 100 |
| 50) Methyl Methacrylate | 17.30 | 100 | 178 | N.D. | | |
| 51) n-Heptane | 17.30 | 71 | 1852 | 0.075 ng | | 81 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 18.09 | 58 | 905 | N.D. | | |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 58) Toluene | 19.37 | 91 | 46060 | 0.419 ng | | 99 |
| 59) 2-Hexanone | 19.67 | 43 | 7780 | 0.167 ng | | 90 |
| 60) Dibromochloromethane | 0.00 | 129 | 0 | N.D. | | |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.48 | 43 | 20421 | 0.384 ng | | 94 |
| 63) n-Octane | 20.65 | 57 | 5230 | 0.265 ng | | 88 |
| 64) Tetrachloroethene | 20.84 | 166 | 1711 | N.D. | | |
| 65) Chlorobenzene | 0.00 | 112 | 0 | N.D. | | |
| 66) Ethylbenzene | 22.19 | 91 | 9727 | 0.081 ng | | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 22402 | 0.235 ng | | 91 |
| 68) Bromoform | 22.51 | 173 | 1072 | N.D. | | |
| 69) Styrene | 22.87 | 104 | 2118 | N.D. | | |
| 70) o-Xylene | 23.01 | 91 | 9339 | 0.096 ng | | 87 |
| 71) n-Nonane | 23.27 | 43 | 4680 | 0.111 ng | | 90 |
| 72) 1,1,2,2-Tetrachloroethane | 23.01 | 83 | 315 | N.D. | | |
| 74) Cumene | 23.75 | 105 | 1068 | N.D. | | |
| 75) alpha-Pinene | 24.25 | 93 | 3949 | 0.064 ng | # | 42 |
| 76) n-Propylbenzene | 24.38 | 91 | 3411 | N.D. | | |
| 77) 3-Ethyltoluene | 24.50 | 105 | 7895 | 0.065 ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 4152 | N.D. | | |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 2285 | N.D. | | |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171017.D
Acq On : 17 May 2010 22:30
Operator : LM
Sample : P1001650-004 (1000ml)
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 18 04:02:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 445 | N.D. | | |
| 81) 2-Ethyltoluene | 24.88 | 105 | 2960 | N.D. | | |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 9051 | 0.088 ng | | 94 |
| 83) n-Decane | 25.25 | 57 | 40662 | 0.864 ng | | 89 |
| 84) Benzyl Chloride | 25.47 | 91 | 3339 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.42 | 146 | 2328 | N.D. | | |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 2328 | N.D. | | |
| 87) sec-Butylbenzene | 25.47 | 105 | 1833 | N.D. | | |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 1725 | N.D. | | |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 2374 | N.D. | | |
| 90) 1,2-Dichlorobenzene | 25.42 | 146 | 2328 | N.D. | | |
| 91) d-Limonene | 25.84 | 68 | 6138 | 0.171 ng | # | 74 |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 93) n-Undecane | 26.75 | 57 | 19020 | 0.408 ng | | 85 |
| 94) 1,2,4-Trichlorobenzene | 0.00 | 180 | 0 | N.D. | | |
| 95) Naphthalene | 28.05 | 128 | 7972 | 0.061 ng | | 96 |
| 96) n-Dodecane | 28.01 | 57 | 42245 | 0.874 ng | | 87 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.61 | 55 | 5239 | 0.166 ng | # | 82 |
| 99) tert-Butylbenzene | 25.15 | 119 | 1179 | N.D. | | |
| 100) n-Butylbenzene | 26.12 | 91 | 5558 | 0.052 ng | # | 38 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Method Blank**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100517-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | ND | 0.50 | ND | 0.29 | |
| 75-71-8 | Dichlorodifluoromethane (CFC 12) | ND | 0.50 | ND | 0.10 | |
| 74-87-3 | Chloromethane | ND | 0.20 | ND | 0.097 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.50 | ND | 0.072 | |
| 75-01-4 | Vinyl Chloride | ND | 0.10 | ND | 0.039 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.20 | ND | 0.090 | |
| 74-83-9 | Bromomethane | ND | 0.10 | ND | 0.026 | |
| 75-00-3 | Chloroethane | ND | 0.10 | ND | 0.038 | |
| 64-17-5 | Ethanol | ND | 5.0 | ND | 2.7 | |
| 75-05-8 | Acetonitrile | ND | 0.50 | ND | 0.30 | |
| 107-02-8 | Acrolein | ND | 2.0 | ND | 0.87 | |
| 67-64-1 | Acetone | ND | 5.0 | ND | 2.1 | |
| 75-69-4 | Trichlorofluoromethane | ND | 0.10 | ND | 0.018 | |
| 67-63-0 | 2-Propanol (Isopropyl Alcohol) | ND | 1.0 | ND | 0.41 | |
| 107-13-1 | Acrylonitrile | ND | 0.50 | ND | 0.23 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.10 | ND | 0.025 | |
| 75-09-2 | Methylene Chloride | ND | 0.50 | ND | 0.14 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.10 | ND | 0.032 | |
| 76-13-1 | Trichlorotrifluoroethane | ND | 0.10 | ND | 0.013 | |
| 75-15-0 | Carbon Disulfide | ND | 5.0 | ND | 1.6 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.10 | ND | 0.025 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.10 | ND | 0.025 | |
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 0.10 | ND | 0.028 | |
| 108-05-4 | Vinyl Acetate | ND | 5.0 | ND | 1.4 | |
| 78-93-3 | 2-Butanone (MEK) | ND | 5.0 | ND | 1.7 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Re Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Method Blank**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100517-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.10 | ND | 0.025 | |
| 141-78-6 | Ethyl Acetate | ND | 0.50 | ND | 0.14 | |
| 110-54-3 | n-Hexane | ND | 0.50 | ND | 0.14 | |
| 67-66-3 | Chloroform | ND | 0.10 | ND | 0.020 | |
| 109-99-9 | Tetrahydrofuran (THF) | ND | 0.50 | ND | 0.17 | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.10 | ND | 0.025 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.10 | ND | 0.018 | |
| 71-43-2 | Benzene | ND | 0.10 | ND | 0.031 | |
| 56-23-5 | Carbon Tetrachloride | ND | 0.10 | ND | 0.016 | |
| 110-82-7 | Cyclohexane | ND | 0.50 | ND | 0.15 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.10 | ND | 0.022 | |
| 75-27-4 | Bromodichloromethane | ND | 0.10 | ND | 0.015 | |
| 79-01-6 | Trichloroethene | ND | 0.10 | ND | 0.019 | |
| 123-91-1 | 1,4-Dioxane | ND | 0.50 | ND | 0.14 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.50 | ND | 0.12 | |
| 142-82-5 | n-Heptane | ND | 0.50 | ND | 0.12 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.50 | ND | 0.11 | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.50 | ND | 0.12 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.50 | ND | 0.11 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.10 | ND | 0.018 | |
| 108-88-3 | Toluene | ND | 0.50 | ND | 0.13 | |
| 591-78-6 | 2-Hexanone | ND | 0.50 | ND | 0.12 | |
| 124-48-1 | Dibromochloromethane | ND | 0.10 | ND | 0.012 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.10 | ND | 0.013 | |
| 123-86-4 | n-Butyl Acetate | ND | 0.50 | ND | 0.11 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Ro Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Method Blank**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100517-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | n-Octane | ND | 0.50 | ND | 0.11 | |
| 127-18-4 | Tetrachloroethene | ND | 0.10 | ND | 0.015 | |
| 108-90-7 | Chlorobenzene | ND | 0.10 | ND | 0.022 | |
| 100-41-4 | Ethylbenzene | ND | 0.50 | ND | 0.12 | |
| 179601-23-1 | m,p-Xylenes | ND | 0.50 | ND | 0.12 | |
| 75-25-2 | Bromoform | ND | 0.50 | ND | 0.048 | |
| 100-42-5 | Styrene | ND | 0.50 | ND | 0.12 | |
| 95-47-6 | o-Xylene | ND | 0.50 | ND | 0.12 | |
| 111-84-2 | n-Nonane | ND | 0.50 | ND | 0.095 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.10 | ND | 0.015 | |
| 98-82-8 | Cumene | ND | 0.50 | ND | 0.10 | |
| 80-56-8 | alpha-Pinene | ND | 0.50 | ND | 0.090 | |
| 103-65-1 | n-Propylbenzene | ND | 0.50 | ND | 0.10 | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.50 | ND | 0.10 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.50 | ND | 0.10 | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 0.50 | ND | 0.10 | |
| 100-44-7 | Benzyl Chloride | ND | 0.50 | ND | 0.097 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.10 | ND | 0.017 | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.10 | ND | 0.017 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.10 | ND | 0.017 | |
| 5989-27-5 | d-Limonene | ND | 0.50 | ND | 0.090 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.50 | ND | 0.052 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.50 | ND | 0.067 | |
| 91-20-3 | Naphthalene | ND | 0.50 | ND | 0.095 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.50 | ND | 0.047 | |

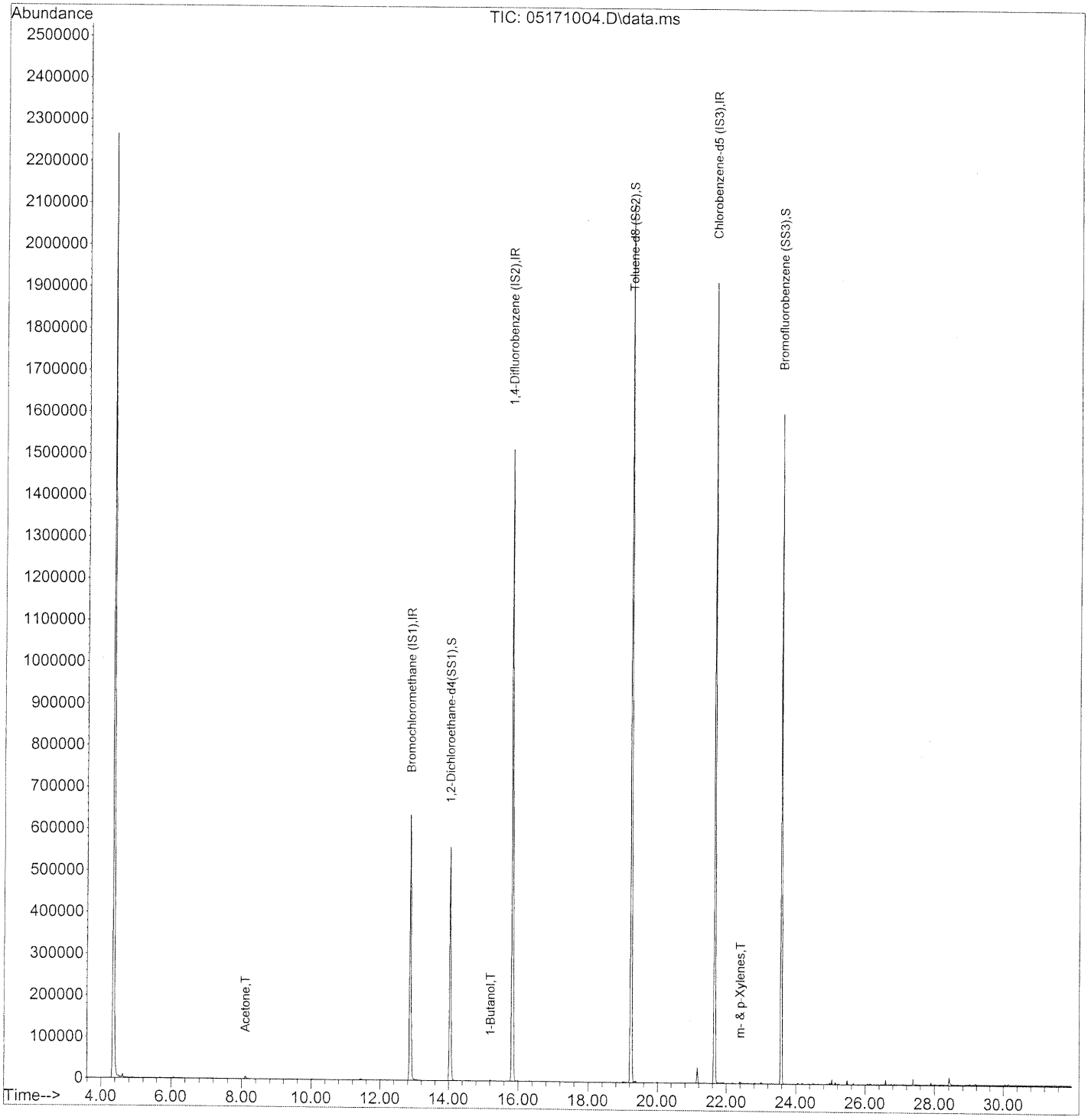
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Rev Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171004.D
Acq On : 17 May 2010 11:10
Operator : LM
Sample : Method Blank (1000ml)
Misc : S20-04261002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 11:45:26 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171004.D
Acq On : 17 May 2010 11:10
Operator : LM
Sample : Method Blank (1000ml)
Misc : S20-04261002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 11:45:26 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

jm 5/18/10

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 378717 | 25.000 ng | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.83 | 114 | 1836622 | 25.000 ng | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 771006 | 25.000 ng | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.04 | 65 | 569022 | 24.895 ng | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = 99.56% | |
| 57) Toluene-d8 (SS2) | 19.23 | 98 | 1931119 | 24.833 ng | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = 99.32% | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 629792 | 23.121 ng | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = 92.48% | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) Propene | 4.91 | 42 | 191 | N.D. | |
| 3) Dichlorodifluoromethan... | 0.00 | 85 | 0 | N.D. | |
| 4) Chloromethane | 0.00 | 50 | 0 | N.D. | |
| 5) 1,2-Dichloro-1,1,2,2-t... | 0.00 | 135 | 0 | N.D. | |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | |
| 7) 1,3-Butadiene | 0.00 | 54 | 0 | N.D. | |
| 8) Bromomethane | 0.00 | 94 | 0 | N.D. | |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | |
| 10) Ethanol | 0.00 | 45 | 0 | N.D. | |
| 11) Acetonitrile | 0.00 | 41 | 0 | N.D. | |
| 12) Acrolein | 0.00 | 56 | 0 | N.D. | |
| 13) Acetone | 8.11 | 58 | 3705 | 0.222 ng # | 84 |
| 14) Trichlorofluoromethane | 0.00 | 101 | 0 | N.D. | |
| 15) 2-Propanol (Isopropanol) | 0.00 | 45 | 0 | N.D. | |
| 16) Acrylonitrile | 0.00 | 53 | 0 | N.D. | |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | |
| 18) 2-Methyl-2-Propanol (t... | 0.00 | 59 | 0 | N.D. | |
| 19) Methylene Chloride | 9.58 | 84 | 483 | N.D. | |
| 20) 3-Chloro-1-propene (Al... | 0.00 | 41 | 0 | N.D. | |
| 21) Trichlorotrifluoroethane | 0.00 | 151 | 0 | N.D. | |
| 22) Carbon Disulfide | 10.02 | 76 | 1955 | N.D. | |
| 23) trans-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | |
| 24) 1,1-Dichloroethane | 0.00 | 63 | 0 | N.D. | |
| 25) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | |
| 26) Vinyl Acetate | 0.00 | 86 | 0 | N.D. | |
| 27) 2-Butanone (MEK) | 12.02 | 72 | 86 | N.D. | |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | |
| 29) Diisopropyl Ether | 0.00 | 87 | 0 | N.D. | |
| 30) Ethyl Acetate | 0.00 | 61 | 0 | N.D. | |
| 31) n-Hexane | 0.00 | 57 | 0 | N.D. | |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171004.D
Acq On : 17 May 2010 11:10
Operator : LM
Sample : Method Blank (1000ml)
Misc : S20-04261002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 11:45:26 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 32) Chloroform | 0.00 | 83 | 0 | N.D. | |
| 34) Tetrahydrofuran (THF) | 0.00 | 72 | 0 | N.D. | |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | |
| 36) 1,2-Dichloroethane | 0.00 | 62 | 0 | N.D. | |
| 38) 1,1,1-Trichloroethane | 0.00 | 97 | 0 | N.D. | |
| 39) Isopropyl Acetate | 0.00 | 61 | 0 | N.D. | |
| 40) 1-Butanol | 15.21 | 56 | 2190 | 0.099 ng # | 73 |
| 41) Benzene | 15.33 | 78 | 967 | N.D. | |
| 42) Carbon Tetrachloride | 0.00 | 117 | 0 | N.D. | |
| 43) Cyclohexane | 15.84 | 84 | 1250 | N.D. | |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | |
| 45) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | |
| 46) Bromodichloromethane | 0.00 | 83 | 0 | N.D. | |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | |
| 48) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | |
| 49) 2,2,4-Trimethylpentane... | 16.94 | 57 | 90 | N.D. | |
| 50) Methyl Methacrylate | 0.00 | 100 | 0 | N.D. | |
| 51) n-Heptane | 0.00 | 71 | 0 | N.D. | |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | |
| 53) 4-Methyl-2-pentanone | 0.00 | 58 | 0 | N.D. | |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | |
| 58) Toluene | 19.36 | 91 | 5467 | N.D. | |
| 59) 2-Hexanone | 19.68 | 43 | 588 | N.D. | |
| 60) Dibromochloromethane | 0.00 | 129 | 0 | N.D. | |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | |
| 62) n-Butyl Acetate | 20.66 | 43 | 509 | N.D. | |
| 63) n-Octane | 0.00 | 57 | 0 | N.D. | |
| 64) Tetrachloroethene | 0.00 | 166 | 0 | N.D. | |
| 65) Chlorobenzene | 0.00 | 112 | 0 | N.D. | |
| 66) Ethylbenzene | 22.19 | 91 | 1720 | N.D. | |
| 67) m- & p-Xylenes | 22.40 | 91 | 6275 | 0.066 ng | 98 |
| 68) Bromoform | 0.00 | 173 | 0 | N.D. | |
| 69) Styrene | 0.00 | 104 | 0 | N.D. | |
| 70) o-Xylene | 23.01 | 91 | 2781 | N.D. | |
| 71) n-Nonane | 23.27 | 43 | 666 | N.D. | |
| 72) 1,1,2,2-Tetrachloroethane | 0.00 | 83 | 0 | N.D. | |
| 74) Cumene | 23.75 | 105 | 187 | N.D. | |
| 75) alpha-Pinene | 0.00 | 93 | 0 | N.D. | |
| 76) n-Propylbenzene | 24.38 | 91 | 1072 | N.D. | |
| 77) 3-Ethyltoluene | 24.50 | 105 | 2807 | N.D. | |
| 78) 4-Ethyltoluene | 24.55 | 105 | 1500 | N.D. | |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 1264 | N.D. | |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171004.D
Acq On : 17 May 2010 11:10
Operator : LM
Sample : Method Blank (1000ml)
Misc : S20-04261002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 11:45:26 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 0.00 | 118 | 0 | N.D. | |
| 81) 2-Ethyltoluene | 24.88 | 105 | 1069 | N.D. | |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 4487 | N.D. | |
| 83) n-Decane | 25.24 | 57 | 720 | N.D. | |
| 84) Benzyl Chloride | 25.15 | 91 | 195 | N.D. | |
| 85) 1,3-Dichlorobenzene | 0.00 | 146 | 0 | N.D. | |
| 86) 1,4-Dichlorobenzene | 0.00 | 146 | 0 | N.D. | |
| 87) sec-Butylbenzene | 25.67 | 105 | 1920 | N.D. | |
| 88) 4-Isopropyltoluene (p-... | 25.67 | 119 | 462 | N.D. | |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 1920 | N.D. | |
| 90) 1,2-Dichlorobenzene | 0.00 | 146 | 0 | N.D. | |
| 91) d-Limonene | 0.00 | 68 | 0 | N.D. | |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | |
| 93) n-Undecane | 26.76 | 57 | 809 | N.D. | |
| 94) 1,2,4-Trichlorobenzene | 0.00 | 180 | 0 | N.D. | |
| 95) Naphthalene | 28.05 | 128 | 834 | N.D. | |
| 96) n-Dodecane | 28.01 | 57 | 638 | N.D. | |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | |
| 98) Cyclohexanone | 22.61 | 55 | 1183 | N.D. | |
| 99) tert-Butylbenzene | 25.15 | 119 | 386 | N.D. | |
| 100) n-Butylbenzene | 26.16 | 91 | 1220 | N.D. | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Method Blank**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100518-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | ND | 0.50 | ND | 0.29 | |
| 75-71-8 | Dichlorodifluoromethane (CFC 12) | ND | 0.50 | ND | 0.10 | |
| 74-87-3 | Chloromethane | ND | 0.20 | ND | 0.097 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.50 | ND | 0.072 | |
| 75-01-4 | Vinyl Chloride | ND | 0.10 | ND | 0.039 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.20 | ND | 0.090 | |
| 74-83-9 | Bromomethane | ND | 0.10 | ND | 0.026 | |
| 75-00-3 | Chloroethane | ND | 0.10 | ND | 0.038 | |
| 64-17-5 | Ethanol | ND | 5.0 | ND | 2.7 | |
| 75-05-8 | Acetonitrile | ND | 0.50 | ND | 0.30 | |
| 107-02-8 | Acrolein | ND | 2.0 | ND | 0.87 | |
| 67-64-1 | Acetone | ND | 5.0 | ND | 2.1 | |
| 75-69-4 | Trichlorofluoromethane | ND | 0.10 | ND | 0.018 | |
| 67-63-0 | 2-Propanol (Isopropyl Alcohol) | ND | 1.0 | ND | 0.41 | |
| 107-13-1 | Acrylonitrile | ND | 0.50 | ND | 0.23 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.10 | ND | 0.025 | |
| 75-09-2 | Methylene Chloride | ND | 0.50 | ND | 0.14 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.10 | ND | 0.032 | |
| 76-13-1 | Trichlorotrifluoroethane | ND | 0.10 | ND | 0.013 | |
| 75-15-0 | Carbon Disulfide | ND | 5.0 | ND | 1.6 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.10 | ND | 0.025 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.10 | ND | 0.025 | |
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 0.10 | ND | 0.028 | |
| 108-05-4 | Vinyl Acetate | ND | 5.0 | ND | 1.4 | |
| 78-93-3 | 2-Butanone (MEK) | ND | 5.0 | ND | 1.7 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Re Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Method Blank**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100518-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.10 | ND | 0.025 | |
| 141-78-6 | Ethyl Acetate | ND | 0.50 | ND | 0.14 | |
| 110-54-3 | n-Hexane | ND | 0.50 | ND | 0.14 | |
| 67-66-3 | Chloroform | ND | 0.10 | ND | 0.020 | |
| 109-99-9 | Tetrahydrofuran (THF) | ND | 0.50 | ND | 0.17 | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.10 | ND | 0.025 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.10 | ND | 0.018 | |
| 71-43-2 | Benzene | ND | 0.10 | ND | 0.031 | |
| 56-23-5 | Carbon Tetrachloride | ND | 0.10 | ND | 0.016 | |
| 110-82-7 | Cyclohexane | ND | 0.50 | ND | 0.15 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.10 | ND | 0.022 | |
| 75-27-4 | Bromodichloromethane | ND | 0.10 | ND | 0.015 | |
| 79-01-6 | Trichloroethene | ND | 0.10 | ND | 0.019 | |
| 123-91-1 | 1,4-Dioxane | ND | 0.50 | ND | 0.14 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.50 | ND | 0.12 | |
| 142-82-5 | n-Heptane | ND | 0.50 | ND | 0.12 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.50 | ND | 0.11 | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.50 | ND | 0.12 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.50 | ND | 0.11 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.10 | ND | 0.018 | |
| 108-88-3 | Toluene | ND | 0.50 | ND | 0.13 | |
| 591-78-6 | 2-Hexanone | ND | 0.50 | ND | 0.12 | |
| 124-48-1 | Dibromochloromethane | ND | 0.10 | ND | 0.012 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.10 | ND | 0.013 | |
| 123-86-4 | n-Butyl Acetate | ND | 0.50 | ND | 0.11 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Ke Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Method Blank**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100518-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/18/10
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | n-Octane | ND | 0.50 | ND | 0.11 | |
| 127-18-4 | Tetrachloroethene | ND | 0.10 | ND | 0.015 | |
| 108-90-7 | Chlorobenzene | ND | 0.10 | ND | 0.022 | |
| 100-41-4 | Ethylbenzene | ND | 0.50 | ND | 0.12 | |
| 179601-23-1 | m,p-Xylenes | ND | 0.50 | ND | 0.12 | |
| 75-25-2 | Bromoform | ND | 0.50 | ND | 0.048 | |
| 100-42-5 | Styrene | ND | 0.50 | ND | 0.12 | |
| 95-47-6 | o-Xylene | ND | 0.50 | ND | 0.12 | |
| 111-84-2 | n-Nonane | ND | 0.50 | ND | 0.095 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.10 | ND | 0.015 | |
| 98-82-8 | Cumene | ND | 0.50 | ND | 0.10 | |
| 80-56-8 | alpha-Pinene | ND | 0.50 | ND | 0.090 | |
| 103-65-1 | n-Propylbenzene | ND | 0.50 | ND | 0.10 | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.50 | ND | 0.10 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.50 | ND | 0.10 | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 0.50 | ND | 0.10 | |
| 100-44-7 | Benzyl Chloride | ND | 0.50 | ND | 0.097 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.10 | ND | 0.017 | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.10 | ND | 0.017 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.10 | ND | 0.017 | |
| 5989-27-5 | d-Limonene | ND | 0.50 | ND | 0.090 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.50 | ND | 0.052 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.50 | ND | 0.067 | |
| 91-20-3 | Naphthalene | ND | 0.50 | ND | 0.095 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.50 | ND | 0.047 | |

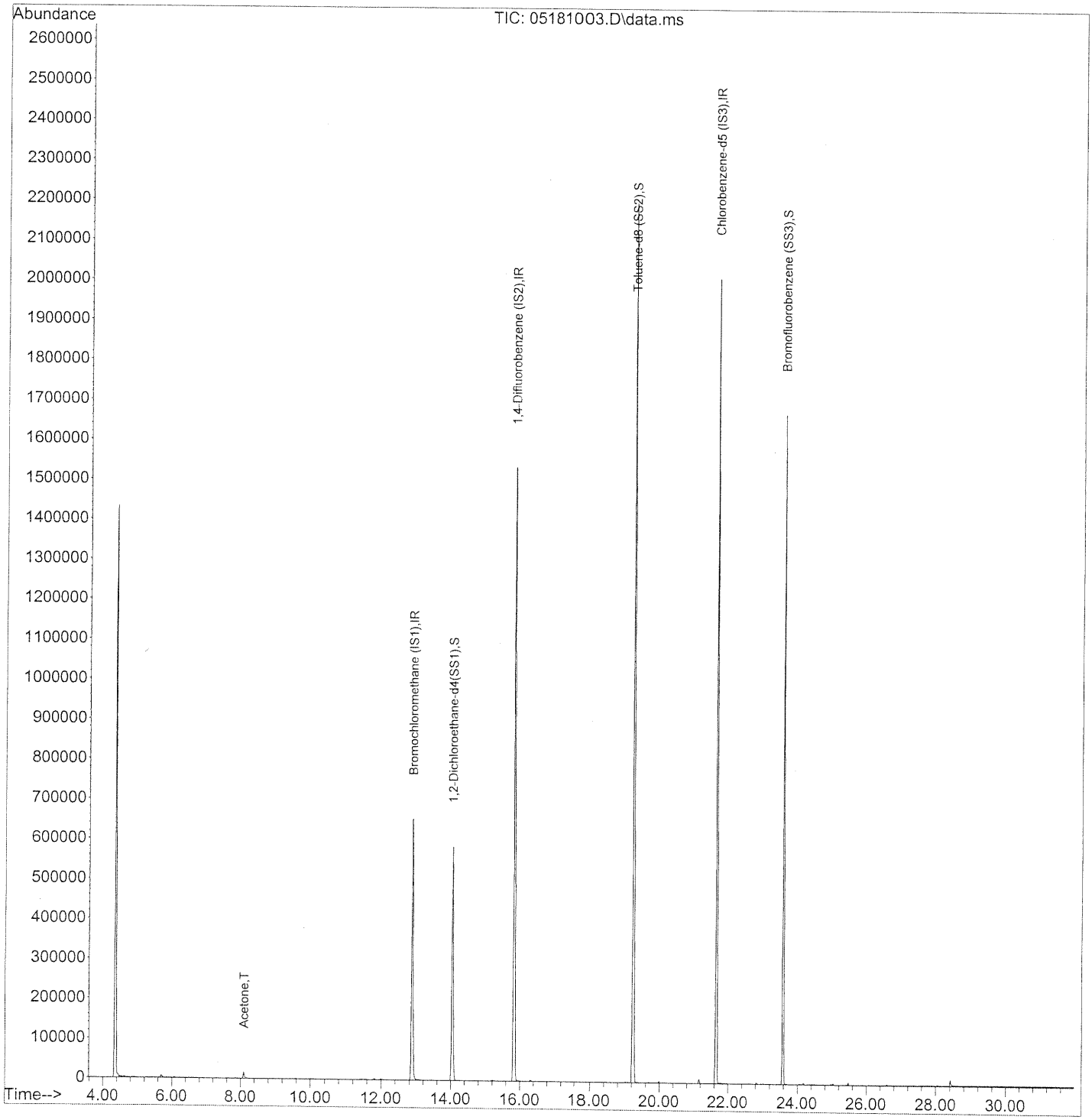
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: Re Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181003.D
Acq On : 18 May 2010 9:10
Operator : LM
Sample : TO-15 Method Blank (1000mL)
Misc : S20-04261002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 10:30:34 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181003.D
Acq On : 18 May 2010 9:10
Operator : LM
Sample : TO-15 Method Blank (1000mL)
Misc : S20-04261002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 10:30:34 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 394974 | 25.000 ng | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1901737 | 25.000 ng | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 802217 | 25.000 ng | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.04 | 65 | 594305 | 24.931 ng | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = 99.72% | |
| 57) Toluene-d8 (SS2) | 19.23 | 98 | 2000749 | 24.728 ng | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = 98.92% | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 663108 | 23.397 ng | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = 93.60% | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) Propene | 4.91 | 42 | 191 | N.D. | |
| 3) Dichlorodifluoromethan... | 0.00 | 85 | 0 | N.D. | |
| 4) Chloromethane | 0.00 | 50 | 0 | N.D. | |
| 5) 1,2-Dichloro-1,1,2,2-t... | 0.00 | 135 | 0 | N.D. | |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | |
| 7) 1,3-Butadiene | 0.00 | 54 | 0 | N.D. | |
| 8) Bromomethane | 0.00 | 94 | 0 | N.D. | |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | |
| 10) Ethanol | 7.30 | 45 | 372 | N.D. | |
| 11) Acetonitrile | 7.63 | 41 | 972 | N.D. | |
| 12) Acrolein | 7.85 | 56 | 626 | N.D. | |
| 13) Acetone | 8.09 | 58 | 10397 | 0.597 ng # | 66 |
| 14) Trichlorofluoromethane | 0.00 | 101 | 0 | N.D. | |
| 15) 2-Propanol (Isopropanol) | 0.00 | 45 | 0 | N.D. | |
| 16) Acrylonitrile | 0.00 | 53 | 0 | N.D. | |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | |
| 18) 2-Methyl-2-Propanol (t... | 0.00 | 59 | 0 | N.D. | |
| 19) Methylene Chloride | 9.59 | 84 | 846 | N.D. | |
| 20) 3-Chloro-1-propene (Al... | 0.00 | 41 | 0 | N.D. | |
| 21) Trichlorotrifluoroethane | 0.00 | 151 | 0 | N.D. | |
| 22) Carbon Disulfide | 10.01 | 76 | 2314 | N.D. | |
| 23) trans-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | |
| 24) 1,1-Dichloroethane | 0.00 | 63 | 0 | N.D. | |
| 25) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | |
| 26) Vinyl Acetate | 0.00 | 86 | 0 | N.D. | |
| 27) 2-Butanone (MEK) | 12.01 | 72 | 1005 | N.D. | |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | |
| 29) Diisopropyl Ether | 0.00 | 87 | 0 | N.D. | |
| 30) Ethyl Acetate | 0.00 | 61 | 0 | N.D. | |
| 31) n-Hexane | 0.00 | 57 | 0 | N.D. | |



BA 5/18/10

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181003.D
Acq On : 18 May 2010 9:10
Operator : LM
Sample : TO-15 Method Blank (1000mL)
Misc : S20-04261002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 10:30:34 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 32) Chloroform | 0.00 | 83 | 0 | N.D. | |
| 34) Tetrahydrofuran (THF) | 0.00 | 72 | 0 | N.D. | |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | |
| 36) 1,2-Dichloroethane | 0.00 | 62 | 0 | N.D. | |
| 38) 1,1,1-Trichloroethane | 0.00 | 97 | 0 | N.D. | |
| 39) Isopropyl Acetate | 0.00 | 61 | 0 | N.D. | |
| 40) 1-Butanol | 15.21 | 56 | 1680 | N.D. | |
| 41) Benzene | 15.31 | 78 | 458 | N.D. | |
| 42) Carbon Tetrachloride | 0.00 | 117 | 0 | N.D. | |
| 43) Cyclohexane | 15.83 | 84 | 1109 | N.D. | |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | |
| 45) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | |
| 46) Bromodichloromethane | 0.00 | 83 | 0 | N.D. | |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | |
| 48) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | |
| 49) 2,2,4-Trimethylpentane... | 0.00 | 57 | 0 | N.D. | |
| 50) Methyl Methacrylate | 0.00 | 100 | 0 | N.D. | |
| 51) n-Heptane | 0.00 | 71 | 0 | N.D. | |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | |
| 53) 4-Methyl-2-pentanone | 0.00 | 58 | 0 | N.D. | |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | |
| 58) Toluene | 19.36 | 91 | 979 | N.D. | |
| 59) 2-Hexanone | 19.69 | 43 | 768 | N.D. | |
| 60) Dibromochloromethane | 0.00 | 129 | 0 | N.D. | |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | |
| 62) n-Butyl Acetate | 0.00 | 43 | 0 | N.D. | |
| 63) n-Octane | 0.00 | 57 | 0 | N.D. | |
| 64) Tetrachloroethene | 0.00 | 166 | 0 | N.D. | |
| 65) Chlorobenzene | 21.72 | 112 | 102 | N.D. | |
| 66) Ethylbenzene | 22.40 | 91 | 593 | N.D. | |
| 67) m- & p-Xylenes | 22.40 | 91 | 593 | N.D. | |
| 68) Bromoform | 0.00 | 173 | 0 | N.D. | |
| 69) Styrene | 0.00 | 104 | 0 | N.D. | |
| 70) o-Xylene | 0.00 | 91 | 0 | N.D. | |
| 71) n-Nonane | 23.02 | 43 | 385 | N.D. | |
| 72) 1,1,2,2-Tetrachloroethane | 0.00 | 83 | 0 | N.D. | |
| 74) Cumene | 23.58 | 105 | 1058 | N.D. | |
| 75) alpha-Pinene | 0.00 | 93 | 0 | N.D. | |
| 76) n-Propylbenzene | 0.00 | 91 | 0 | N.D. | |
| 77) 3-Ethyltoluene | 24.50 | 105 | 219 | N.D. | |
| 78) 4-Ethyltoluene | 24.55 | 105 | 175 | N.D. | |
| 79) 1,3,5-Trimethylbenzene | 24.55 | 105 | 175 | N.D. | |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181003.D
Acq On : 18 May 2010 9:10
Operator : LM
Sample : TO-15 Method Blank (1000mL)
Misc : S20-04261002
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 18 10:30:34 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 0.00 | 118 | 0 | N.D. | |
| 81) 2-Ethyltoluene | 25.15 | 105 | 86 | N.D. | |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 86 | N.D. | |
| 83) n-Decane | 25.48 | 57 | 3418 | N.D. | |
| 84) Benzyl Chloride | 0.00 | 91 | 0 | N.D. | |
| 85) 1,3-Dichlorobenzene | 25.34 | 146 | 297 | N.D. | |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 512 | N.D. | |
| 87) sec-Butylbenzene | 25.15 | 105 | 86 | N.D. | |
| 88) 4-Isopropyltoluene (p-... | 0.00 | 119 | 0 | N.D. | |
| 89) 1,2,3-Trimethylbenzene | 26.08 | 105 | 666 | N.D. | |
| 90) 1,2-Dichlorobenzene | 25.42 | 146 | 512 | N.D. | |
| 91) d-Limonene | 0.00 | 68 | 0 | N.D. | |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | |
| 93) n-Undecane | 26.59 | 57 | 763 | N.D. | |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 204 | N.D. | |
| 95) Naphthalene | 28.05 | 128 | 2193 | N.D. | |
| 96) n-Dodecane | 0.00 | 57 | 0 | N.D. | |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | |
| 98) Cyclohexanone | 22.62 | 55 | 431 | N.D. | |
| 99) tert-Butylbenzene | 0.00 | 119 | 0 | N.D. | |
| 100) n-Butylbenzene | 26.17 | 91 | 207 | N.D. | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

QC SUMMARY FORMS

# COLUMBIA ANALYTICAL SERVICES, INC.

SURROGATE SPIKE RECOVERY RESULTS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Project ID:** **17131** CAS Project ID: P1001650

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 5/9/10
Date(s) Received: 5/11/10
Date(s) Analyzed: 5/17 - 5/18/10

| Client Sample ID | CAS Sample ID | 1,2-Dichloroethane-d4 % Recovered | Acceptance Limits | Toluene-d8 % Recovered | Acceptance Limits | Bromofluorobenzene % Recovered | Acceptance Limits | Data Qualifier |
|---|---|---|---|---|---|---|---|---|
| Method Blank | P100517-MB | **100** | 70-130 | **99** | 70-130 | **92** | 70-130 | |
| Method Blank | P100518-MB | **100** | 70-130 | **99** | 70-130 | **94** | 70-130 | |
| Lab Control Sample | P100517-LCS | **98** | 70-130 | **99** | 70-130 | **96** | 70-130 | |
| Lab Control Sample | P100518-LCS | **97** | 70-130 | **99** | 70-130 | **96** | 70-130 | |
| 110354 | P1001650-001 | **98** | 70-130 | **99** | 70-130 | **95** | 70-130 | |
| 110355 | P1001650-002 | **98** | 70-130 | **99** | 70-130 | **94** | 70-130 | |
| 110355 | P1001650-002DUP | **98** | 70-130 | **99** | 70-130 | **95** | 70-130 | |
| 110356 | P1001650-003 | **99** | 70-130 | **99** | 70-130 | **95** | 70-130 | |
| 110357 | P1001650-004 | **100** | 70-130 | **99** | 70-130 | **94** | 70-130 | |

Verified By: Rc Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Lab Control Sample** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P100517-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Liliana Marghitoiu Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: NA Liter(s)
Test Notes:

| CAS # | Compound | Spike Amount ng | Result ng | % Recovery | CAS Acceptance Limits | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 26.3 | **27.7** | **105** | 58-133 | |
| 75-71-8 | Dichlorodifluoromethane (CFC 12) | 26.0 | **21.5** | **83** | 63-114 | |
| 74-87-3 | Chloromethane | 25.0 | **20.8** | **83** | 60-130 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | 26.0 | **21.2** | **82** | 63-118 | |
| 75-01-4 | Vinyl Chloride | 25.3 | **21.7** | **86** | 63-123 | |
| 106-99-0 | 1,3-Butadiene | 26.8 | **23.9** | **89** | 63-141 | |
| 74-83-9 | Bromomethane | 25.8 | **22.0** | **85** | 67-133 | |
| 75-00-3 | Chloroethane | 25.5 | **22.9** | **90** | 65-122 | |
| 64-17-5 | Ethanol | 130 | **126** | **97** | 54-137 | |
| 75-05-8 | Acetonitrile | 26.0 | **24.8** | **95** | 59-128 | |
| 107-02-8 | Acrolein | 26.3 | **20.2** | **77** | 61-131 | |
| 67-64-1 | Acetone | 132 | **111** | **84** | 60-117 | |
| 75-69-4 | Trichlorofluoromethane | 26.3 | **20.9** | **79** | 62-125 | |
| 67-63-0 | 2-Propanol (Isopropyl Alcohol) | 48.0 | **35.1** | **73** | 57-125 | |
| 107-13-1 | Acrylonitrile | 25.8 | **25.3** | **98** | 66-136 | |
| 75-35-4 | 1,1-Dichloroethene | 27.5 | **24.4** | **89** | 71-121 | |
| 75-09-2 | Methylene Chloride | 26.8 | **21.8** | **81** | 67-109 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | 27.0 | **27.0** | **100** | 64-145 | |
| 76-13-1 | Trichlorotrifluoroethane | 27.5 | **23.1** | **84** | 71-124 | |
| 75-15-0 | Carbon Disulfide | 26.0 | **23.3** | **90** | 64-119 | |
| 156-60-5 | trans-1,2-Dichloroethene | 25.5 | **23.5** | **92** | 68-126 | |
| 75-34-3 | 1,1-Dichloroethane | 26.5 | **23.3** | **88** | 67-124 | |
| 1634-04-4 | Methyl tert-Butyl Ether | 26.3 | **23.1** | **88** | 67-124 | |
| 108-05-4 | Vinyl Acetate | 126 | **79.3** | **63** | 50-171 | |
| 78-93-3 | 2-Butanone (MEK) | 26.8 | **24.1** | **90** | 69-136 | |

Verified By: Re Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Lab Control Sample**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100517-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/17/10
Volume(s) Analyzed: NA Liter(s)

| CAS # | Compound | Spike Amount ng | Result ng | % Recovery | CAS Acceptance Limits | Data Qualifier |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 27.0 | **24.2** | **90** | 68-123 | |
| 141-78-6 | Ethyl Acetate | 52.0 | **47.5** | **91** | 75-131 | |
| 110-54-3 | n-Hexane | 26.0 | **23.2** | **89** | 63-118 | |
| 67-66-3 | Chloroform | 27.5 | **22.6** | **82** | 66-124 | |
| 109-99-9 | Tetrahydrofuran (THF) | 26.5 | **23.4** | **88** | 66-129 | |
| 107-06-2 | 1,2-Dichloroethane | 26.3 | **22.1** | **84** | 64-125 | |
| 71-55-6 | 1,1,1-Trichloroethane | 26.0 | **22.7** | **87** | 71-123 | |
| 71-43-2 | Benzene | 25.8 | **21.7** | **84** | 63-112 | |
| 56-23-5 | Carbon Tetrachloride | 26.3 | **23.7** | **90** | 73-129 | |
| 110-82-7 | Cyclohexane | 51.8 | **45.9** | **89** | 68-118 | |
| 78-87-5 | 1,2-Dichloropropane | 26.0 | **23.5** | **90** | 74-122 | |
| 75-27-4 | Bromodichloromethane | 26.3 | **23.8** | **90** | 75-125 | |
| 79-01-6 | Trichloroethene | 25.8 | **22.8** | **88** | 66-120 | |
| 123-91-1 | 1,4-Dioxane | 26.0 | **21.7** | **83** | 75-127 | |
| 80-62-6 | Methyl Methacrylate | 52.8 | **48.7** | **92** | 80-130 | |
| 142-82-5 | n-Heptane | 25.8 | **23.3** | **90** | 71-121 | |
| 10061-01-5 | cis-1,3-Dichloropropene | 24.5 | **23.1** | **94** | 77-130 | |
| 108-10-1 | 4-Methyl-2-pentanone | 26.8 | **23.7** | **88** | 74-134 | |
| 10061-02-6 | trans-1,3-Dichloropropene | 27.0 | **26.1** | **97** | 78-134 | |
| 79-00-5 | 1,1,2-Trichloroethane | 26.0 | **23.3** | **90** | 76-122 | |
| 108-88-3 | Toluene | 26.8 | **22.6** | **84** | 66-120 | |
| 591-78-6 | 2-Hexanone | 27.0 | **21.2** | **79** | 72-135 | |
| 124-48-1 | Dibromochloromethane | 28.3 | **25.5** | **90** | 79-136 | |
| 106-93-4 | 1,2-Dibromoethane | 26.3 | **23.4** | **89** | 76-129 | |
| 123-86-4 | n-Butyl Acetate | 27.5 | **19.9** | **72** | 68-138 | |

Verified By: Rc Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Lab Control Sample**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100517-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/17/10
Volume(s) Analyzed: NA Liter(s)

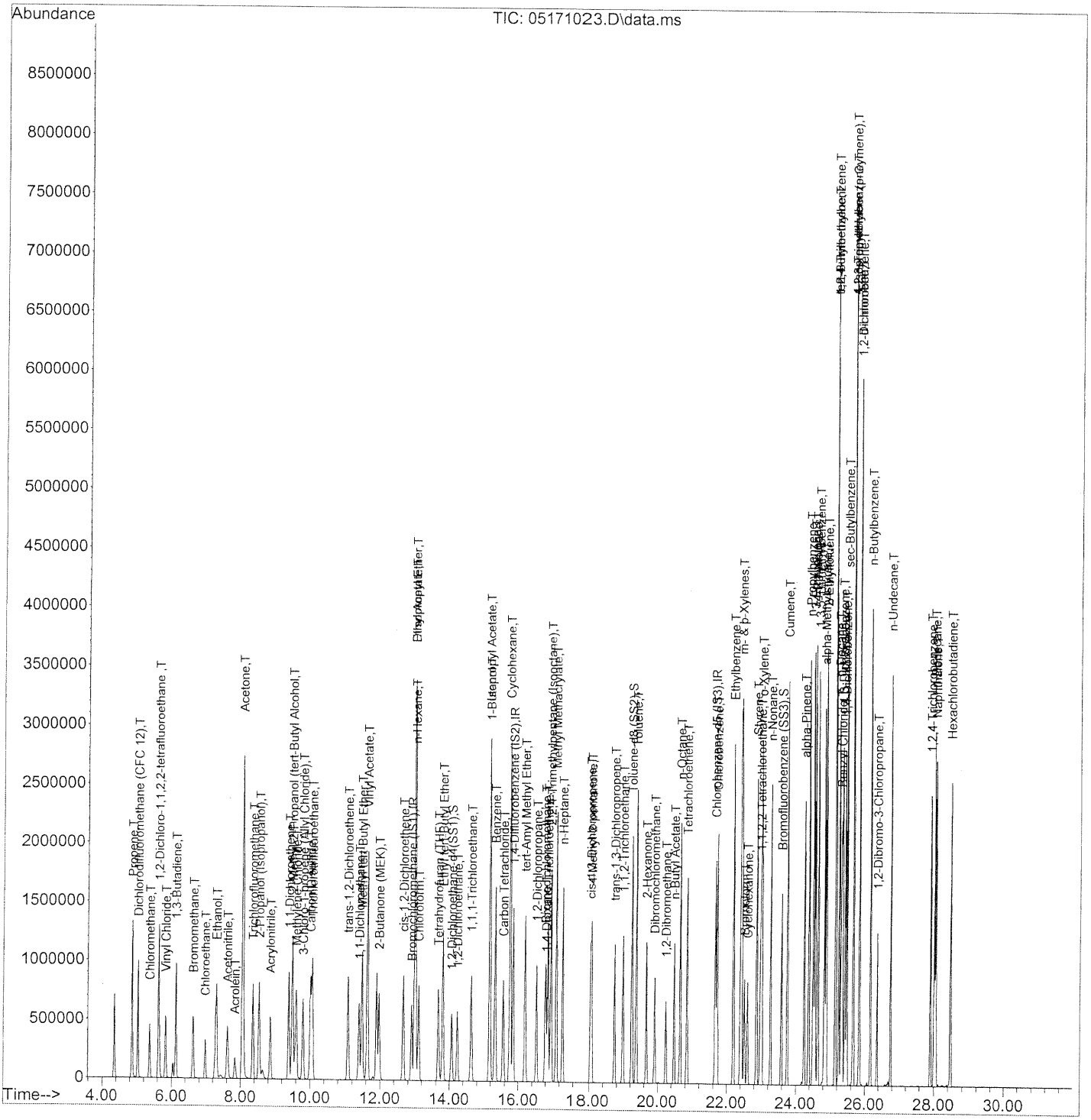
| CAS # | Compound | Spike Amount ng | Result ng | % Recovery | CAS Acceptance Limits | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | n-Octane | 26.3 | **24.4** | **93** | 71-122 | |
| 127-18-4 | Tetrachloroethene | 25.3 | **21.0** | **83** | 65-132 | |
| 108-90-7 | Chlorobenzene | 26.5 | **22.2** | **84** | 66-122 | |
| 100-41-4 | Ethylbenzene | 26.3 | **22.9** | **87** | 69-122 | |
| 179601-23-1 | m,p-Xylenes | 51.5 | **44.9** | **87** | 69-122 | |
| 75-25-2 | Bromoform | 26.5 | **23.7** | **89** | 73-150 | |
| 100-42-5 | Styrene | 26.3 | **23.5** | **89** | 75-130 | |
| 95-47-6 | o-Xylene | 26.0 | **22.6** | **87** | 69-122 | |
| 111-84-2 | n-Nonane | 25.8 | **23.8** | **92** | 68-125 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 27.0 | **23.4** | **87** | 80-126 | |
| 98-82-8 | Cumene | 25.3 | **21.3** | **84** | 70-123 | |
| 80-56-8 | alpha-Pinene | 24.8 | **19.6** | **79** | 75-128 | |
| 103-65-1 | n-Propylbenzene | 25.3 | **22.0** | **87** | 70-125 | |
| 622-96-8 | 4-Ethyltoluene | 26.3 | **22.8** | **87** | 71-129 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 26.5 | **23.4** | **88** | 71-125 | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 25.5 | **23.2** | **91** | 69-132 | |
| 100-44-7 | Benzyl Chloride | 26.8 | **22.9** | **85** | 78-144 | |
| 541-73-1 | 1,3-Dichlorobenzene | 26.0 | **23.0** | **88** | 65-132 | |
| 106-46-7 | 1,4-Dichlorobenzene | 26.3 | **22.3** | **85** | 66-126 | |
| 95-50-1 | 1,2-Dichlorobenzene | 25.8 | **22.8** | **88** | 67-134 | |
| 5989-27-5 | d-Limonene | 26.5 | **24.3** | **92** | 68-149 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 27.0 | **24.2** | **90** | 76-150 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 27.3 | **22.5** | **82** | 66-145 | |
| 91-20-3 | Naphthalene | 25.0 | **19.9** | **80** | 71-147 | |
| 87-68-3 | Hexachlorobutadiene | 26.8 | **22.5** | **84** | 65-140 | |

Verified By: RC Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:41
Operator : LM
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 04:06:25 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

LM 5/18/10

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.90 | 130 | 384686 | 25.000 | ng | | 0.02 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1817553 | 25.000 | ng | | 0.01 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 765495 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.06 | 65 | 567520 | 24.444 | ng | | 0.02 |
| Spiked Amount 25.000 | | | Recovery | = | 97.76% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1906751 | 24.697 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.80% | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 651634 | 24.095 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 96.40% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.86 | 42 | 604472 | 27.736 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 1102836 | 21.518 | ng | | 99 |
| 4) Chloromethane | 5.37 | 50 | 644920 | 20.759 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.63 | 135 | 630565 | 21.179 | ng | | 99 |
| 6) Vinyl Chloride | 5.83 | 62 | 754701 | 21.687 | ng | | 99 |
| 7) 1,3-Butadiene | 6.12 | 54 | 604910 | 23.852 | ng | | 92 |
| 8) Bromomethane | 6.63 | 94 | 511905 | 22.030 | ng | | 99 |
| 9) Chloroethane | 6.98 | 64 | 406144 | 22.876 | ng | | 99 |
| 10) Ethanol | 7.30 | 45 | 1678469m | 126.444 | ng | | |
| 11) Acetonitrile | 7.62 | 41 | 797506 | 24.794 | ng | | 100 |
| 12) Acrolein | 7.84 | 56 | 265040 | 20.245 | ng | | 98 |
| 13) Acetone | 8.06 | 58 | 1881138 | 110.899 | ng | # | 85 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 972807 | 20.857 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.53 | 45 | 1735461m | 35.115 | ng | | |
| 16) Acrylonitrile | 8.86 | 53 | 654309 | 25.311 | ng | | 99 |
| 17) 1,1-Dichloroethene | 9.40 | 96 | 570992 | 24.396 | ng | # | 73 |
| 18) 2-Methyl-2-Propanol (t... | 9.50 | 59 | 2310797 | 39.617 | ng | | 96 |
| 19) Methylene Chloride | 9.61 | 84 | 556943 | 21.830 | ng | # | 74 |
| 20) 3-Chloro-1-propene (Al... | 9.80 | 41 | 695734 | 26.999 | ng | | 82 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 539315 | 23.069 | ng | # | 76 |
| 22) Carbon Disulfide | 10.01 | 76 | 1923864 | 23.343 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 11.08 | 61 | 726095 | 23.537 | ng | | 78 |
| 24) 1,1-Dichloroethane | 11.40 | 63 | 935766 | 23.300 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.48 | 73 | 1655839 | 23.053 | ng | | 94 |
| 26) Vinyl Acetate | 11.64 | 86 | 467888 | 79.263 | ng | # | 26 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 375679 | 24.113 | ng | # | 66 |
| 28) cis-1,2-Dichloroethene | 12.66 | 61 | 725318 | 24.232 | ng | | 77 |
| 29) Diisopropyl Ether | 13.00 | 87 | 492728 | 23.093 | ng | # | 35 |
| 30) Ethyl Acetate | 13.00 | 61 | 393140 | 47.512 | ng | | 89 |
| 31) n-Hexane | 13.02 | 57 | 913994 | 23.175 | ng | # | 98 |

Quantitation Report (QT Reviewed)

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Data File : 05171023.D
Acq On : 18 May 2010 2:41
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Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 04:06:25 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.12 | 83 | 946910 | 22.591 | ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.67 | 72 | 353996 | 23.389 | ng | # | 77 |
| 35) Ethyl tert-Butyl Ether | 13.81 | 87 | 695806 | 22.169 | ng | # | 77 |
| 36) 1,2-Dichloroethane | 14.23 | 62 | 695335 | 22.104 | ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 866176 | 22.694 | ng | | 95 |
| 39) Isopropyl Acetate | 15.17 | 61 | 680444 | 48.749 | ng | # | 84 |
| 40) 1-Butanol | 15.18 | 56 | 904886 | 41.281 | ng | | 85 |
| 41) Benzene | 15.33 | 78 | 2250188 | 21.747 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.56 | 117 | 752753 | 23.677 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 1767528 | 45.880 | ng | # | 81 |
| 44) tert-Amyl Methyl Ether | 16.20 | 73 | 1592277 | 22.836 | ng | | 92 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 529305 | 23.498 | ng | | 98 |
| 46) Bromodichloromethane | 16.79 | 83 | 738260 | 23.764 | ng | | 98 |
| 47) Trichloroethene | 16.87 | 130 | 658420 | 22.802 | ng | | 98 |
| 48) 1,4-Dioxane | 16.81 | 88 | 436920 | 21.660 | ng | | 83 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 2217055 | 23.326 | ng | | 94 |
| 50) Methyl Methacrylate | 17.11 | 100 | 534234 | 48.729 | ng | # | 63 |
| 51) n-Heptane | 17.31 | 71 | 573661 | 23.305 | ng | | 89 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 852039 | 23.133 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 463589 | 23.660 | ng | # | 85 |
| 54) trans-1,3-Dichloropropene | 18.74 | 75 | 870954 | 26.116 | ng | | 100 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 555204 | 23.298 | ng | | 93 |
| 58) Toluene | 19.38 | 91 | 2457518 | 22.569 | ng | | 98 |
| 59) 2-Hexanone | 19.67 | 43 | 978362 | 21.221 | ng | | 91 |
| 60) Dibromochloromethane | 19.91 | 129 | 664575 | 25.533 | ng | | 100 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 646178 | 23.392 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 1045702 | 19.875 | ng | | 92 |
| 63) n-Octane | 20.66 | 57 | 475972 | 24.360 | ng | # | 82 |
| 64) Tetrachloroethene | 20.85 | 166 | 715256 | 21.021 | ng | | 100 |
| 65) Chlorobenzene | 21.72 | 112 | 1609267 | 22.242 | ng | | 99 |
| 66) Ethylbenzene | 22.19 | 91 | 2732296 | 22.895 | ng | | 95 |
| 67) m- & p-Xylenes | 22.43 | 91 | 4234166 | 44.901 | ng | | 93 |
| 68) Bromoform | 22.51 | 173 | 579570 | 23.707 | ng | | 99 |
| 69) Styrene | 22.87 | 104 | 1741946 | 23.479 | ng | | 94 |
| 70) o-Xylene | 23.02 | 91 | 2177338 | 22.648 | ng | | 93 |
| 71) n-Nonane | 23.28 | 43 | 996081 | 23.751 | ng | | 85 |
| 72) 1,1,2,2-Tetrachloroethane | 22.99 | 83 | 947844 | 23.411 | ng | | 98 |
| 74) Cumene | 23.76 | 105 | 2801223 | 21.322 | ng | | 95 |
| 75) alpha-Pinene | 24.25 | 93 | 1194873 | 19.602 | ng | | 93 |
| 76) n-Propylbenzene | 24.38 | 91 | 3345322 | 21.952 | ng | | 94 |
| 77) 3-Ethyltoluene | 24.51 | 105 | 2782333 | 23.126 | ng | | 96 |
| 78) 4-Ethyltoluene | 24.56 | 105 | 2762939 | 22.791 | ng | | 95 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 2314883 | 23.399 | ng | | 92 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:41
Operator : LM
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 04:06:25 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

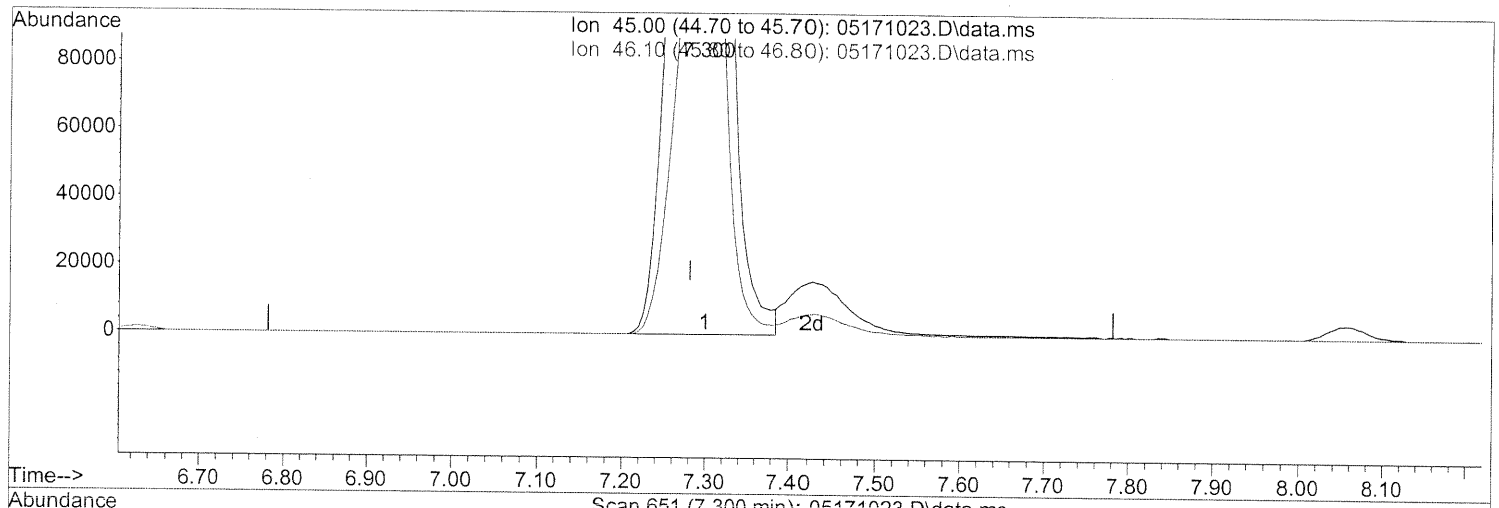
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 1203603 | 21.957 | ng | | 96 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 2773423 | 22.215 | ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 2377422 | 23.241 | ng | | 92 |
| 83) n-Decane | 25.25 | 57 | 1131451 | 24.270 | ng | | 89 |
| 84) Benzyl Chloride | 25.31 | 91 | 1757351 | 22.894 | ng | | 91 |
| 85) 1,3-Dichlorobenzene | 25.35 | 146 | 1432682 | 22.967 | ng | | 100 |
| 86) 1,4-Dichlorobenzene | 25.43 | 146 | 1444624 | 22.335 | ng | | 100 |
| 87) sec-Butylbenzene | 25.48 | 105 | 3117448 | 22.451 | ng | | 94 |
| 88) 4-Isopropyltoluene (p-... | 25.67 | 119 | 2955585 | 22.373 | ng | | 94 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 2400771 | 23.288 | ng | | 91 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 1354318 | 22.798 | ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 864314 | 24.331 | ng | | 84 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 463099 | 24.234 | ng | # | 61 |
| 93) n-Undecane | 26.76 | 57 | 1138580 | 24.664 | ng | | 89 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 944910 | 22.489 | ng | | 99 |
| 95) Naphthalene | 28.05 | 128 | 2590549 | 19.940 | ng | | 100 |
| 96) n-Dodecane | 28.01 | 57 | 974430 | 20.358 | ng | | 89 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 610738 | 22.538 | ng | | 99 |
| 98) Cyclohexanone | 22.60 | 55 | 460961 | 14.757 | ng | # | 87 |
| 99) tert-Butylbenzene | 25.15 | 119 | 2370412 | 22.406 | ng | | 95 |
| 100) n-Butylbenzene | 26.17 | 91 | 2457402 | 23.323 | ng | # | 95 |

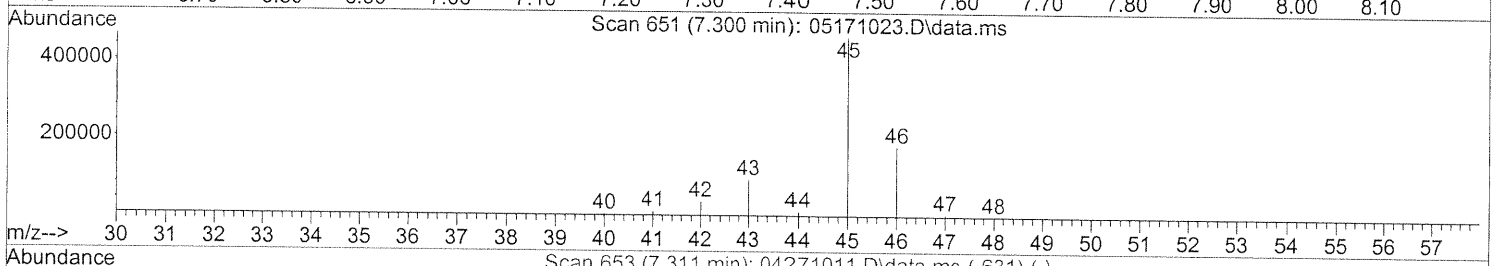
(#) = qualifier out of range (m) = manual integration (+) = signals summed

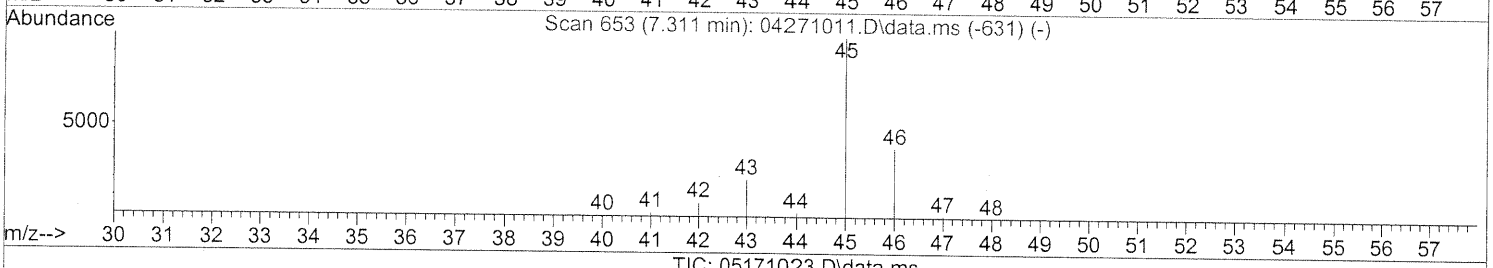
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:41
Operator : LM
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 04:05:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171023.D\data.ms

(10) Ethanol (T)

7.300min (+0.017) 120.75ng

response 1602830

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.77 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

PT

# Quantitation Report (Qedit)

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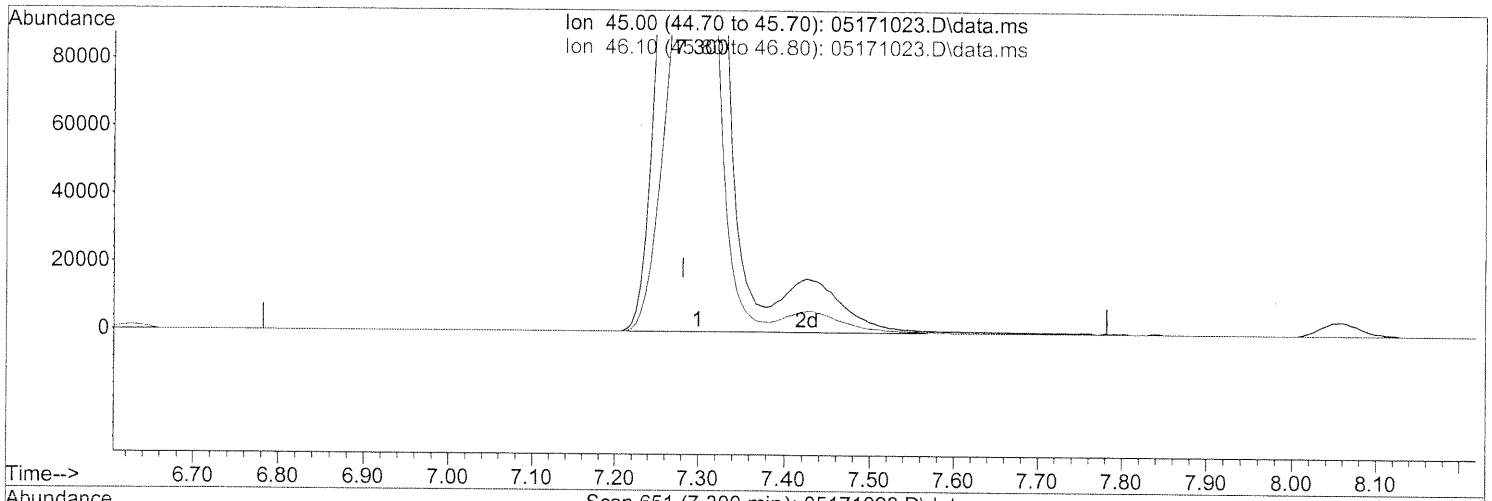
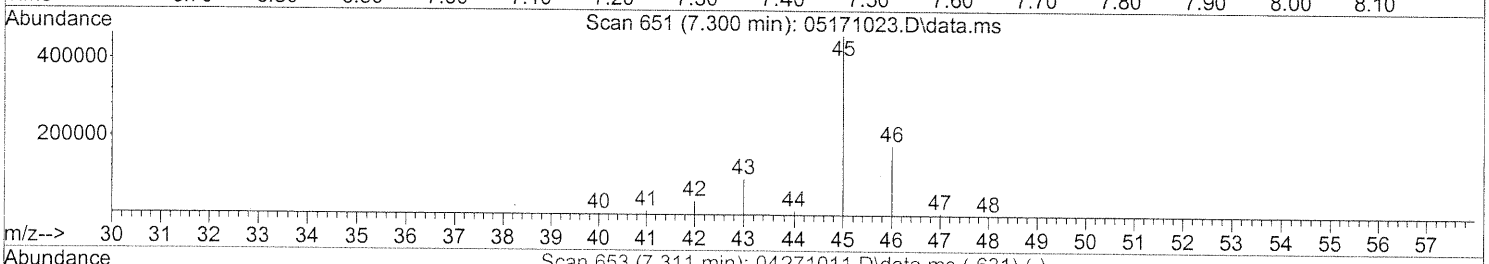
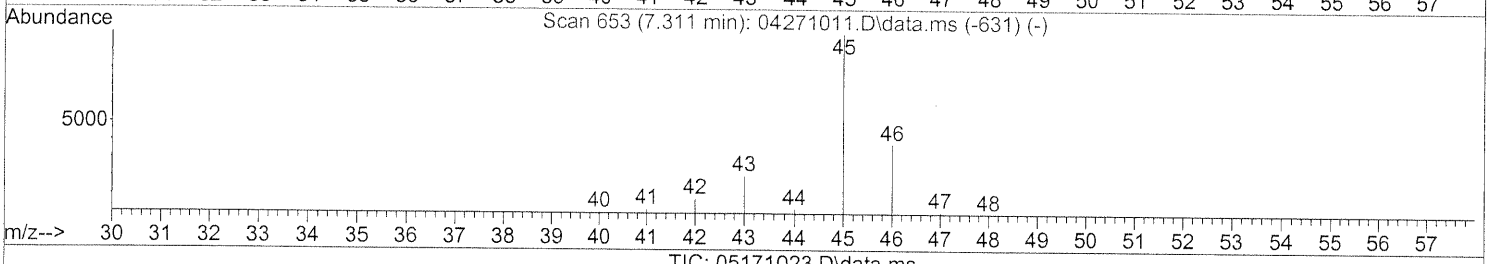
Response via : Initial Calibration




TIC: 05171023.D\data.ms

(10) Ethanol (T)

7.300min (+0.017) 126.44ng m

response 1678469

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 37.03 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

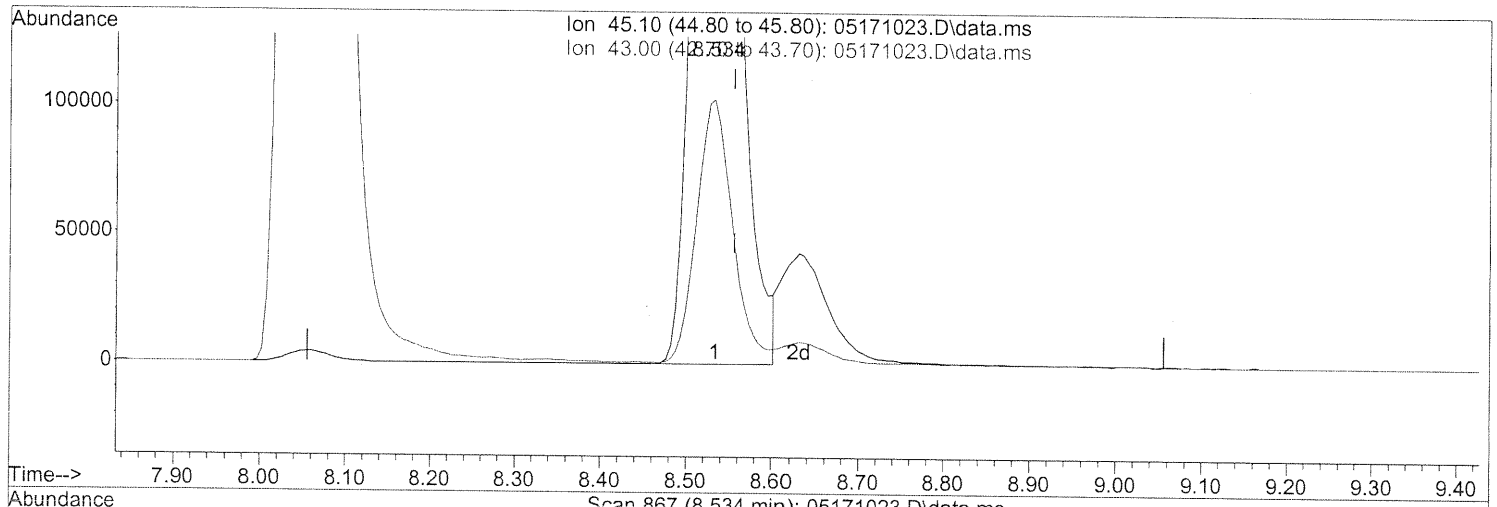
PT->IC
TM 5/18/10

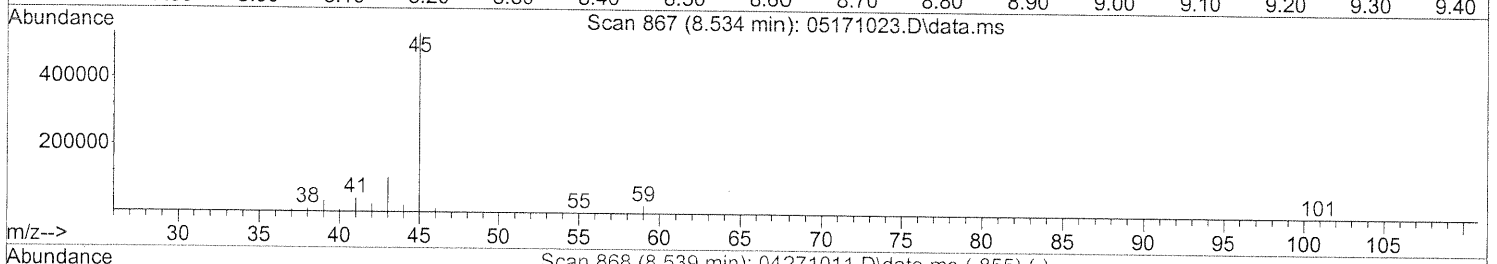
5/18/10

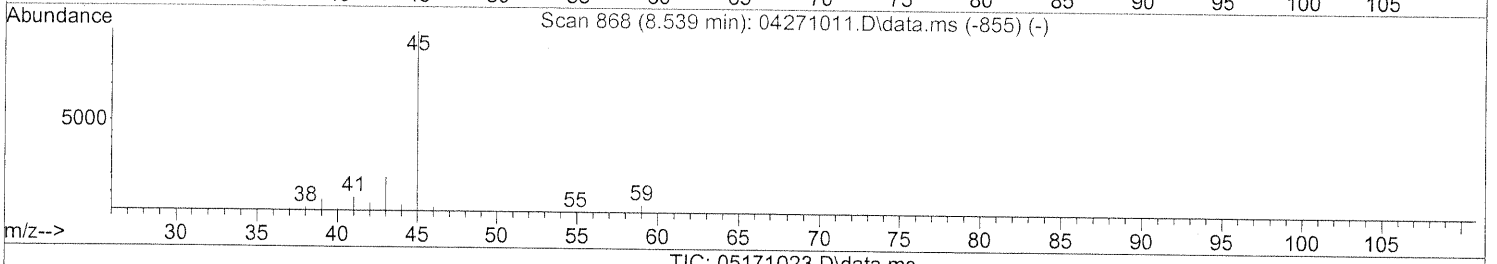
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:41
Operator : LM
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 04:05:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171023.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.534min (-0.023) 31.81ng

response 1572273

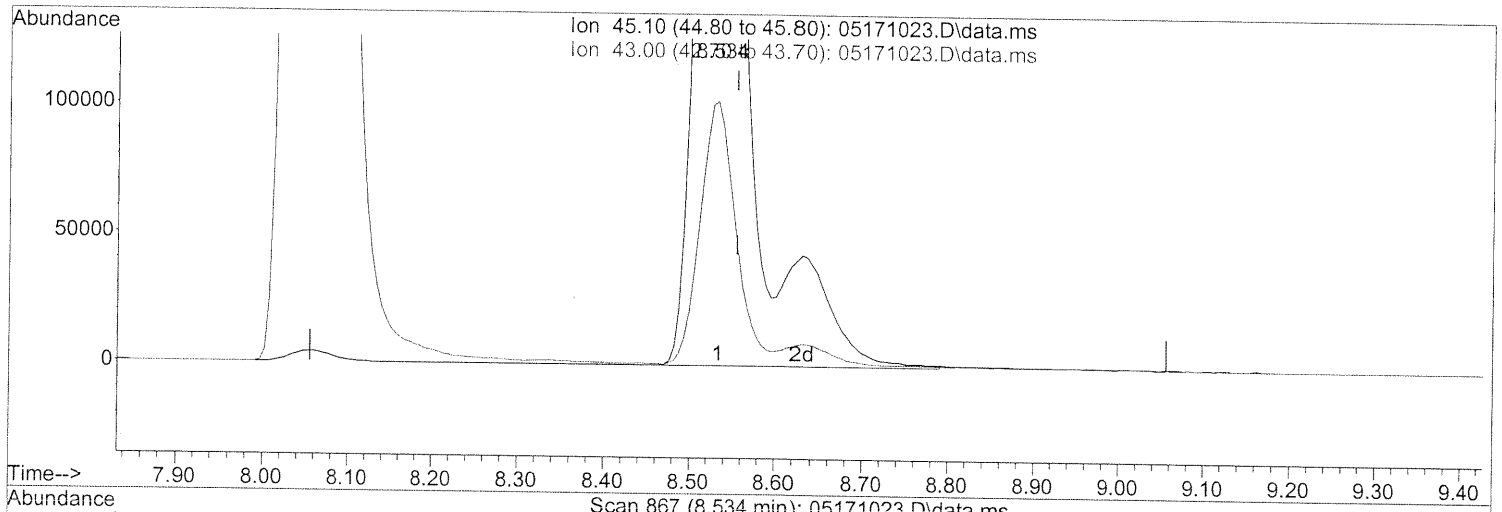
SH

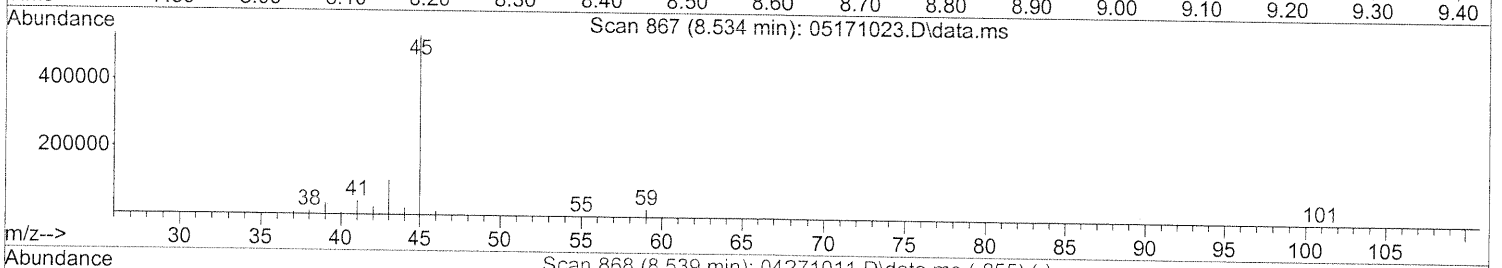
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 19.01 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

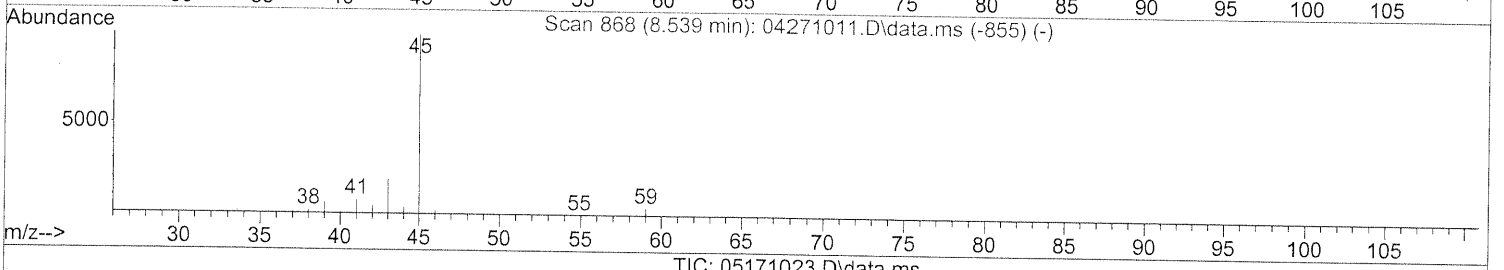
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171023.D
Acq On : 18 May 2010 2:41
Operator : LM
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 04:05:28 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171023.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.534min (-0.023) 35.12ng m

response 1735461

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 17.23 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SH -> IC
LM 5/18/10

5/18/10

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Lab Control Sample**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100518-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/18/10
Volume(s) Analyzed: NA Liter(s)

| CAS # | Compound | Spike Amount ng | Result ng | % Recovery | CAS Acceptance Limits | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 26.3 | **28.8** | **110** | 58-133 | |
| 75-71-8 | Dichlorodifluoromethane (CFC 12) | 26.0 | **21.2** | **82** | 63-114 | |
| 74-87-3 | Chloromethane | 25.0 | **21.3** | **85** | 60-130 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | 26.0 | **20.9** | **80** | 63-118 | |
| 75-01-4 | Vinyl Chloride | 25.3 | **22.1** | **87** | 63-123 | |
| 106-99-0 | 1,3-Butadiene | 26.8 | **24.2** | **90** | 63-141 | |
| 74-83-9 | Bromomethane | 25.8 | **22.0** | **85** | 67-133 | |
| 75-00-3 | Chloroethane | 25.5 | **23.3** | **91** | 65-122 | |
| 64-17-5 | Ethanol | 130 | **129** | **99** | 54-137 | |
| 75-05-8 | Acetonitrile | 26.0 | **25.4** | **98** | 59-128 | |
| 107-02-8 | Acrolein | 26.3 | **20.5** | **78** | 61-131 | |
| 67-64-1 | Acetone | 132 | **113** | **86** | 60-117 | |
| 75-69-4 | Trichlorofluoromethane | 26.3 | **20.5** | **78** | 62-125 | |
| 67-63-0 | 2-Propanol (Isopropyl Alcohol) | 48.0 | **34.5** | **72** | 57-125 | |
| 107-13-1 | Acrylonitrile | 25.8 | **25.9** | **100** | 66-136 | |
| 75-35-4 | 1,1-Dichloroethene | 27.5 | **24.2** | **88** | 71-121 | |
| 75-09-2 | Methylene Chloride | 26.8 | **21.9** | **82** | 67-109 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | 27.0 | **27.3** | **101** | 64-145 | |
| 76-13-1 | Trichlorotrifluoroethane | 27.5 | **22.6** | **82** | 71-124 | |
| 75-15-0 | Carbon Disulfide | 26.0 | **23.4** | **90** | 64-119 | |
| 156-60-5 | trans-1,2-Dichloroethene | 25.5 | **24.8** | **97** | 68-126 | |
| 75-34-3 | 1,1-Dichloroethane | 26.5 | **23.8** | **90** | 67-124 | |
| 1634-04-4 | Methyl tert-Butyl Ether | 26.3 | **23.0** | **87** | 67-124 | |
| 108-05-4 | Vinyl Acetate | 126 | **77.7** | **62** | 50-171 | |
| 78-93-3 | 2-Butanone (MEK) | 26.8 | **24.2** | **90** | 69-136 | |

Verified By: Rc Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Lab Control Sample**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P100518-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 5/18/10
Volume(s) Analyzed: NA Liter(s)

| CAS # | Compound | Spike Amount ng | Result ng | % Recovery | CAS Acceptance Limits | Data Qualifier |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 27.0 | **25.4** | **94** | 68-123 | |
| 141-78-6 | Ethyl Acetate | 52.0 | **48.0** | **92** | 75-131 | |
| 110-54-3 | n-Hexane | 26.0 | **23.4** | **90** | 63-118 | |
| 67-66-3 | Chloroform | 27.5 | **22.4** | **81** | 66-124 | |
| 109-99-9 | Tetrahydrofuran (THF) | 26.5 | **23.7** | **89** | 66-129 | |
| 107-06-2 | 1,2-Dichloroethane | 26.3 | **22.0** | **84** | 64-125 | |
| 71-55-6 | 1,1,1-Trichloroethane | 26.0 | **22.4** | **86** | 71-123 | |
| 71-43-2 | Benzene | 25.8 | **22.0** | **85** | 63-112 | |
| 56-23-5 | Carbon Tetrachloride | 26.3 | **23.3** | **89** | 73-129 | |
| 110-82-7 | Cyclohexane | 51.8 | **46.2** | **89** | 68-118 | |
| 78-87-5 | 1,2-Dichloropropane | 26.0 | **23.8** | **92** | 74-122 | |
| 75-27-4 | Bromodichloromethane | 26.3 | **23.7** | **90** | 75-125 | |
| 79-01-6 | Trichloroethene | 25.8 | **22.7** | **88** | 66-120 | |
| 123-91-1 | 1,4-Dioxane | 26.0 | **21.4** | **82** | 75-127 | |
| 80-62-6 | Methyl Methacrylate | 52.8 | **48.0** | **91** | 80-130 | |
| 142-82-5 | n-Heptane | 25.8 | **23.6** | **91** | 71-121 | |
| 10061-01-5 | cis-1,3-Dichloropropene | 24.5 | **23.2** | **95** | 77-130 | |
| 108-10-1 | 4-Methyl-2-pentanone | 26.8 | **23.8** | **89** | 74-134 | |
| 10061-02-6 | trans-1,3-Dichloropropene | 27.0 | **26.0** | **96** | 78-134 | |
| 79-00-5 | 1,1,2-Trichloroethane | 26.0 | **23.2** | **89** | 76-122 | |
| 108-88-3 | Toluene | 26.8 | **22.6** | **84** | 66-120 | |
| 591-78-6 | 2-Hexanone | 27.0 | **21.2** | **79** | 72-135 | |
| 124-48-1 | Dibromochloromethane | 28.3 | **25.2** | **89** | 79-136 | |
| 106-93-4 | 1,2-Dibromoethane | 26.3 | **23.1** | **88** | 76-129 | |
| 123-86-4 | n-Butyl Acetate | 27.5 | **19.9** | **72** | 68-138 | |

Verified By: Rev Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Lab Control Sample** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P100518-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: NA
Analyst: Liliana Marghitoiu Date Analyzed: 5/18/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: NA Liter(s)
Test Notes:

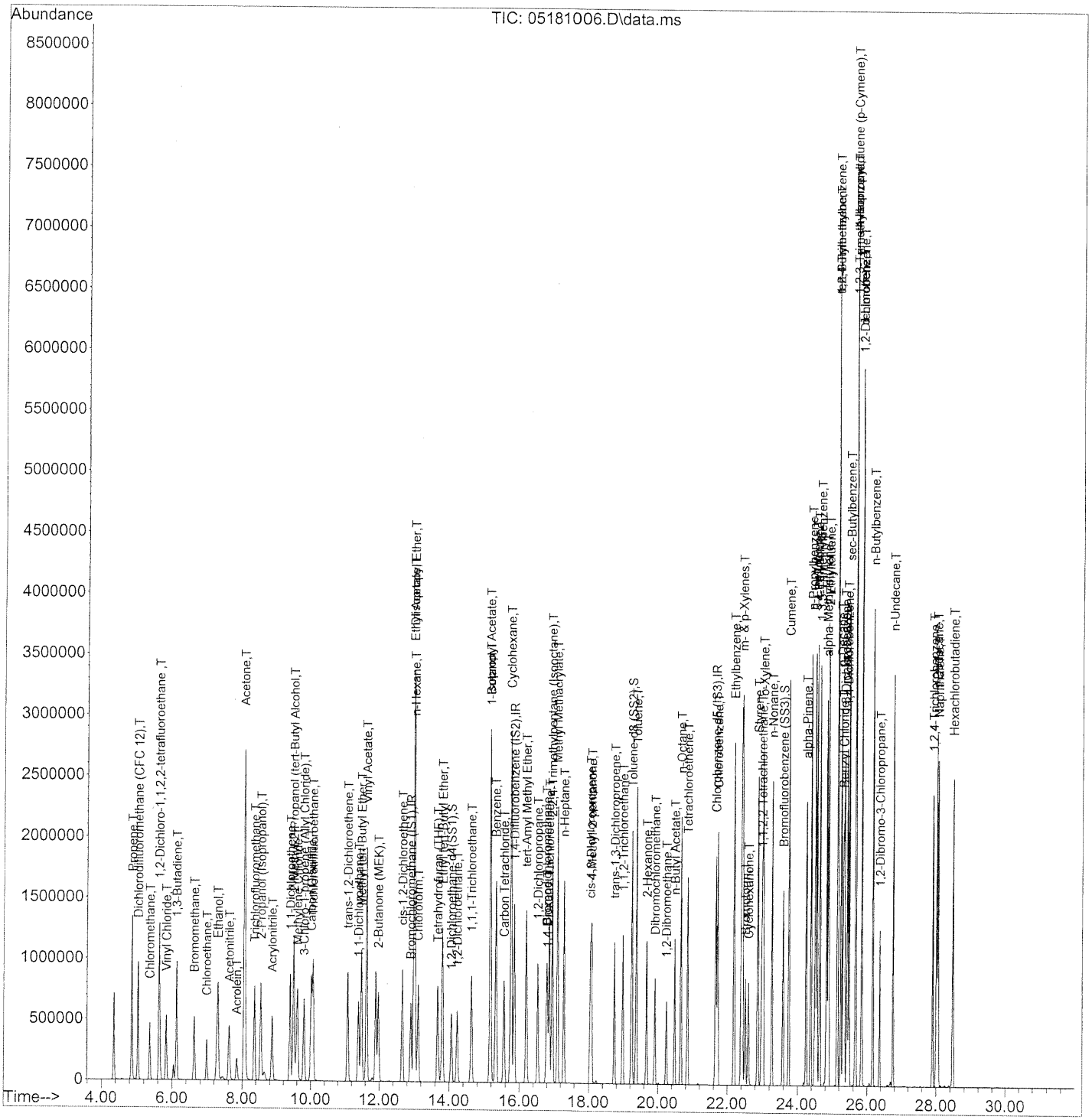
| CAS # | Compound | Spike Amount ng | Result ng | % Recovery | CAS Acceptance Limits | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | n-Octane | 26.3 | **24.7** | **94** | 71-122 | |
| 127-18-4 | Tetrachloroethene | 25.3 | **20.8** | **82** | 65-132 | |
| 108-90-7 | Chlorobenzene | 26.5 | **22.1** | **83** | 66-122 | |
| 100-41-4 | Ethylbenzene | 26.3 | **22.8** | **87** | 69-122 | |
| 179601-23-1 | m,p-Xylenes | 51.5 | **44.6** | **87** | 69-122 | |
| 75-25-2 | Bromoform | 26.5 | **23.3** | **88** | 73-150 | |
| 100-42-5 | Styrene | 26.3 | **23.3** | **89** | 75-130 | |
| 95-47-6 | o-Xylene | 26.0 | **22.6** | **87** | 69-122 | |
| 111-84-2 | n-Nonane | 25.8 | **24.0** | **93** | 68-125 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 27.0 | **23.5** | **87** | 80-126 | |
| 98-82-8 | Cumene | 25.3 | **21.2** | **84** | 70-123 | |
| 80-56-8 | alpha-Pinene | 24.8 | **19.4** | **78** | 75-128 | |
| 103-65-1 | n-Propylbenzene | 25.3 | **21.9** | **87** | 70-125 | |
| 622-96-8 | 4-Ethyltoluene | 26.3 | **22.5** | **86** | 71-129 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 26.5 | **23.1** | **87** | 71-125 | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 25.5 | **23.0** | **90** | 69-132 | |
| 100-44-7 | Benzyl Chloride | 26.8 | **22.6** | **84** | 78-144 | |
| 541-73-1 | 1,3-Dichlorobenzene | 26.0 | **22.7** | **87** | 65-132 | |
| 106-46-7 | 1,4-Dichlorobenzene | 26.3 | **22.1** | **84** | 66-126 | |
| 95-50-1 | 1,2-Dichlorobenzene | 25.8 | **22.5** | **87** | 67-134 | |
| 5989-27-5 | d-Limonene | 26.5 | **24.2** | **91** | 68-149 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 27.0 | **23.8** | **88** | 76-150 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 27.3 | **22.0** | **81** | 66-145 | |
| 91-20-3 | Naphthalene | 25.0 | **19.6** | **78** | 71-147 | |
| 87-68-3 | Hexachlorobutadiene | 26.8 | **22.2** | **83** | 65-140 | |

Verified By: Rev Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 11:15
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 12:26:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 11:15
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 12:26:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.90 | 130 | 381939 | 25.000 | ng | | 0.02 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1799774 | 25.000 | ng | | 0.01 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 754192 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.06 | 65 | 561088 | 24.341 | ng | | 0.02 |
| Spiked Amount 25.000 | | | Recovery | = | 97.36% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1881424 | 24.734 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.92% | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 636430 | 23.886 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 95.56% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 623922 | 28.835 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 5.04 | 85 | 1078969 | 21.204 | ng | | 99 |
| 4) Chloromethane | 5.37 | 50 | 655522 | 21.252 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.63 | 135 | 616834 | 20.867 | ng | | 100 |
| 6) Vinyl Chloride | 5.84 | 62 | 762223 | 22.061 | ng | | 99 |
| 7) 1,3-Butadiene | 6.13 | 54 | 608400 | 24.162 | ng | | 92 |
| 8) Bromomethane | 6.63 | 94 | 507236 | 21.986 | ng | | 99 |
| 9) Chloroethane | 6.99 | 64 | 411477 | 23.343 | ng | | 99 |
| 10) Ethanol | 7.31 | 45 | 1697294m | 128.782 | ng | | |
| 11) Acetonitrile | 7.63 | 41 | 810047 | 25.365 | ng | | 100 |
| 12) Acrolein | 7.84 | 56 | 266376 | 20.494 | ng | | 98 |
| 13) Acetone | 8.06 | 58 | 1897190 | 112.649 | ng | # | 84 |
| 14) Trichlorofluoromethane | 8.36 | 101 | 951465 | 20.546 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.54 | 45 | 1692370m | 34.490 | ng | | |
| 16) Acrylonitrile | 8.86 | 53 | 663647 | 25.857 | ng | | 98 |
| 17) 1,1-Dichloroethene | 9.40 | 96 | 561651 | 24.170 | ng | # | 73 |
| 18) 2-Methyl-2-Propanol (t... | 9.50 | 59 | 2279523 | 39.362 | ng | | 96 |
| 19) Methylene Chloride | 9.61 | 84 | 554060 | 21.873 | ng | # | 75 |
| 20) 3-Chloro-1-propene (Al... | 9.80 | 41 | 697568 | 27.264 | ng | | 82 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 523453 | 22.551 | ng | # | 77 |
| 22) Carbon Disulfide | 10.01 | 76 | 1918797 | 23.449 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 11.09 | 61 | 759229 | 24.788 | ng | | 79 |
| 24) 1,1-Dichloroethane | 11.40 | 63 | 947562 | 23.763 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.48 | 73 | 1642693 | 23.034 | ng | | 94 |
| 26) Vinyl Acetate | 11.64 | 86 | 455434 | 77.708 | ng | # | 29 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 373920 | 24.173 | ng | # | 66 |
| 28) cis-1,2-Dichloroethene | 12.66 | 61 | 753829 | 25.365 | ng | | 78 |
| 29) Diisopropyl Ether | 13.00 | 87 | 487890 | 23.031 | ng | # | 36 |
| 30) Ethyl Acetate | 12.99 | 61 | 394502 | 48.019 | ng | | 90 |
| 31) n-Hexane | 13.02 | 57 | 915004 | 23.367 | ng | # | 98 |



DA 5/18/10

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 11:15
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 12:26:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.11 | 83 | 933743 | 22.437 | ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.67 | 72 | 355759 | 23.675 | ng | # | 78 |
| 35) Ethyl tert-Butyl Ether | 13.81 | 87 | 687449 | 22.060 | ng | # | 78 |
| 36) 1,2-Dichloroethane | 14.23 | 62 | 686545 | 21.981 | ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 848210 | 22.443 | ng | | 95 |
| 39) Isopropyl Acetate | 15.17 | 61 | 677246 | 48.999 | ng | # | 84 |
| 40) 1-Butanol | 15.18 | 56 | 893535 | 41.166 | ng | | 85 |
| 41) Benzene | 15.33 | 78 | 2259061 | 22.048 | ng | | 98 |
| 42) Carbon Tetrachloride | 15.56 | 117 | 735049 | 23.349 | ng | | 99 |
| 43) Cyclohexane | 15.76 | 84 | 1761887 | 46.186 | ng | # | 82 |
| 44) tert-Amyl Methyl Ether | 16.20 | 73 | 1578908 | 22.868 | ng | | 92 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 531308 | 23.820 | ng | | 98 |
| 46) Bromodichloromethane | 16.79 | 83 | 728865 | 23.693 | ng | | 98 |
| 47) Trichloroethene | 16.87 | 130 | 650153 | 22.738 | ng | | 99 |
| 48) 1,4-Dioxane | 16.81 | 88 | 428238 | 21.440 | ng | | 85 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 2234929 | 23.746 | ng | | 94 |
| 50) Methyl Methacrylate | 17.11 | 100 | 521524 | 48.040 | ng | # | 65 |
| 51) n-Heptane | 17.30 | 71 | 574391 | 23.565 | ng | | 89 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 847098 | 23.226 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 461367 | 23.779 | ng | # | 85 |
| 54) trans-1,3-Dichloropropene | 18.74 | 75 | 858249 | 25.989 | ng | | 100 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 546322 | 23.152 | ng | | 94 |
| 58) Toluene | 19.38 | 91 | 2425749 | 22.611 | ng | | 98 |
| 59) 2-Hexanone | 19.67 | 43 | 961859 | 21.176 | ng | | 91 |
| 60) Dibromochloromethane | 19.91 | 129 | 646210 | 25.199 | ng | | 100 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 629892 | 23.145 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 1031600 | 19.900 | ng | | 92 |
| 63) n-Octane | 20.66 | 57 | 474693 | 24.659 | ng | # | 83 |
| 64) Tetrachloroethene | 20.85 | 166 | 697744 | 20.814 | ng | | 100 |
| 65) Chlorobenzene | 21.72 | 112 | 1574226 | 22.083 | ng | | 99 |
| 66) Ethylbenzene | 22.19 | 91 | 2680823 | 22.800 | ng | | 95 |
| 67) m- & p-Xylenes | 22.43 | 91 | 4142879 | 44.592 | ng | | 93 |
| 68) Bromoform | 22.51 | 173 | 562168 | 23.340 | ng | | 99 |
| 69) Styrene | 22.87 | 104 | 1706238 | 23.342 | ng | | 94 |
| 70) o-Xylene | 23.02 | 91 | 2138363 | 22.576 | ng | | 93 |
| 71) n-Nonane | 23.28 | 43 | 990061 | 23.961 | ng | | 86 |
| 72) 1,1,2,2-Tetrachloroethane | 22.99 | 83 | 935590 | 23.455 | ng | | 98 |
| 74) Cumene | 23.76 | 105 | 2748562 | 21.235 | ng | | 95 |
| 75) alpha-Pinene | 24.25 | 93 | 1165432 | 19.405 | ng | | 93 |
| 76) n-Propylbenzene | 24.38 | 91 | 3286407 | 21.888 | ng | | 94 |
| 77) 3-Ethyltoluene | 24.51 | 105 | 2729373 | 23.025 | ng | | 96 |
| 78) 4-Ethyltoluene | 24.56 | 105 | 2685659 | 22.485 | ng | | 95 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 2253734 | 23.123 | ng | | 92 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 11:15
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 12:26:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

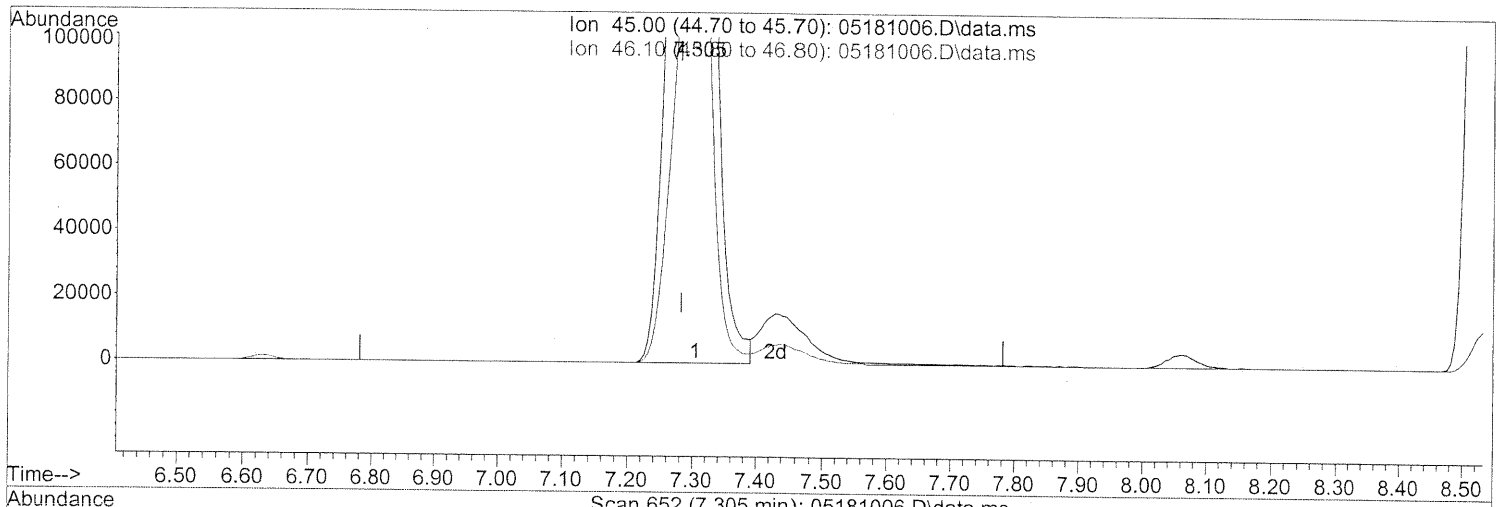
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 1175096 | 21.758 | ng | | 96 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 2704806 | 21.990 | ng | | 94 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 2321652 | 23.036 | ng | | 92 |
| 83) n-Decane | 25.25 | 57 | 1123524 | 24.461 | ng | | 90 |
| 84) Benzyl Chloride | 25.31 | 91 | 1708118 | 22.586 | ng | | 91 |
| 85) 1,3-Dichlorobenzene | 25.35 | 146 | 1394213 | 22.685 | ng | | 100 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 1410466 | 22.133 | ng | | 100 |
| 87) sec-Butylbenzene | 25.48 | 105 | 3051473 | 22.305 | ng | | 94 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 2883979 | 22.158 | ng | | 94 |
| 89) 1,2,3-Trimethylbenzene | 25.66 | 105 | 2343979 | 23.077 | ng | | 91 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 1318746 | 22.532 | ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 848080 | 24.232 | ng | | 84 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 447404 | 23.764 | ng | # | 61 |
| 93) n-Undecane | 26.76 | 57 | 1126333 | 24.765 | ng | | 90 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 910495 | 21.994 | ng | | 99 |
| 95) Naphthalene | 28.05 | 128 | 2508695 | 19.600 | ng | | 100 |
| 96) n-Dodecane | 28.01 | 57 | 962729 | 20.415 | ng | | 90 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 591952 | 22.172 | ng | | 99 |
| 98) Cyclohexanone | 22.60 | 55 | 449004 | 14.590 | ng | # | 87 |
| 99) tert-Butylbenzene | 25.15 | 119 | 2315670 | 22.216 | ng | | 95 |
| 100) n-Butylbenzene | 26.17 | 91 | 2407872 | 23.196 | ng | # | 95 |

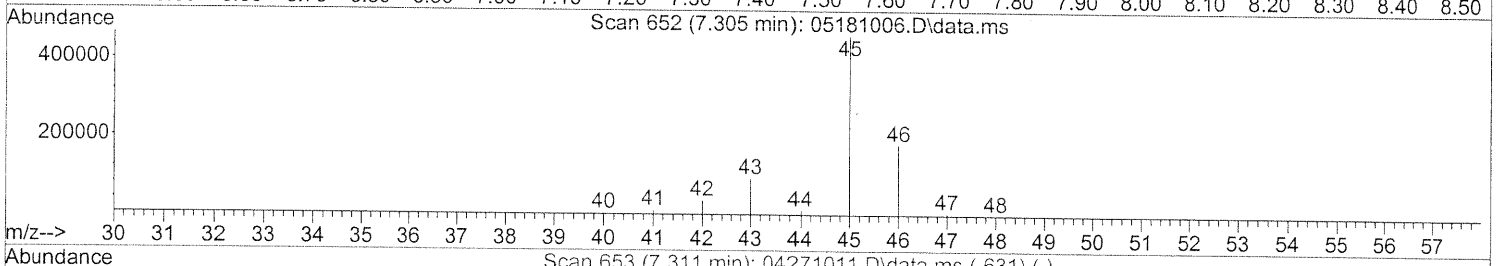
(#) = qualifier out of range (m) = manual integration (+) = signals summed

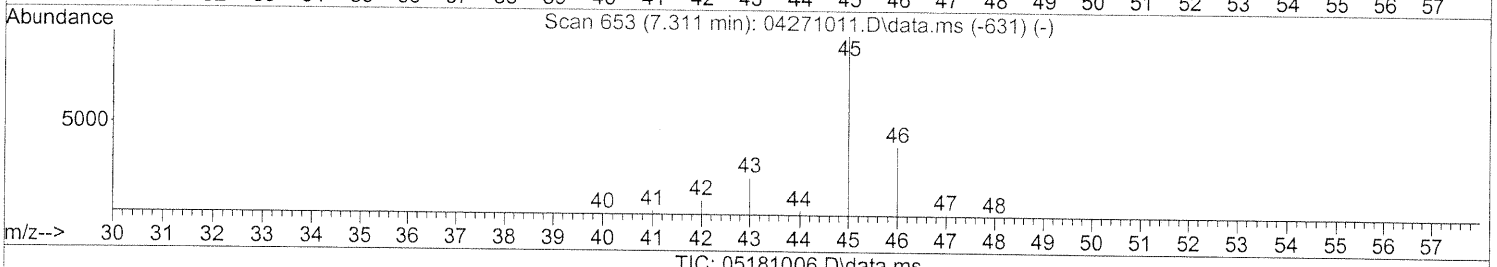
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 11:15
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 12:24:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181006.D\data.ms

(10) Ethanol (T)

7.305min (+0.023) 122.86ng

response 1619204

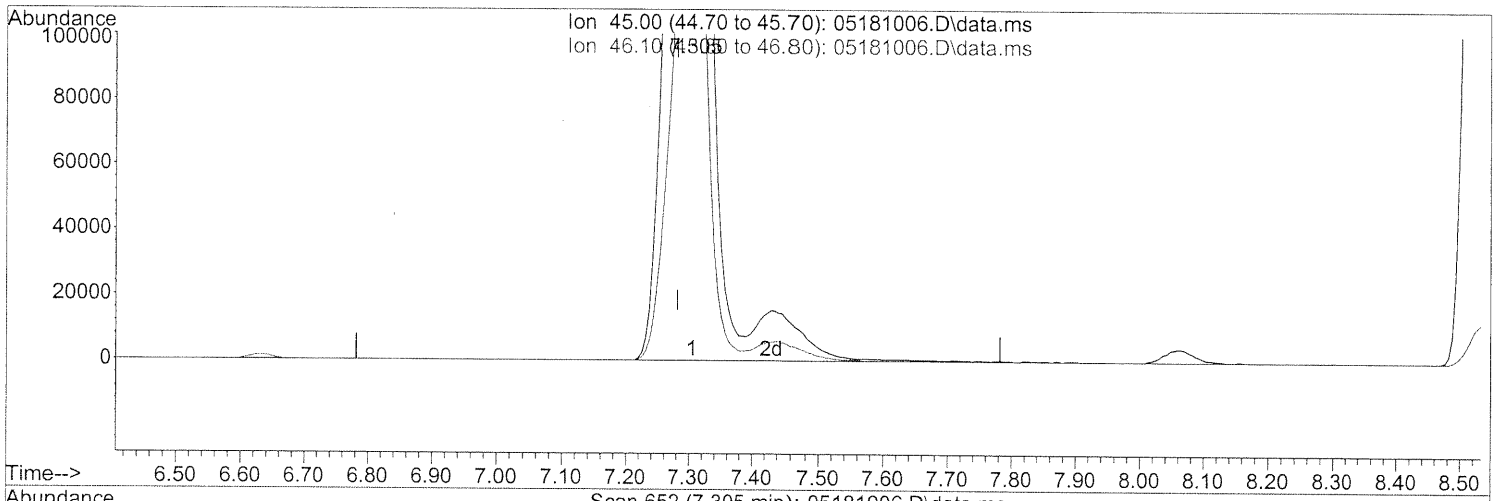
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.99 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

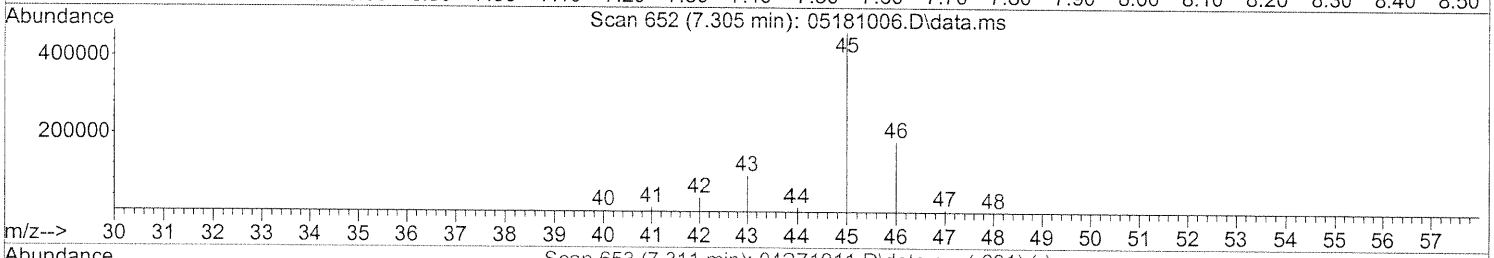
SP

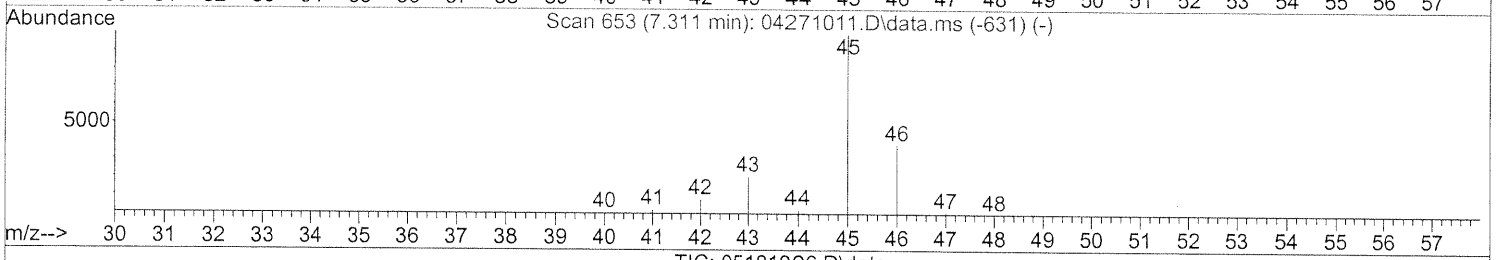
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 11:15
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 12:24:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181006.D\data.ms

(10) Ethanol (T)

7.305min (+0.023) 128.78ng m

response 1697294

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 37.20 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

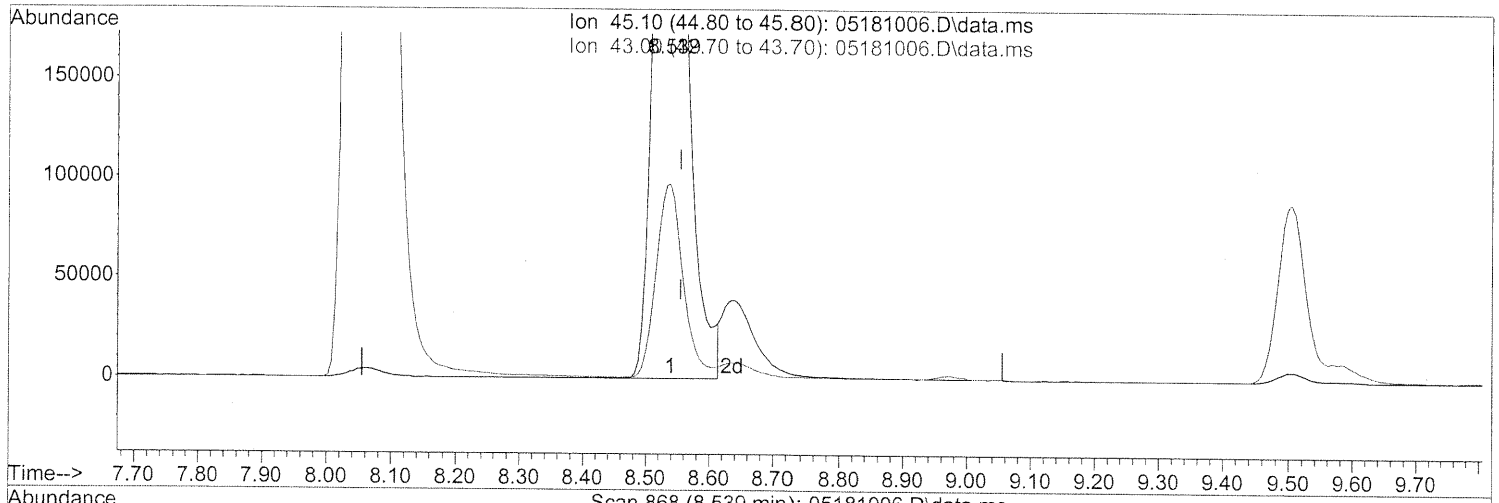
SP → IC

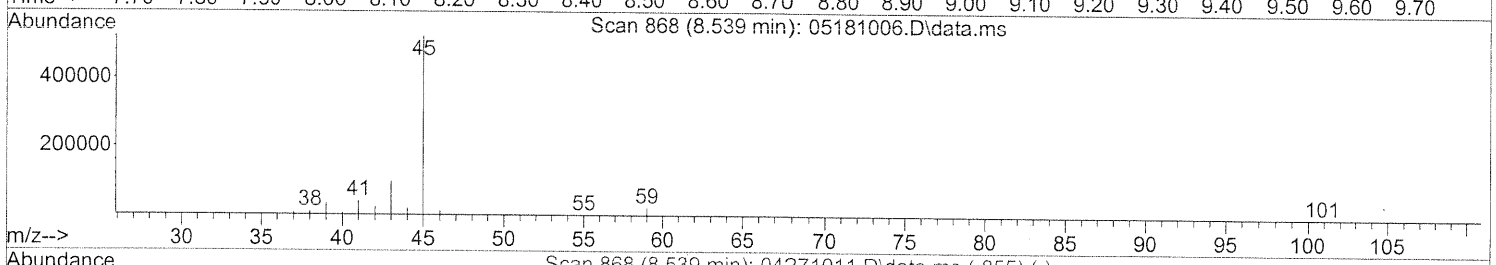
10A 5/18/10

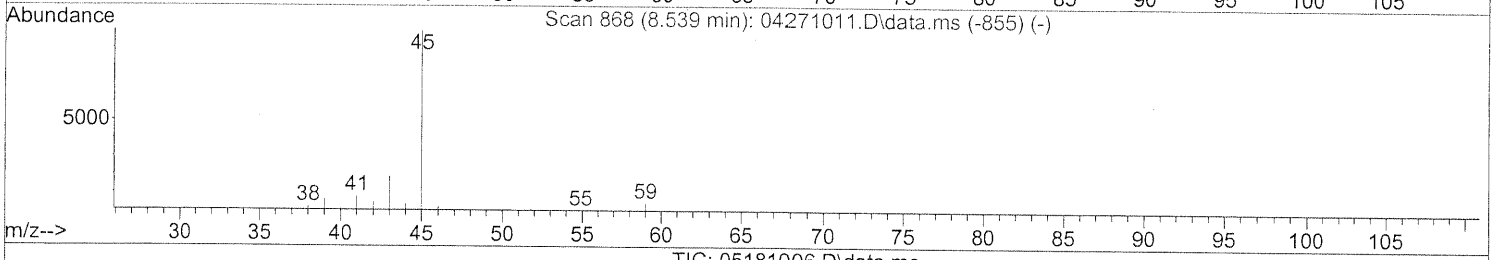
CC 5-18-10

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 11:15
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 12:24:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181006.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.539min (-0.017) 31.53ng

response 1547221

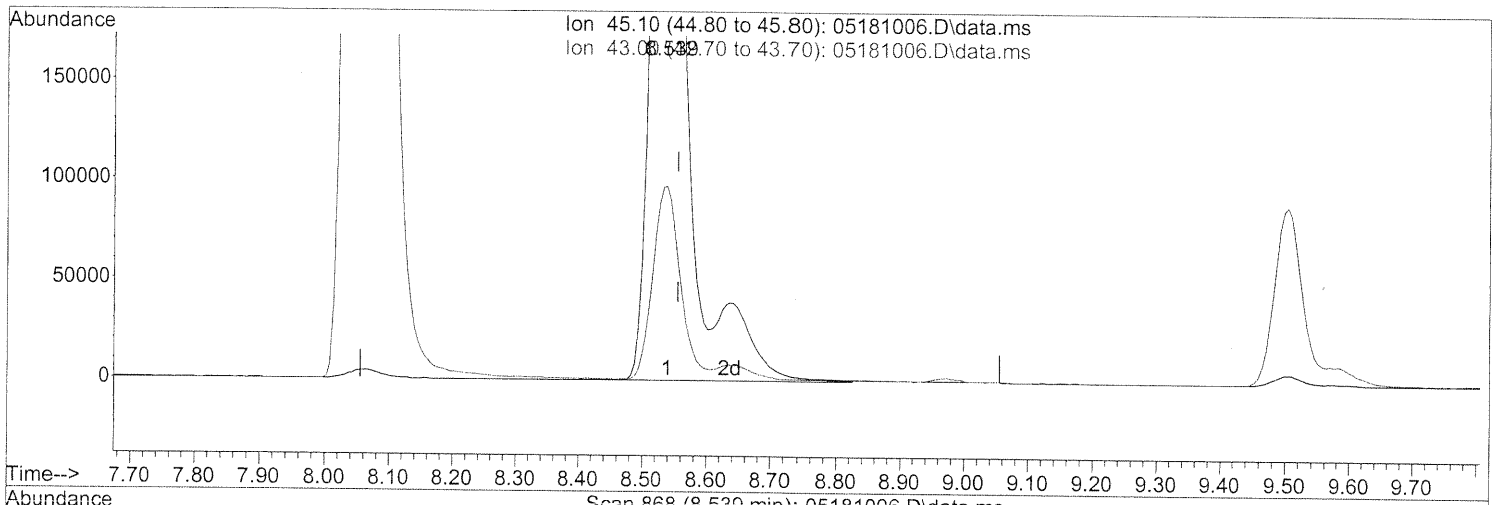
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 18.78 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

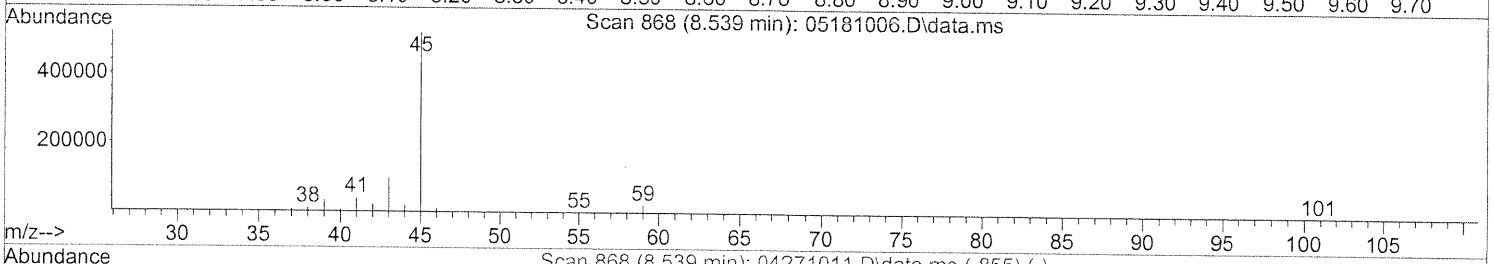
SP

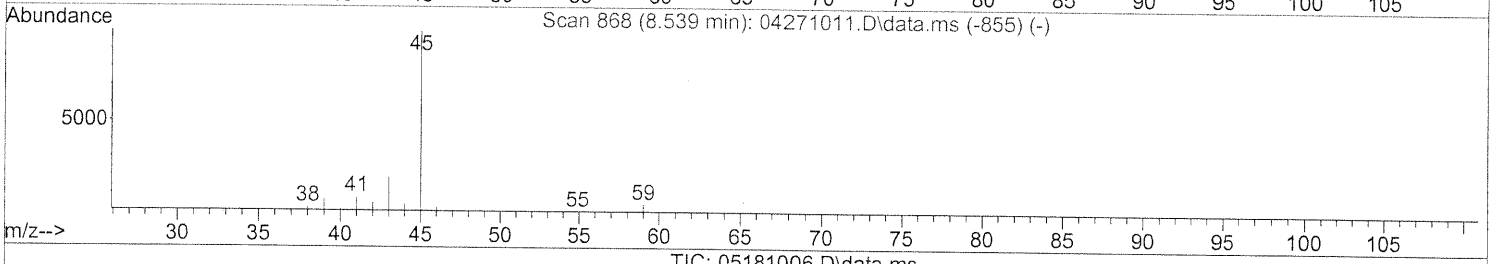
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181006.D
Acq On : 18 May 2010 11:15
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-04261002/S20-04231004
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 18 12:24:46 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181006.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.539min (-0.017) 34.49ng m

response 1692370

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 17.17 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → IC

DH 5/18/10

CC
5-18-10

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY DUPLICATE SUMMARY RESULTS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110355**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P1001650-002DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01209

Date Collected: 5/9/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -2.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.44

| Compound | Sample Result µg/m³ | Sample Result ppbV | Duplicate Sample Result µg/m³ | Duplicate Sample Result ppbV | Average µg/m³ | % RPD | RPD Limit | Data Qualifier |
|---|---|---|---|---|---|---|---|---|
| **Propene** | 52.5 | 30.5 | 59.9 | 34.8 | 56.2 | **13** | 25 | |
| **Dichlorodifluoromethane (CFC 12)** | 2.19 | 0.443 | 2.40 | 0.486 | 2.295 | **9** | 25 | |
| **Chloromethane** | 0.900 | 0.436 | 0.838 | 0.406 | 0.869 | **7** | 25 | |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | ND | ND | ND | - | - | 25 | |
| Vinyl Chloride | ND | ND | ND | ND | - | - | 25 | |
| 1,3-Butadiene | ND | ND | ND | ND | - | - | 25 | |
| Bromomethane | ND | ND | ND | ND | - | - | 25 | |
| Chloroethane | ND | ND | ND | ND | - | - | 25 | |
| **Ethanol** | 731 | 388 | 727 | 386 | 729 | **0.5** | 25 | **D** |
| Acetonitrile | ND | ND | ND | ND | - | - | 25 | |
| Acrolein | ND | ND | ND | ND | - | - | 25 | |
| **Acetone** | 72.3 | 30.5 | 76.4 | 32.2 | 74.35 | **6** | 25 | |
| **Trichlorofluoromethane** | 1.13 | 0.201 | 1.23 | 0.219 | 1.18 | **8** | 25 | |
| **2-Propanol (Isopropyl Alcohol)** | 384 | 156 | 376 | 153 | 380 | **2** | 25 | **D** |
| Acrylonitrile | ND | ND | ND | ND | - | - | 25 | |
| 1,1-Dichloroethene | ND | ND | ND | ND | - | - | 25 | |
| Methylene Chloride | ND | ND | ND | ND | - | - | 25 | |
| 3-Chloro-1-propene (Allyl Chloride) | ND | ND | ND | ND | - | - | 25 | |
| **Trichlorotrifluoroethane** | 0.436 | 0.0570 | 0.497 | 0.0649 | 0.4665 | **13** | 25 | |
| Carbon Disulfide | ND | ND | ND | ND | - | - | 25 | |
| trans-1,2-Dichloroethene | ND | ND | ND | ND | - | - | 25 | |
| 1,1-Dichloroethane | ND | ND | ND | ND | - | - | 25 | |
| Methyl tert-Butyl Ether | ND | ND | ND | ND | - | - | 25 | |
| Vinyl Acetate | ND | ND | ND | ND | - | - | 25 | |
| 2-Butanone (MEK) | ND | ND | ND | ND | - | - | 25 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
D = The reported result is from a dilution.

Verified By: Rcr Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY DUPLICATE SUMMARY RESULTS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110355** CAS Project ID: P1001650
**Client Project ID:** **17131** CAS Sample ID: P1001650-002DUP

Test Code: EPA TO-15 Date Collected: 5/9/10
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9 Date Received: 5/11/10
Analyst: Liliana Marghitoiu Date Analyzed: 5/17/10
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes: 0.10 Liter(s)
Container ID: AC01209

Initial Pressure (psig): -2.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.44

| Compound | Sample Result µg/m³ | Sample Result ppbV | Duplicate Sample Result µg/m³ | Duplicate Sample Result ppbV | Average µg/m³ | % RPD | RPD Limit | Data Qualifier |
|---|---|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | ND | ND | ND | ND | - | - | 25 | |
| **Ethyl Acetate** | 11.6 | 3.21 | 12.5 | 3.47 | 12.05 | **7** | 25 | |
| **n-Hexane** | 17.6 | 4.99 | 19.0 | 5.39 | 18.3 | **8** | 25 | |
| **Chloroform** | 3.07 | 0.629 | 3.33 | 0.682 | 3.2 | **8** | 25 | |
| Tetrahydrofuran (THF) | ND | ND | ND | ND | - | - | 25 | |
| **1,2-Dichloroethane** | 1.18 | 0.293 | 1.29 | 0.320 | 1.235 | **9** | 25 | |
| 1,1,1-Trichloroethane | ND | ND | ND | ND | - | - | 25 | |
| **Benzene** | 9.77 | 3.06 | 10.5 | 3.29 | 10.135 | **7** | 25 | |
| **Carbon Tetrachloride** | 0.707 | 0.112 | 0.769 | 0.122 | 0.738 | **8** | 25 | |
| **Cyclohexane** | 3.09 | 0.899 | 3.35 | 0.973 | 3.22 | **8** | 25 | |
| **1,2-Dichloropropane** | ND | ND | 0.145 | 0.0315 | - | - | 25 | |
| **Bromodichloromethane** | 1.61 | 0.240 | 1.74 | 0.260 | 1.675 | **8** | 25 | |
| Trichloroethene | ND | ND | ND | ND | - | - | 25 | |
| 1,4-Dioxane | ND | ND | ND | ND | - | - | 25 | |
| Methyl Methacrylate | ND | ND | ND | ND | - | - | 25 | |
| **n-Heptane** | 7.47 | 1.82 | 8.09 | 1.97 | 7.78 | **8** | 25 | |
| cis-1,3-Dichloropropene | ND | ND | ND | ND | - | - | 25 | |
| **4-Methyl-2-pentanone** | 1.08 | 0.263 | 1.15 | 0.282 | 1.115 | **6** | 25 | |
| trans-1,3-Dichloropropene | ND | ND | ND | ND | - | - | 25 | |
| 1,1,2-Trichloroethane | ND | ND | ND | ND | - | - | 25 | |
| **Toluene** | 40.1 | 10.6 | 43.4 | 11.5 | 41.75 | **8** | 25 | |
| 2-Hexanone | ND | ND | ND | ND | - | - | 25 | |
| **Dibromochloromethane** | 0.570 | 0.0670 | 0.636 | 0.0747 | 0.603 | **11** | 25 | |
| 1,2-Dibromoethane | ND | ND | ND | ND | - | - | 25 | |
| **n-Butyl Acetate** | 1.61 | 0.338 | 1.76 | 0.370 | 1.685 | **9** | 25 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

Verified By: Rc Date: 5/24/10

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY DUPLICATE SUMMARY RESULTS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **110355**
**Client Project ID:** **17131**

CAS Project ID: P1001650
CAS Sample ID: P1001650-002DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5973inert/6890N/MS9
Analyst: Liliana Marghitoiu
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01209

Date Collected: 5/9/10
Date Received: 5/11/10
Date Analyzed: 5/17/10
Volume(s) Analyzed: 1.00 Liter(s)
0.10 Liter(s)

Initial Pressure (psig): -2.1 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.44

| Compound | Sample Result µg/m³ | Sample Result ppbV | Duplicate Sample Result µg/m³ | Duplicate Sample Result ppbV | Average µg/m³ | % RPD | RPD Limit | Data Qualifier |
|---|---|---|---|---|---|---|---|---|
| **n-Octane** | 3.14 | 0.673 | 3.36 | 0.720 | 3.25 | **7** | 25 | |
| **Tetrachloroethene** | 0.353 | 0.0520 | 0.386 | 0.0569 | 0.3695 | **9** | 25 | |
| Chlorobenzene | ND | ND | ND | ND | - | - | 25 | |
| **Ethylbenzene** | 9.17 | 2.11 | 9.93 | 2.29 | 9.55 | **8** | 25 | |
| **m,p-Xylenes** | 32.1 | 7.39 | 35.0 | 8.07 | 33.55 | **9** | 25 | |
| Bromoform | ND | ND | ND | ND | - | - | 25 | |
| **Styrene** | 1.73 | 0.405 | 1.89 | 0.444 | 1.81 | **9** | 25 | |
| **o-Xylene** | 10.9 | 2.51 | 11.9 | 2.75 | 11.4 | **9** | 25 | |
| **n-Nonane** | 2.94 | 0.561 | 3.18 | 0.607 | 3.06 | **8** | 25 | |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND | - | - | 25 | |
| Cumene | ND | ND | ND | ND | - | - | 25 | |
| **alpha-Pinene** | 16.6 | 2.98 | 18.2 | 3.26 | 17.4 | **9** | 25 | |
| **n-Propylbenzene** | 1.92 | 0.390 | 2.12 | 0.430 | 2.02 | **10** | 25 | |
| **4-Ethyltoluene** | 3.47 | 0.706 | 3.81 | 0.776 | 3.64 | **9** | 25 | |
| **1,3,5-Trimethylbenzene** | 2.85 | 0.580 | 3.13 | 0.636 | 2.99 | **9** | 25 | |
| **1,2,4-Trimethylbenzene** | 10.2 | 2.09 | 11.2 | 2.27 | 10.7 | **9** | 25 | |
| Benzyl Chloride | ND | ND | ND | ND | - | - | 25 | |
| 1,3-Dichlorobenzene | ND | ND | ND | ND | - | - | 25 | |
| **1,4-Dichlorobenzene** | ND | ND | 0.150 | 0.0249 | - | - | 25 | |
| 1,2-Dichlorobenzene | ND | ND | ND | ND | - | - | 25 | |
| **d-Limonene** | 41.2 | 7.39 | 44.8 | 8.04 | 43 | **8** | 25 | |
| 1,2-Dibromo-3-chloropropane | ND | ND | ND | ND | - | - | 25 | |
| 1,2,4-Trichlorobenzene | ND | ND | ND | ND | - | - | 25 | |
| **Naphthalene** | ND | ND | 0.737 | 0.141 | - | - | 25 | |
| Hexachlorobutadiene | ND | ND | ND | ND | - | - | 25 | |

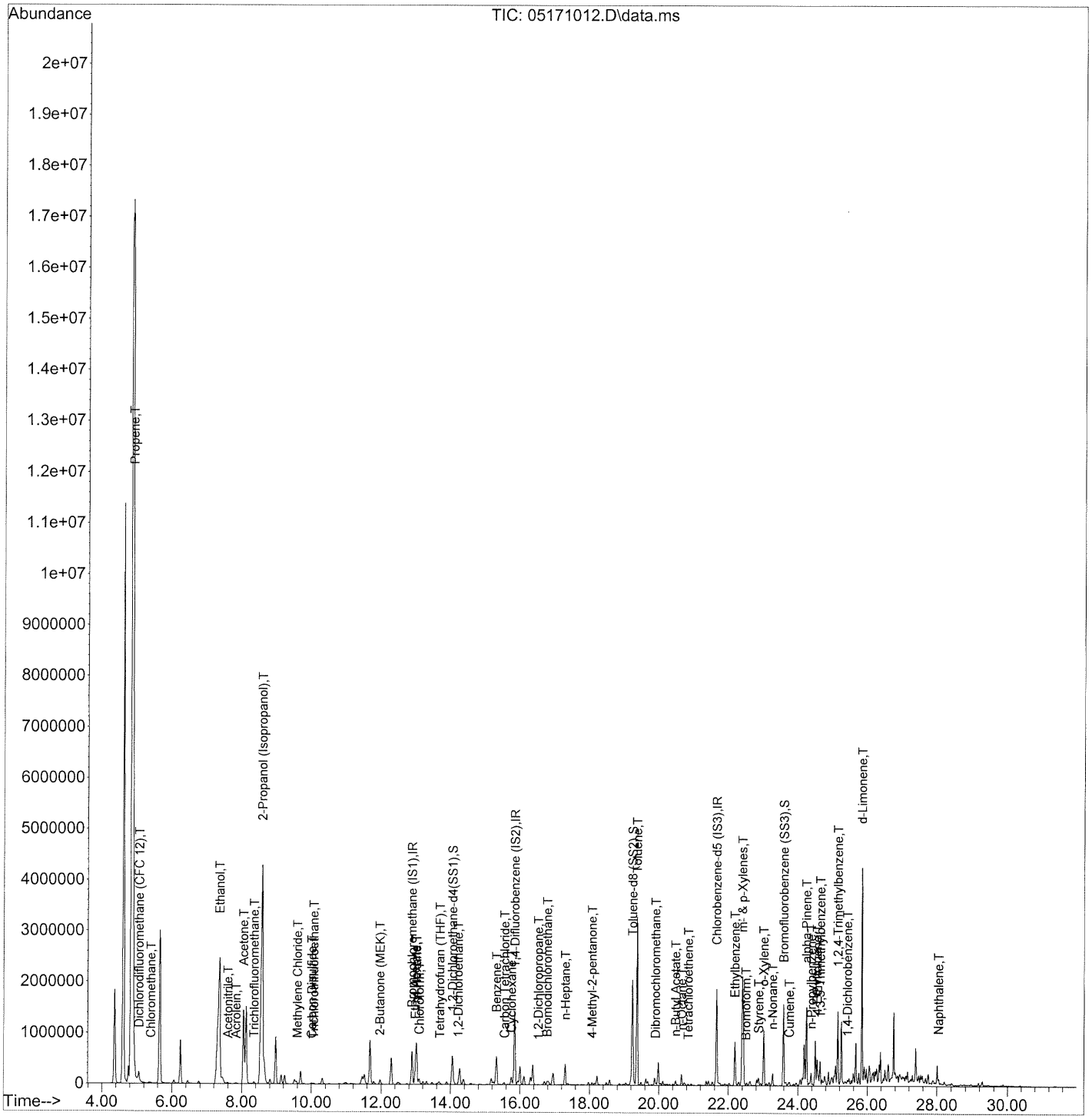
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

Verified By: Rec Date: 5/24/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:28:13 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:28:13 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 374588 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1780102 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 751929 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 554019 | 24.506 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.04% | | ✓ |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1868667 | 24.640 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.56% | | ✓ |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 628350 | 23.653 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.60% | | ✓ |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 882803 | 41.600 | ng | | 95 |
| 3) Dichlorodifluoromethan... | 5.06 | 85 | 83244 | 1.668 | ng | | 99 |
| 4) Chloromethane | 5.40 | 50 | 17595 | 0.582 | ng | | 97 |
| 10) Ethanol | 7.36 | 45 | 7034425 | 544.209 | ng | | 99 |
| 11) Acetonitrile | 7.60 | 41 | 14955 | 0.477 | ng | | 92 |
| 12) Acrolein | 7.83 | 56 | 19800 | 1.553 | ng | | 99 |
| 13) Acetone | 8.05 | 58 | 876192m | 53.047 | ng | | |
| 14) Trichlorofluoromethane | 8.35 | 101 | 38863 | 0.856 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.58 | 45 | 11343469 | 235.711 | ng | see dil | 99 |
| 19) Methylene Chloride | 9.60 | 84 | 5027 | 0.202 | ng | # | 78 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 7855 | 0.345 | ng | # | 76 |
| 22) Carbon Disulfide | 10.01 | 76 | 41563 | 0.518 | ng | | 99 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 42144 | 2.778 | ng | # | 69 |
| 30) Ethyl Acetate | 12.98 | 61 | 69996 | 8.687 | ng | | 83 |
| 31) n-Hexane | 13.02 | 57 | 506735 | 13.195 | ng | # | 96 |
| 32) Chloroform | 13.10 | 83 | 94381 | 2.312 | ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.69 | 72 | 3192 | 0.217 | ng | # | 1 |
| 36) 1,2-Dichloroethane | 14.22 | 62 | 27524 | 0.899 | ng | | 99 |
| 41) Benzene | 15.32 | 78 | 739839 | 7.301 | ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 16641 | 0.534 | ng | | 100 |
| 43) Cyclohexane | 15.75 | 84 | 87739 | 2.325 | ng | # | 81 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 2221 | 0.101 | ng | | 96 |
| 46) Bromodichloromethane | 16.78 | 83 | 36807 | 1.210 | ng | | 78 |
| 51) n-Heptane | 17.30 | 71 | 135396 | 5.616 | ng | | 89 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 15386 | 0.802 | ng | | 93 |
| 58) Toluene | 19.37 | 91 | 3224486 | 30.147 | ng | | 98 |
| 60) Dibromochloromethane | 19.91 | 129 | 11308 | 0.442 | ng | | 98 |
| 62) n-Butyl Acetate | 20.48 | 43 | 63102 | 1.221 | ng | | 83 |
| 63) n-Octane | 20.66 | 57 | 44801 | 2.334 | ng | # | 82 |
| 64) Tetrachloroethene | 20.85 | 166 | 8966 | 0.268 | ng | | 99 |

Quantitation Report (QT Reviewed)

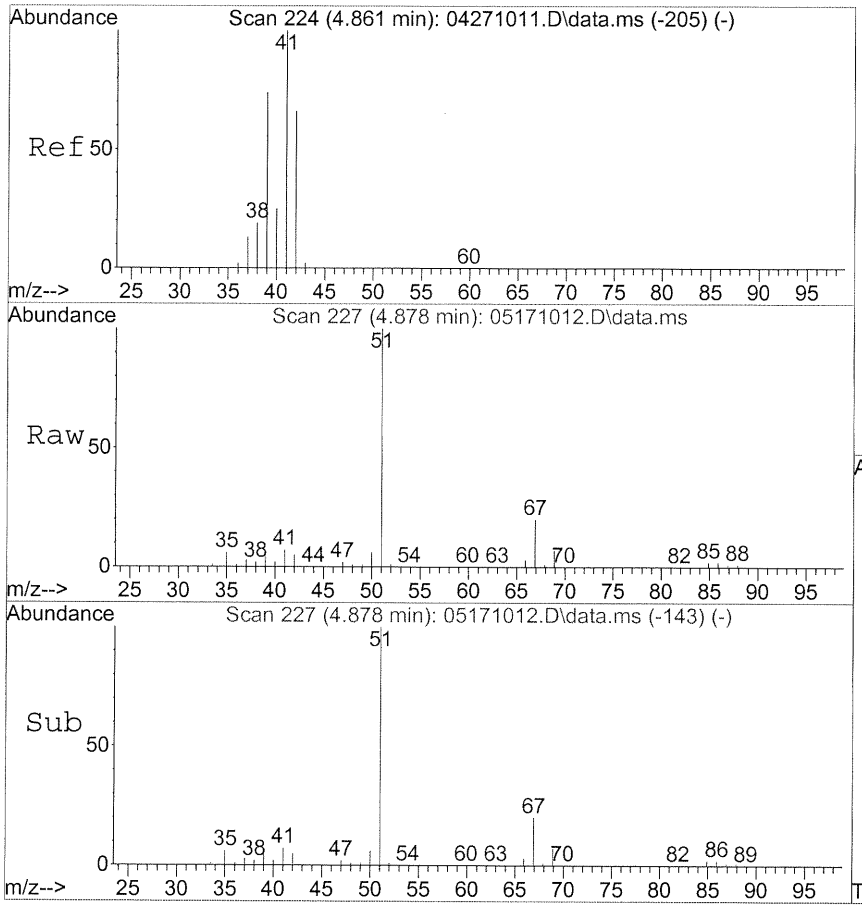
Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:28:13 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 66) Ethylbenzene | 22.19 | 91 | 808355 | 6.896 | ng | 95 |
| 67) m- & p-Xylenes | 22.40 | 91 | 2252464 | 24.317 | ng | 93 |
| 68) Bromoform | 22.51 | 173 | 2591 | 0.108 | ng | 96 |
| 69) Styrene | 22.87 | 104 | 95672 | 1.313 | ng | 94 |
| 70) o-Xylene | 23.01 | 91 | 782054 | 8.281 | ng | 93 |
| 71) n-Nonane | 23.27 | 43 | 91077 | 2.211 | ng | 89 |
| 74) Cumene | 23.75 | 105 | 46721 | 0.362 | ng | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 754759 | 12.605 | ng | 93 |
| 76) n-Propylbenzene | 24.38 | 91 | 219911 | 1.469 | ng | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 315197 | 2.647 | ng | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 211089 | 2.172 | ng | 93 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 779069 | 7.753 | ng | 97 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 6598 | 0.104 | ng | 97 |
| 91) d-Limonene | 25.84 | 68 | 1085236 | 31.102 | ng | 83 |
| 95) Naphthalene | 28.05 | 128 | 65350 | 0.512 | ng | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

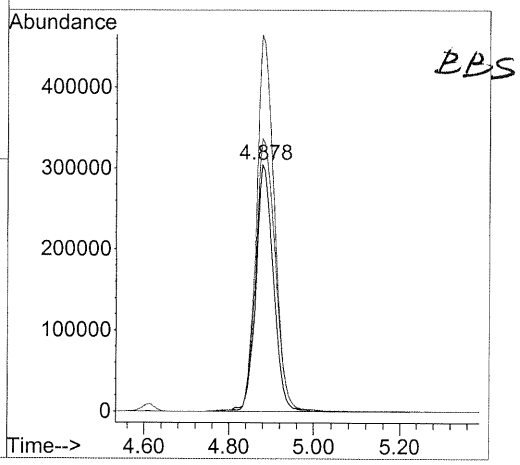
MDA 5/19/10

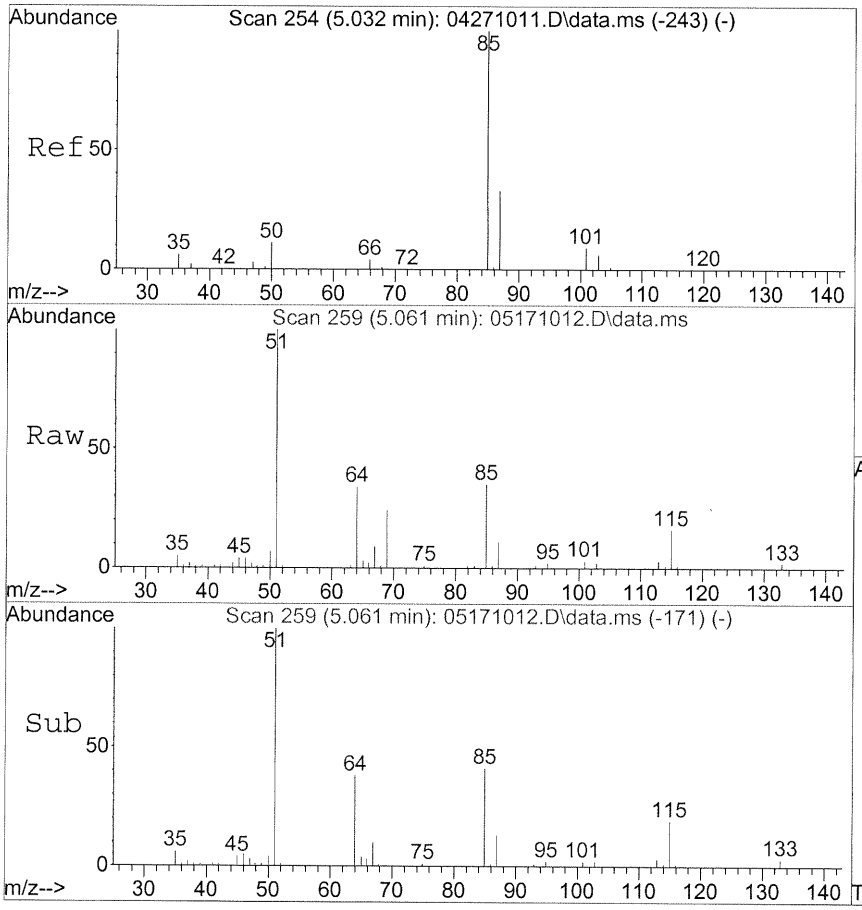



#2
Propene
Concen: 41.60 ng
RT: 4.88 min Scan# 227
Delta R.T. -0.023 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 42 Resp: 882803

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 42 | 100 | | |
| 39 | 122.4 | 92.2 | 132.2 |
| 41 | 155.4 | 133.9 | 173.9 |

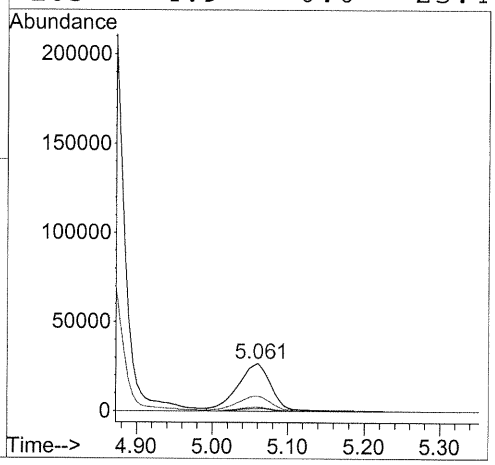



#3
Dichlorodifluoromethane (CFC
Concen: 1.67 ng
RT: 5.06 min Scan# 259
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 85 Resp: 83244

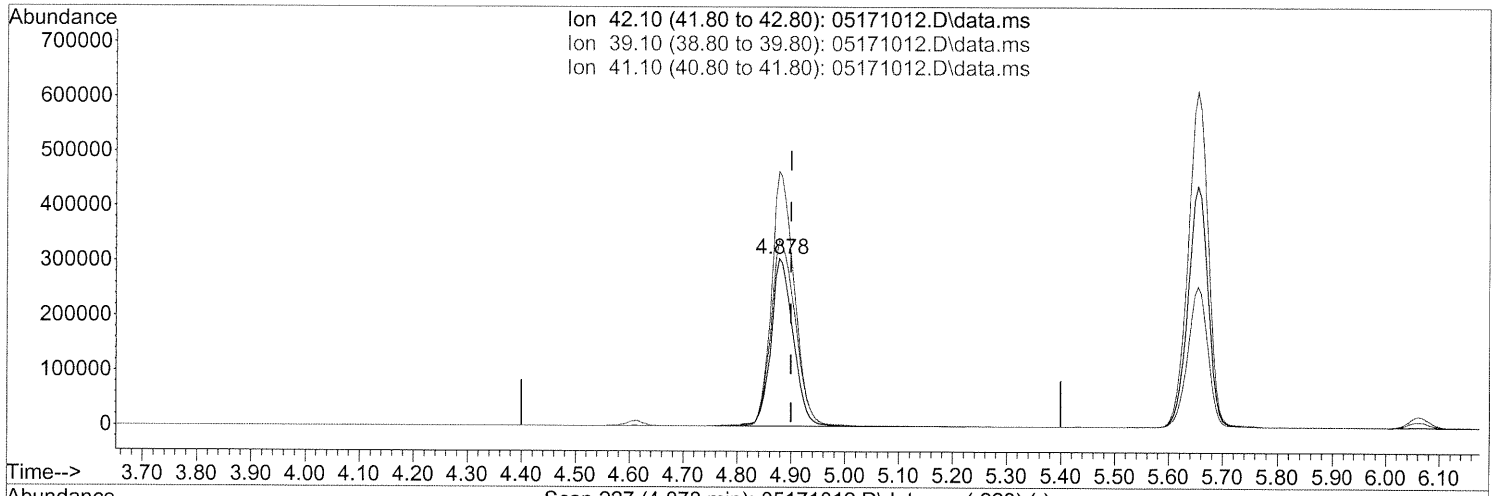
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 85 | 100 | | |
| 87 | 31.3 | 12.0 | 52.0 |
| 101 | 7.7 | 0.0 | 28.5 |
| 103 | 4.9 | 0.0 | 25.4 |

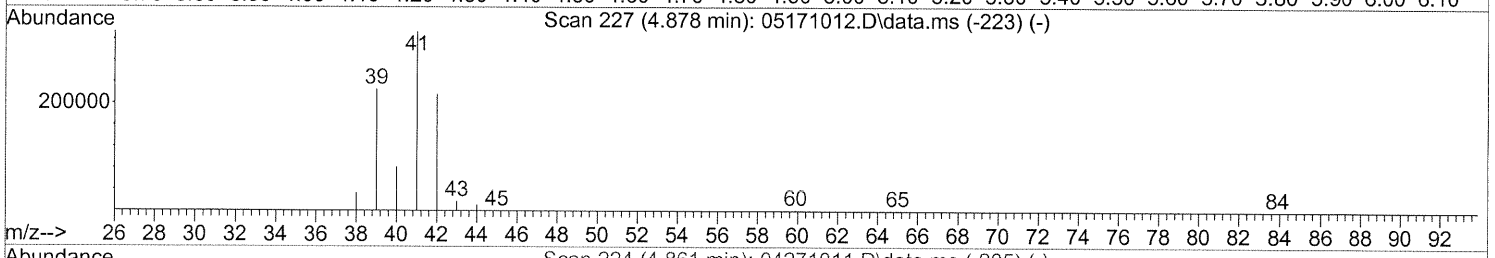


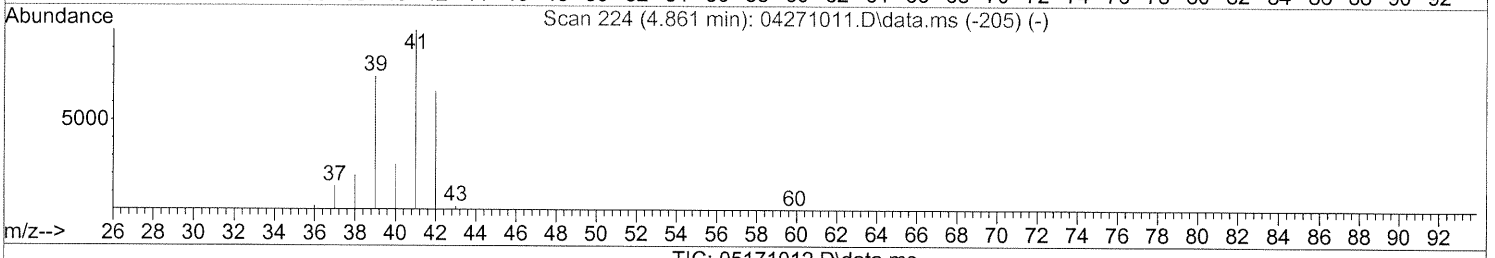
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171012.D\data.ms

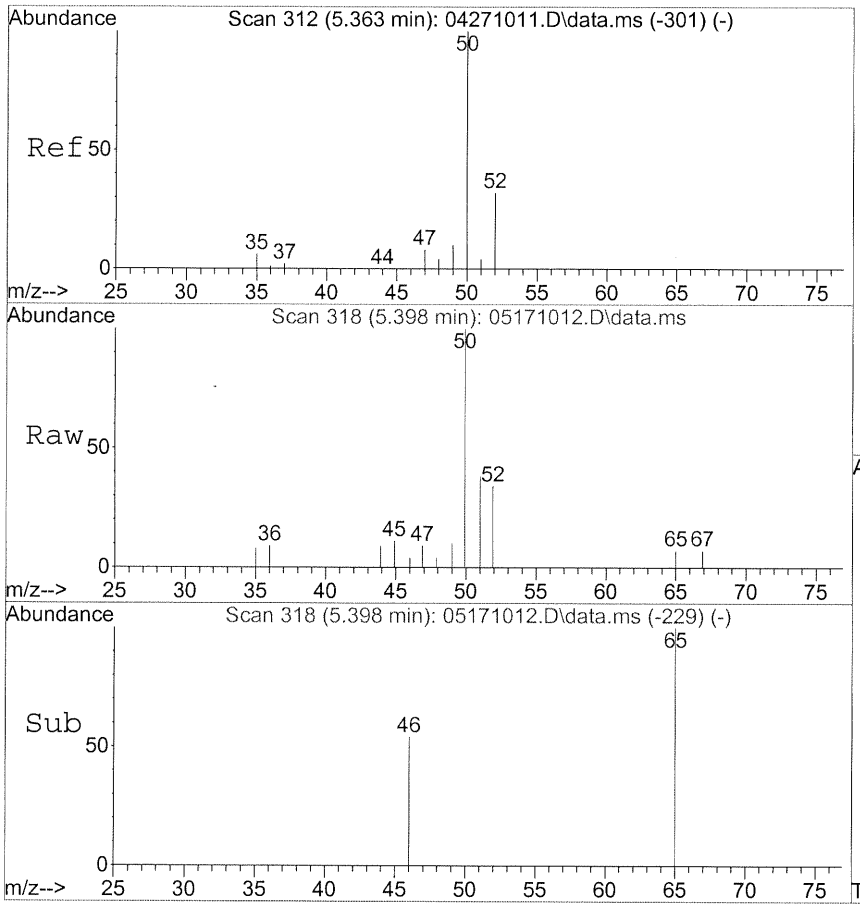
(2) Propene (T)

4.878min (-0.023) 41.60ng

response 882803

| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 112.20 | 122.37 |
| 41.10 | 153.90 | 155.41 |
| 0.00 | 0.00 | 0.00 |

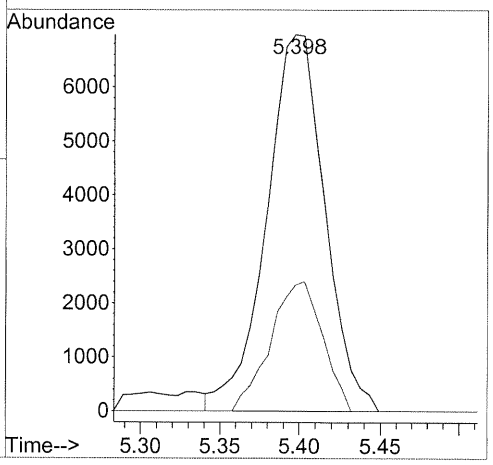
ABS

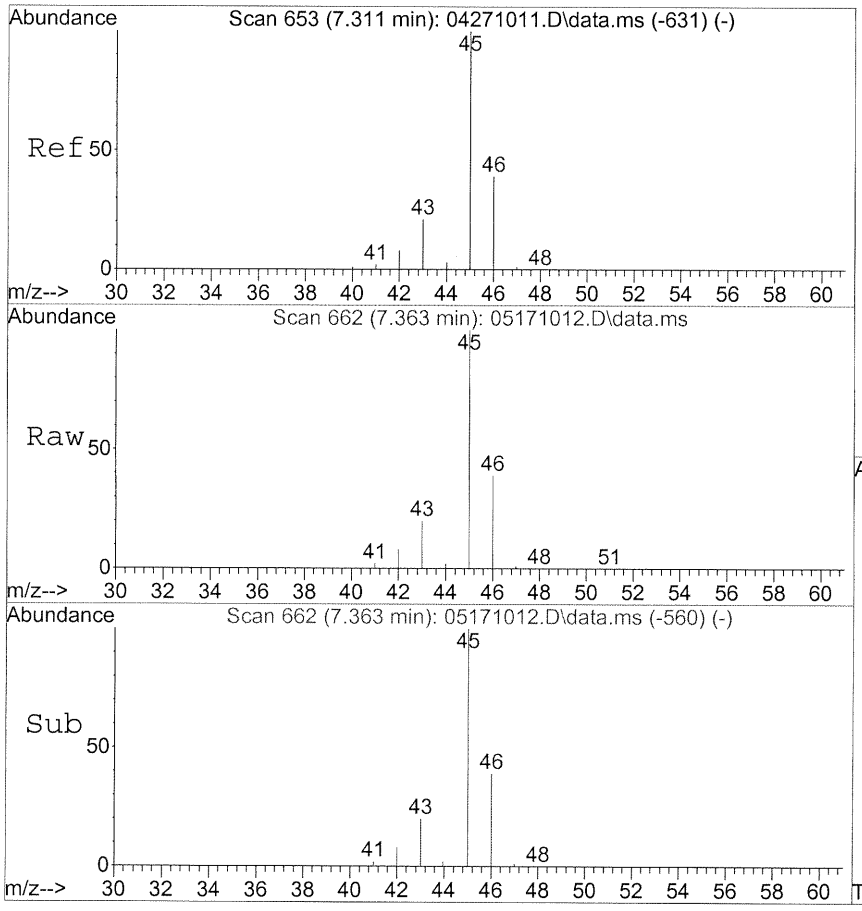



#4
Chloromethane
Concen: 0.58 ng
RT: 5.40 min Scan# 318
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 50 Resp: 17595

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 50 | 100 | | |
| 52 | 30.6 | 12.1 | 52.1 |

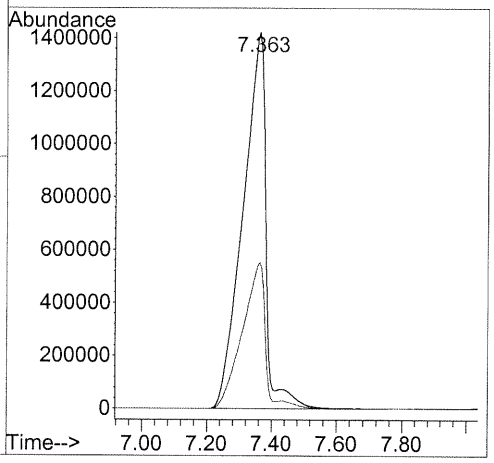


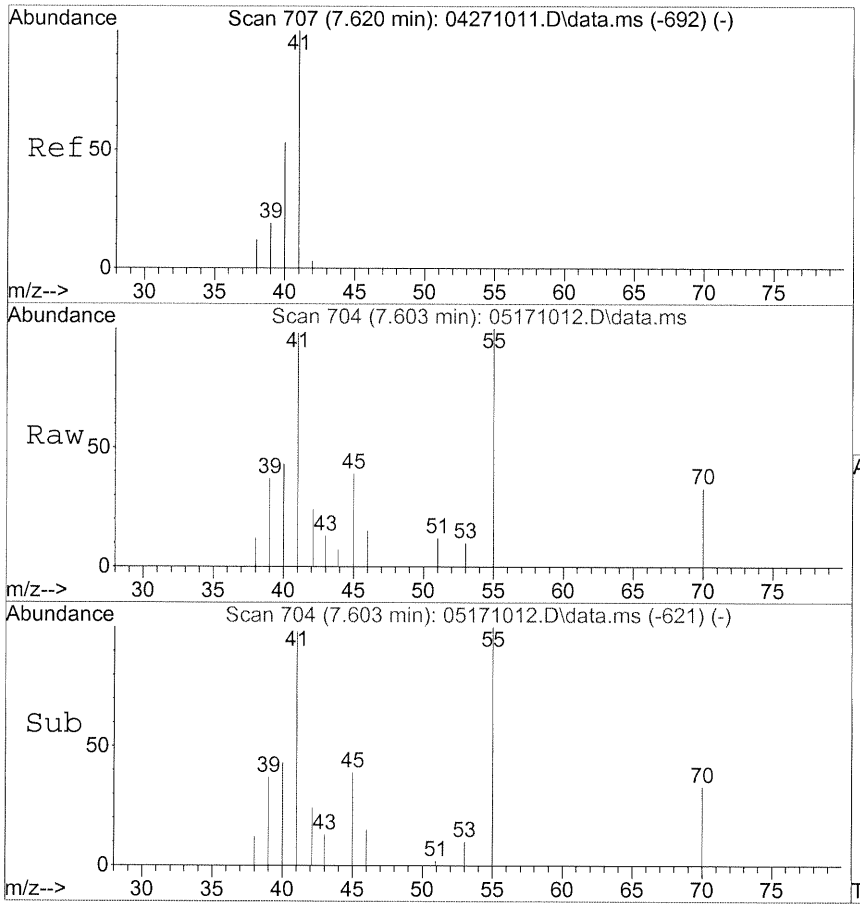




#10
Ethanol
Concen: 544.21 ng
RT: 7.36 min Scan# 662
Delta R.T. 0.080 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 45 Resp: 7034425

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 46 | 38.8 | 18.4 | 58.4 |

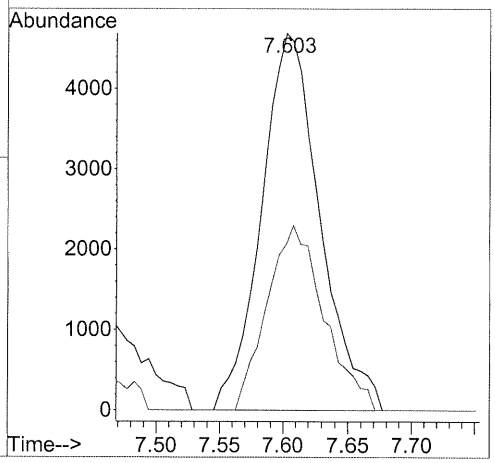


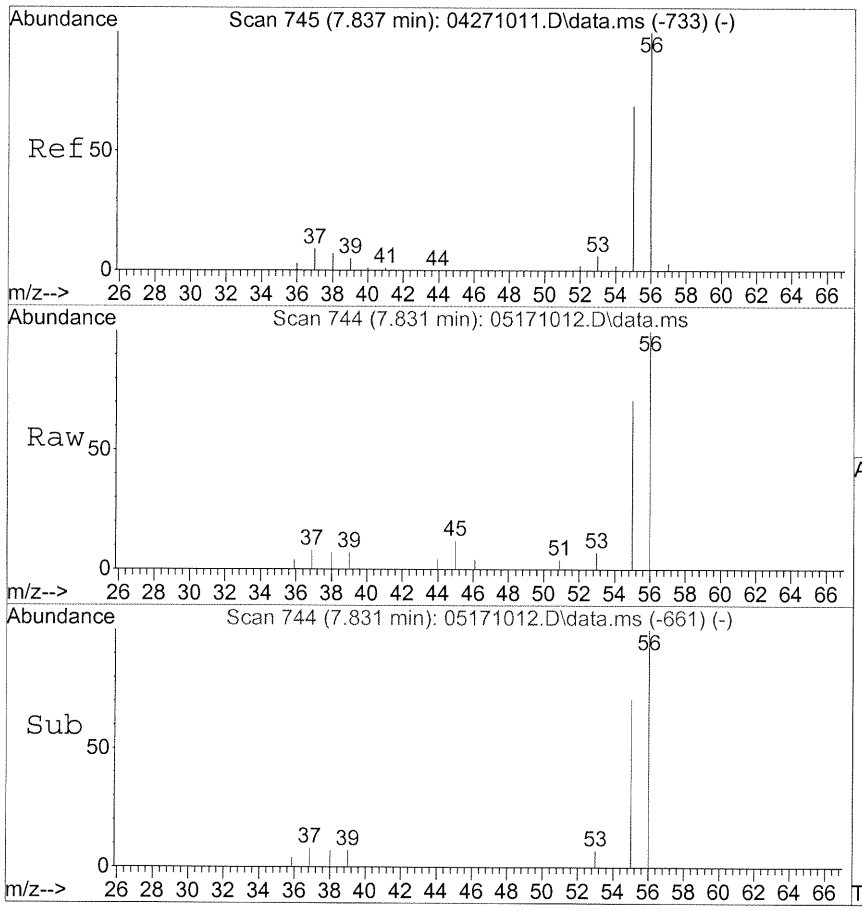



#11
Acetonitrile
Concen: 0.48 ng
RT: 7.60 min Scan# 704
Delta R.T. -0.028 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 41 Resp: 14955

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 41 | 100 | | |
| 40 | 47.4 | 32.7 | 72.7 |

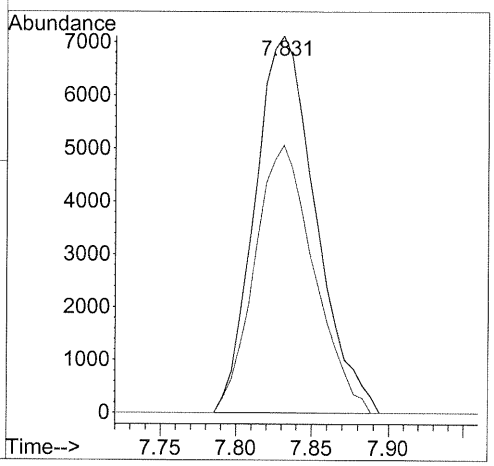


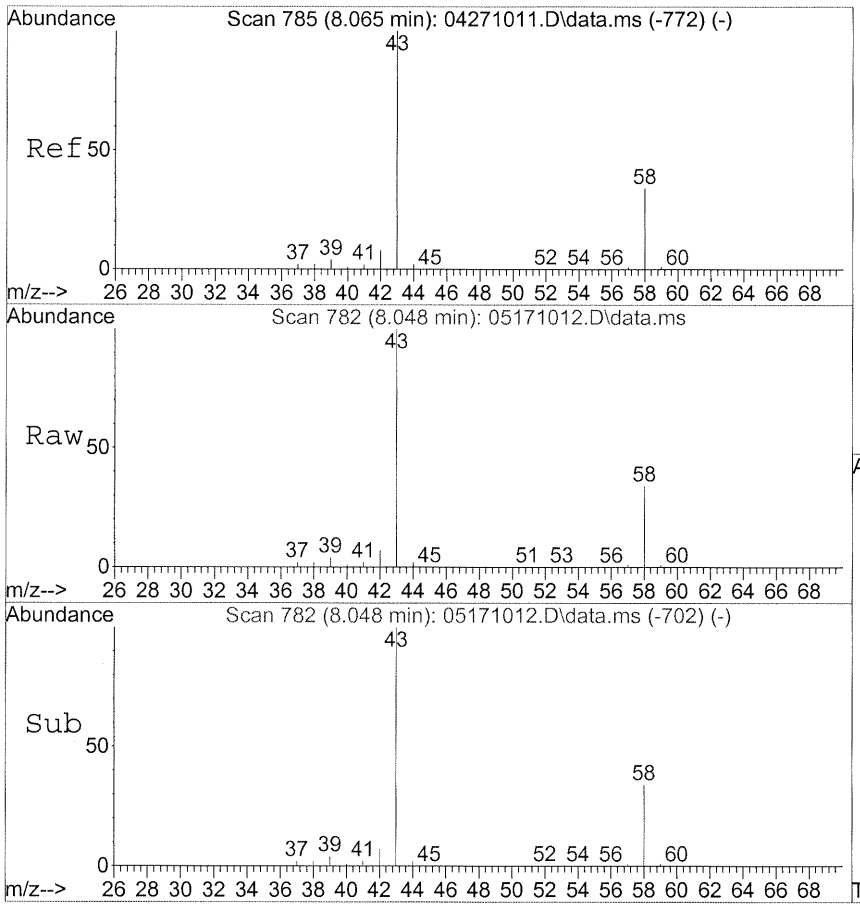




#12
Acrolein
Concen: 1.55 ng
RT: 7.83 min Scan# 744
Delta R.T. -0.028 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 56 Resp: 19800

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 56 | 100 | | |
| 55 | 69.4 | 50.5 | 90.5 |

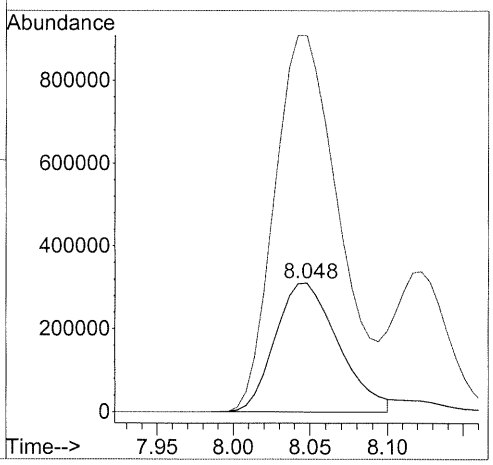


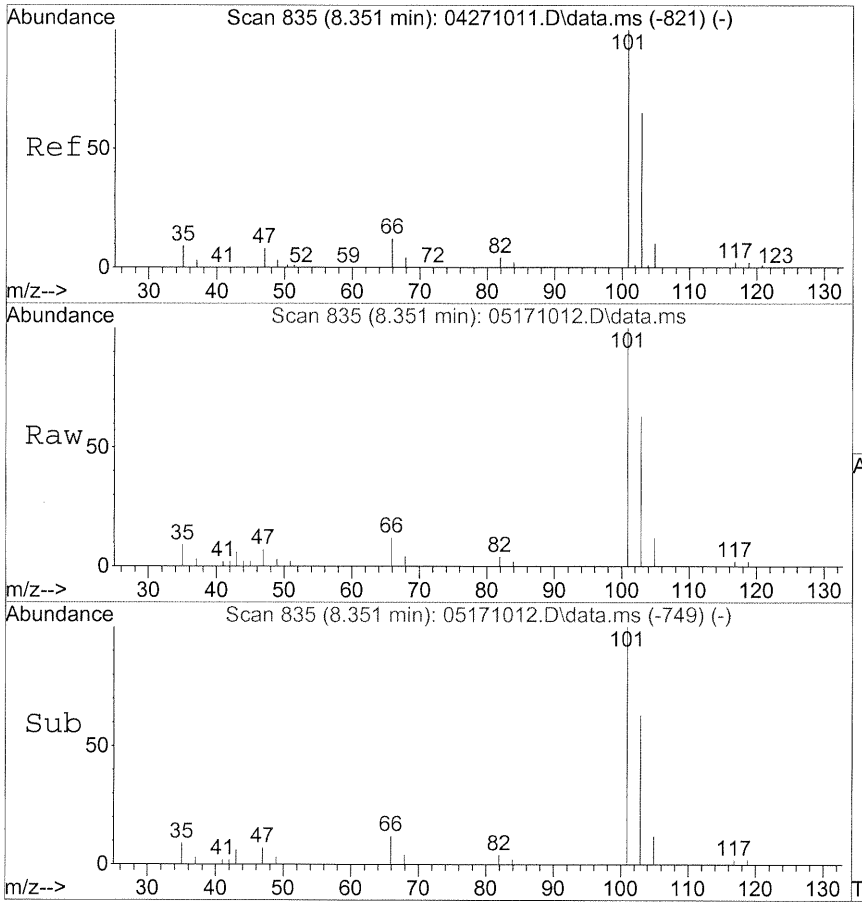



#13
Acetone
Concen: 53.05 ng m
RT: 8.05 min Scan# 782
Delta R.T. -0.045 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 58 Resp: 876192

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 297.7 | 295.0 | 355.0 |

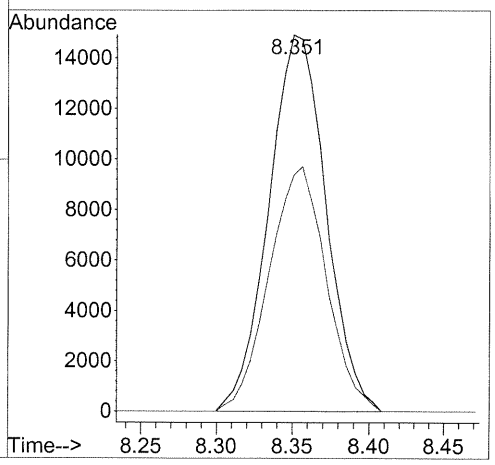


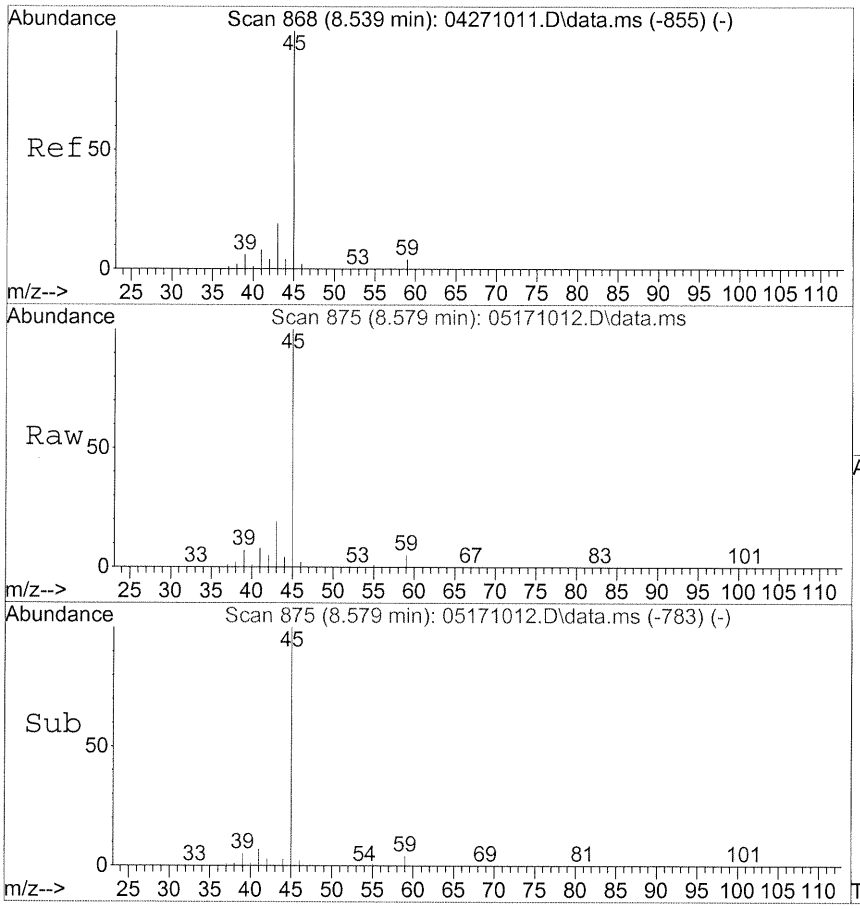




#14
Trichlorofluoromethane
Concen: 0.86 ng
RT: 8.35 min Scan# 835
Delta R.T. -0.011 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:101 Resp: 38863

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 101 | 100 | | |
| 103 | 65.1 | 43.8 | 83.8 |

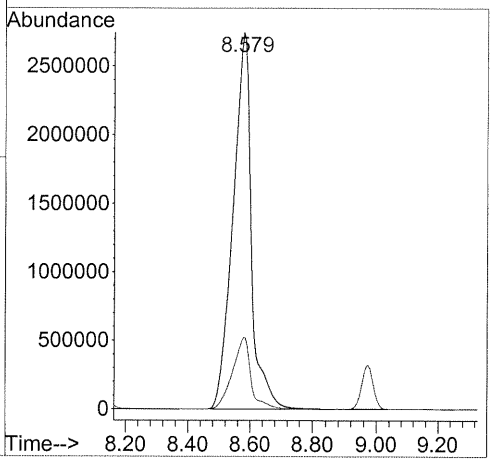


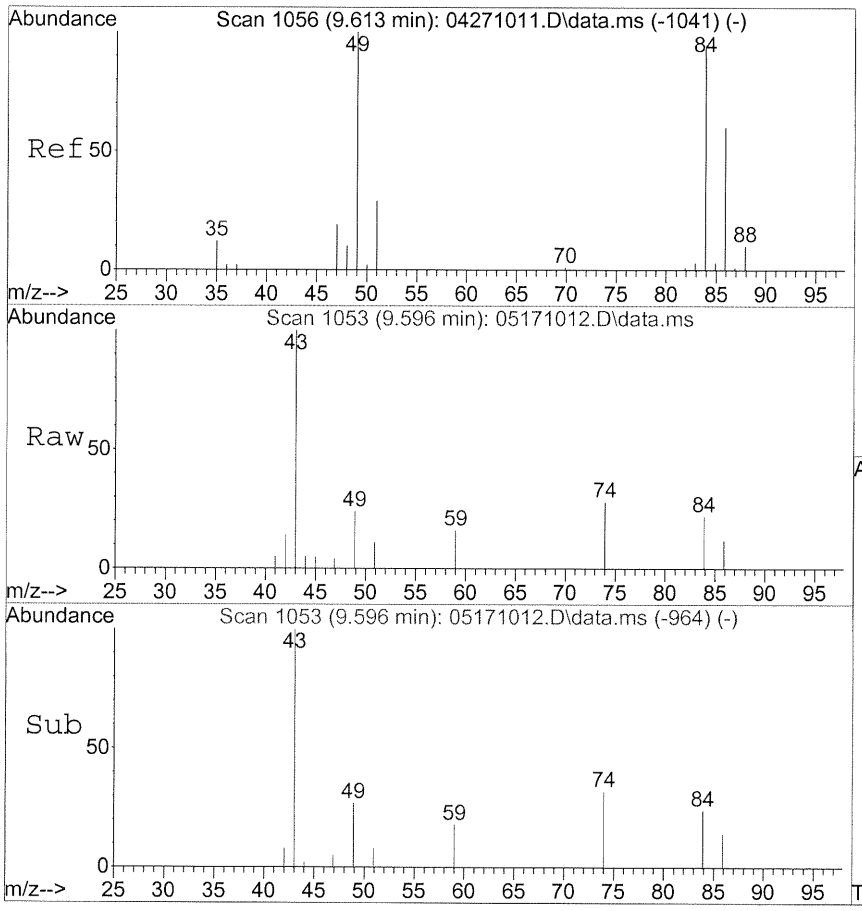



#15
2-Propanol (Isopropanol)
Concen: 235.71 ng
RT: 8.58 min Scan# 875
Delta R.T. 0.023 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 45 Resp:11343469

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 45 | 100 | | |
| 43 | 18.9 | 0.0 | 39.2 |

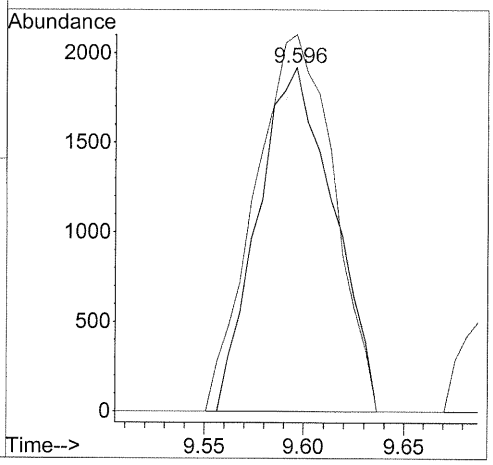


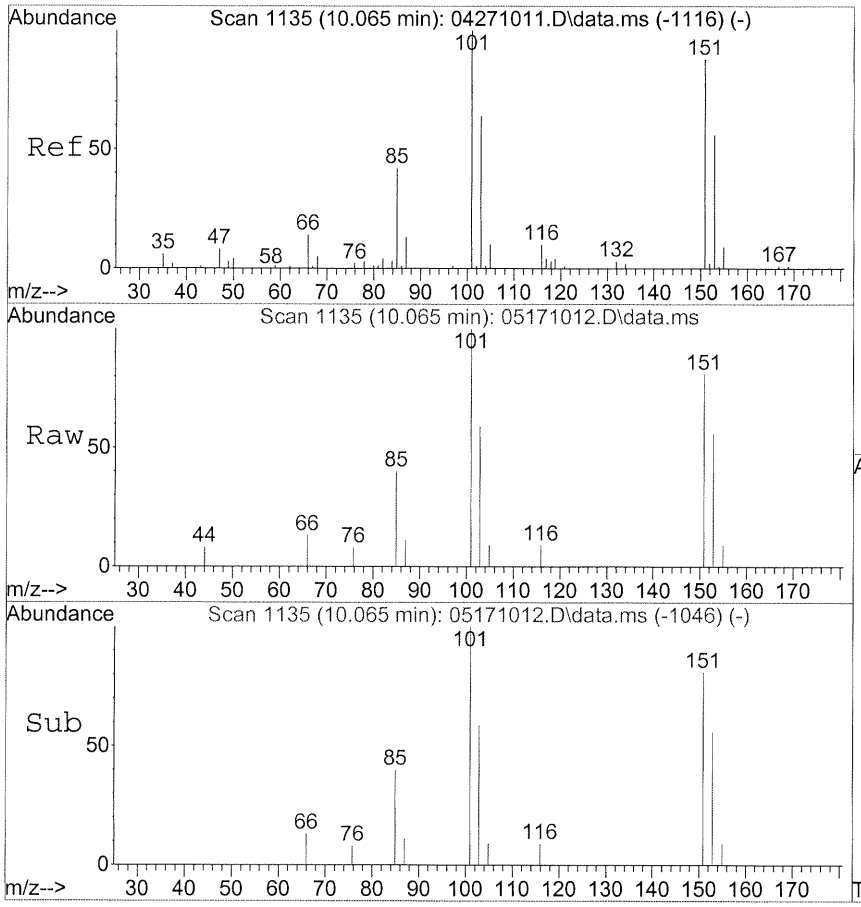




#19
Methylene Chloride
Concen: 0.20 ng
RT: 9.60 min Scan# 1053
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 84 Resp: 5027

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 49 | 115.1 | 116.6 | 166.6# |

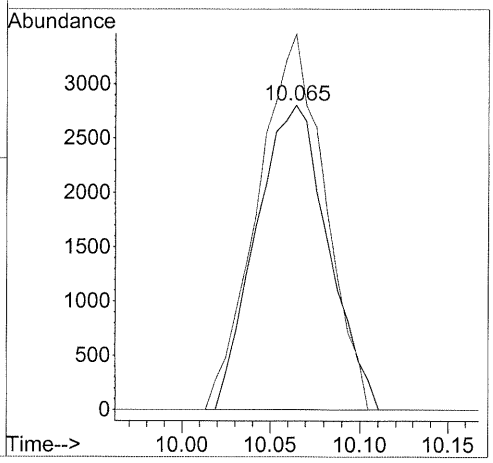


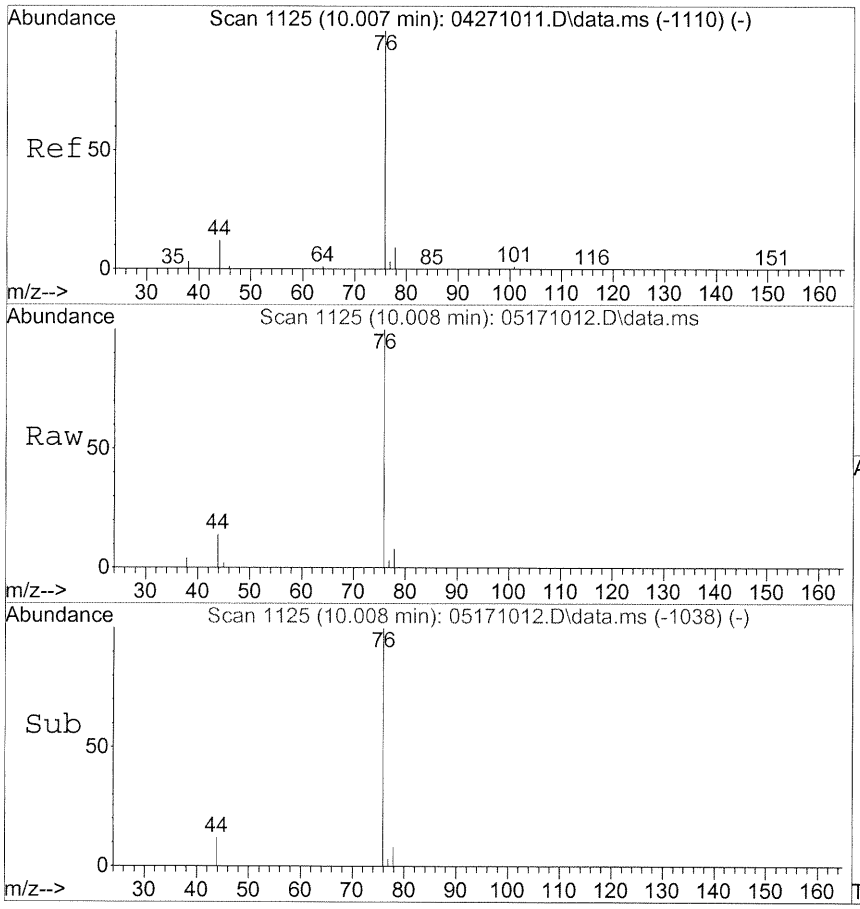



#21
Trichlorotrifluoroethane
Concen: 0.35 ng
RT: 10.06 min Scan# 1135
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:151 Resp: 7855

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 151 | 100 | | |
| 101 | 115.2 | 125.6 | 165.6# |

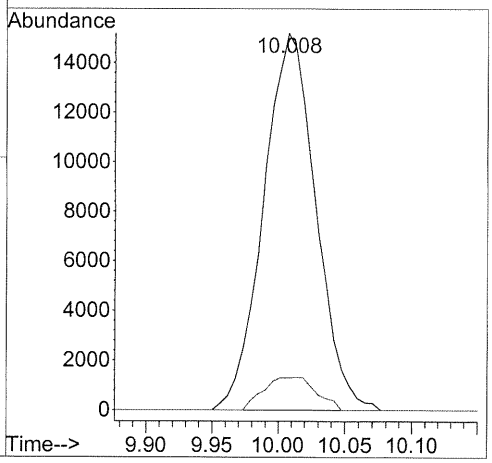


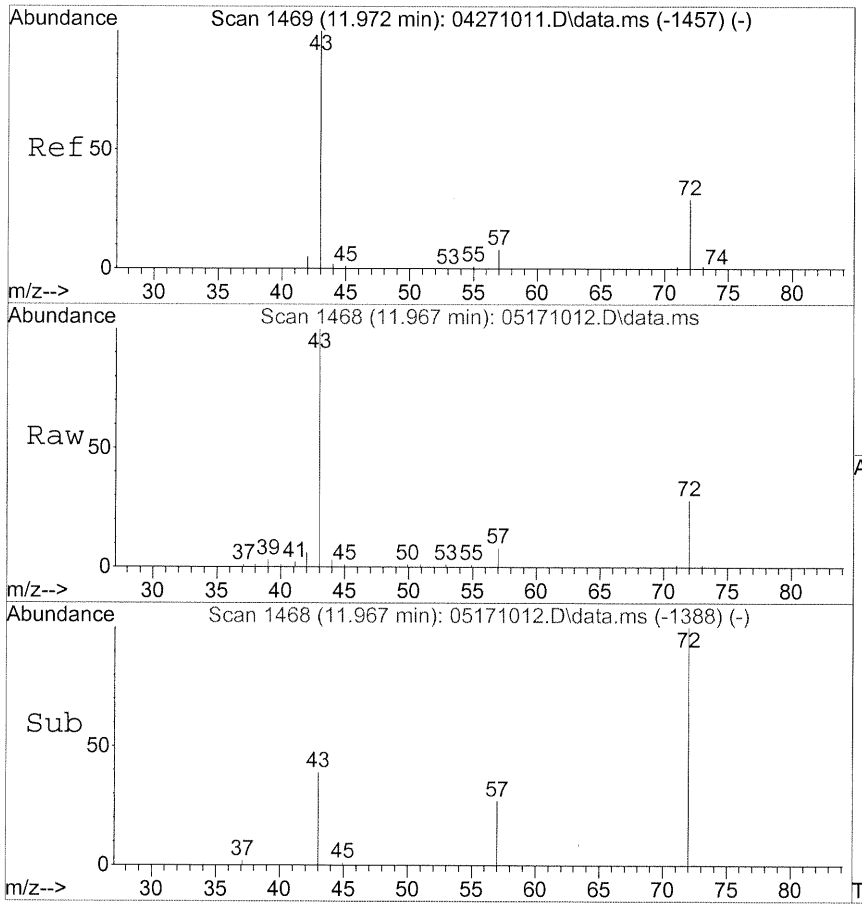




#22
Carbon Disulfide
Concen: 0.52 ng
RT: 10.01 min Scan# 1125
Delta R.T. -0.005 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 76 Resp: 41563

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 76 | 100 | | |
| 78 | 8.7 | 0.0 | 29.1 |

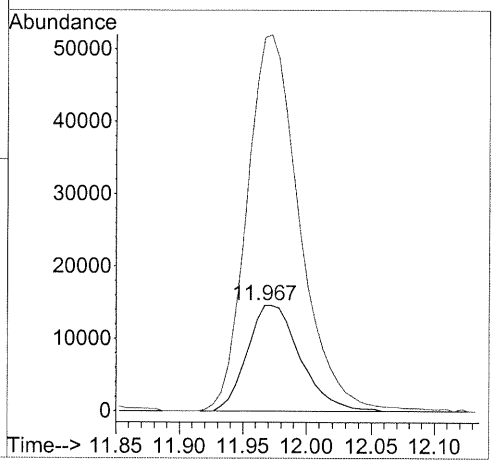


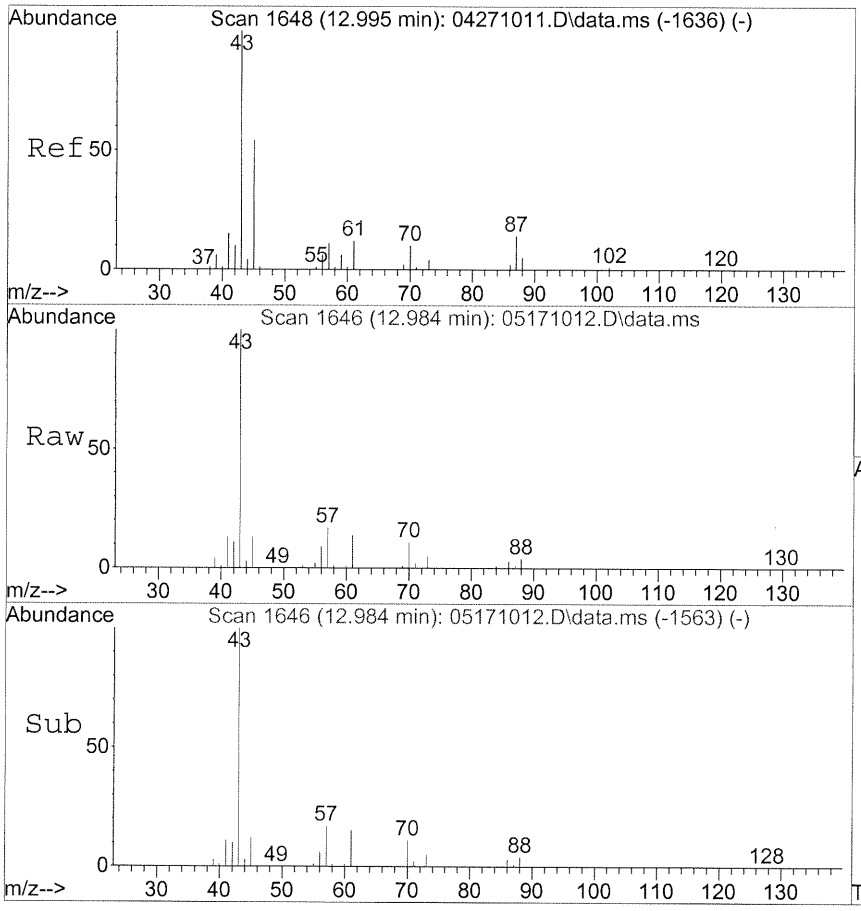



#27
2-Butanone (MEK)
Concen: 2.78 ng
RT: 11.97 min Scan# 1468
Delta R.T. -0.045 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 72 Resp: 42144

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 43 | 356.0 | 412.3 | 452.3# |

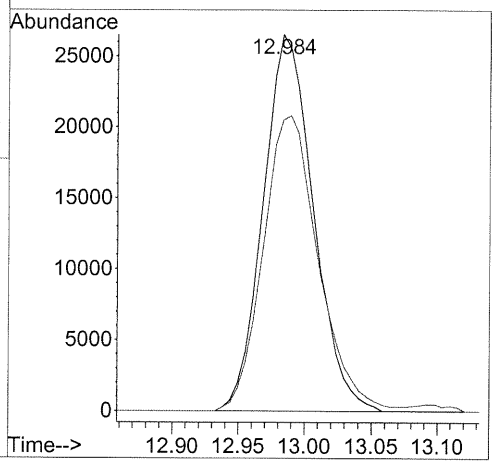


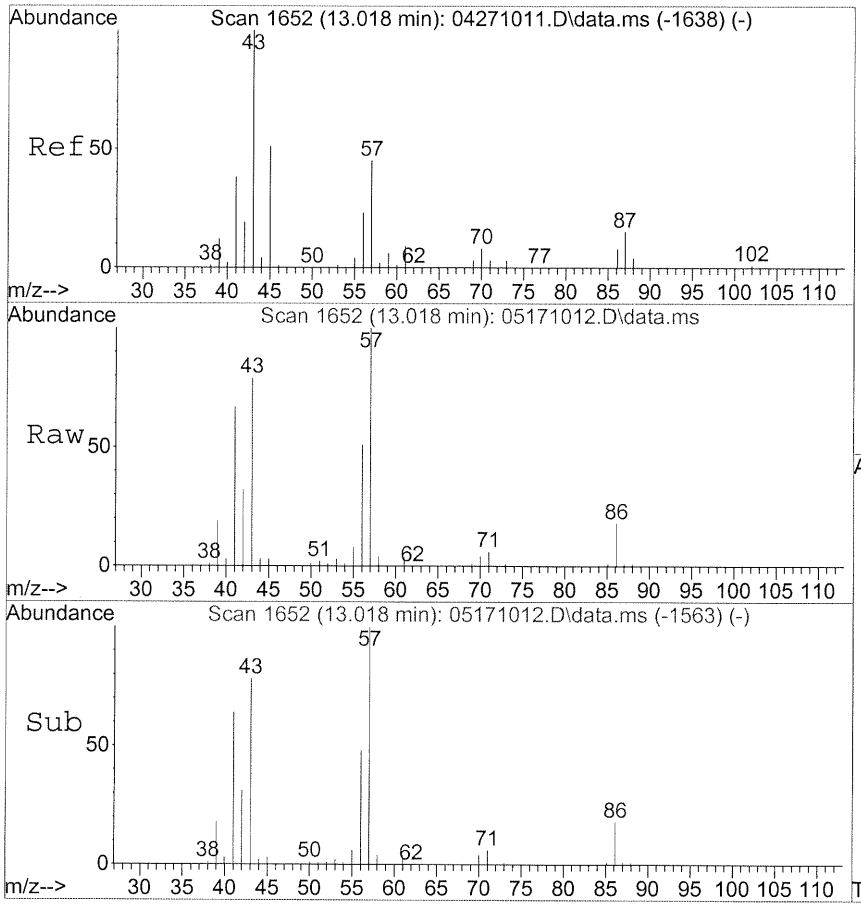




#30
Ethyl Acetate
Concen: 8.69 ng
RT: 12.98 min Scan# 1646
Delta R.T. -0.028 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 61 Resp: 69996

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 70 | 86.1 | 52.2 | 92.2 |

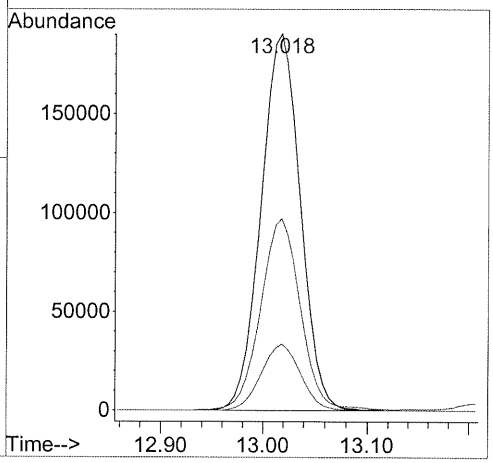


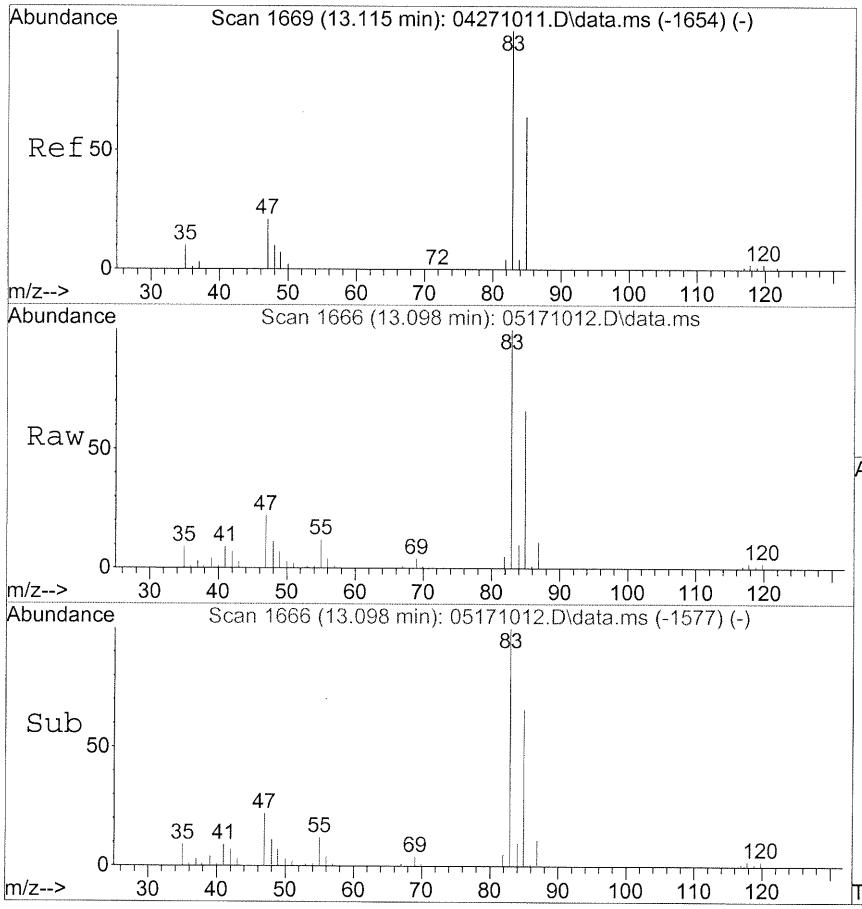



#31
n-Hexane
Concen: 13.20 ng
RT: 13.02 min Scan# 1652
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 57 Resp: 506735

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 56 | 51.9 | 40.0 | 60.0 |
| 86 | 17.7 | 11.5 | 17.3# |

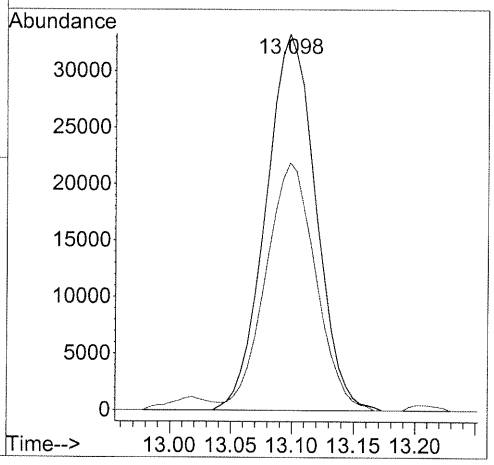


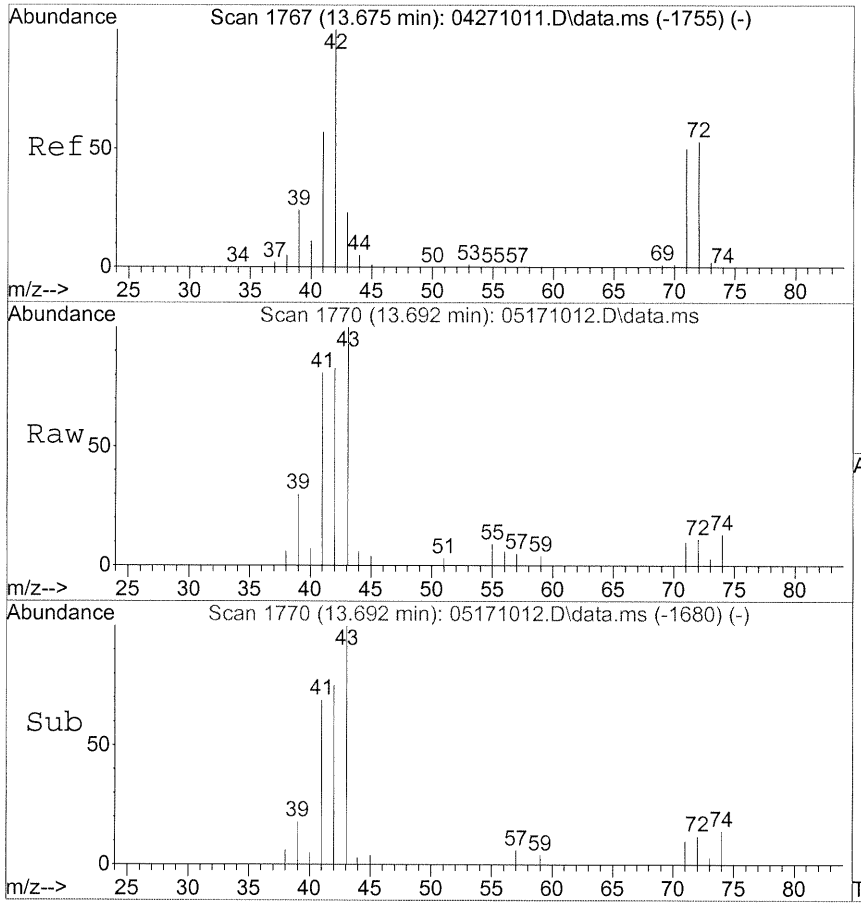




#32
Chloroform
Concen: 2.31 ng
RT: 13.10 min Scan# 1666
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 83 Resp: 94381

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 65.7 | 44.0 | 84.0 |

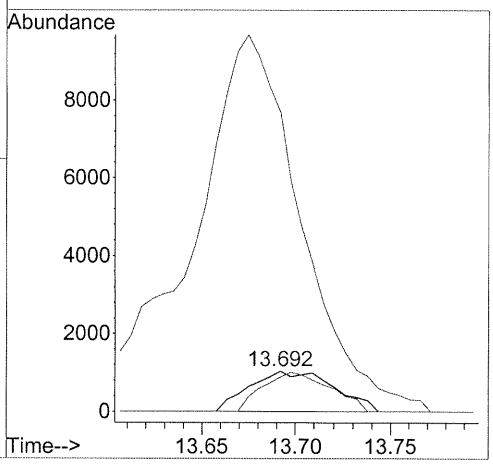


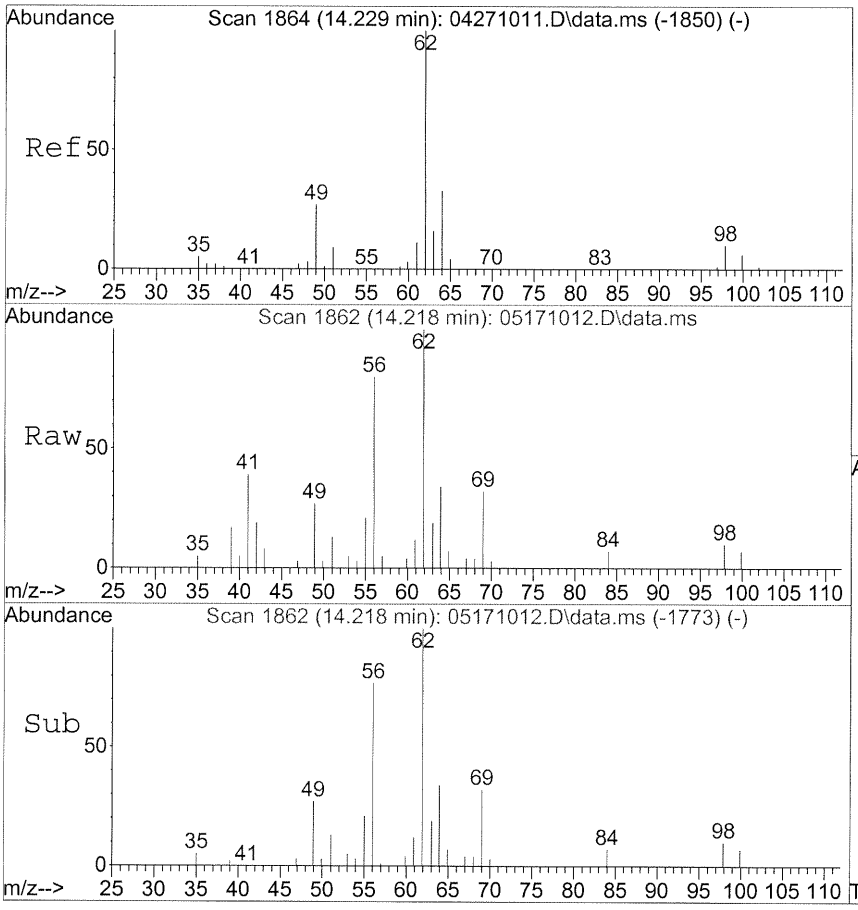



#34
Tetrahydrofuran (THF)
Concen: 0.22 ng
RT: 13.69 min Scan# 1770
Delta R.T. 0.012 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 72 Resp: 3192

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 72 | 100 | | |
| 71 | 78.1 | 76.0 | 116.0 |
| 42 | 0.0 | 231.9 | 271.9# |

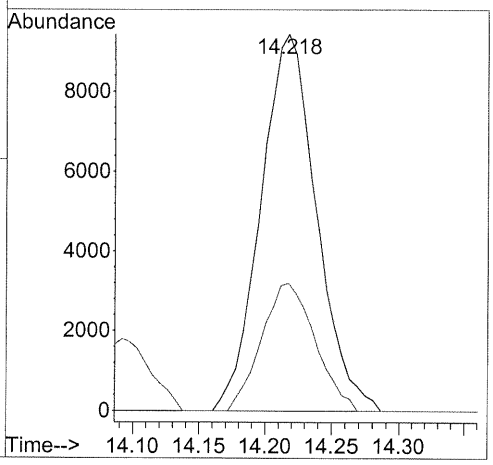


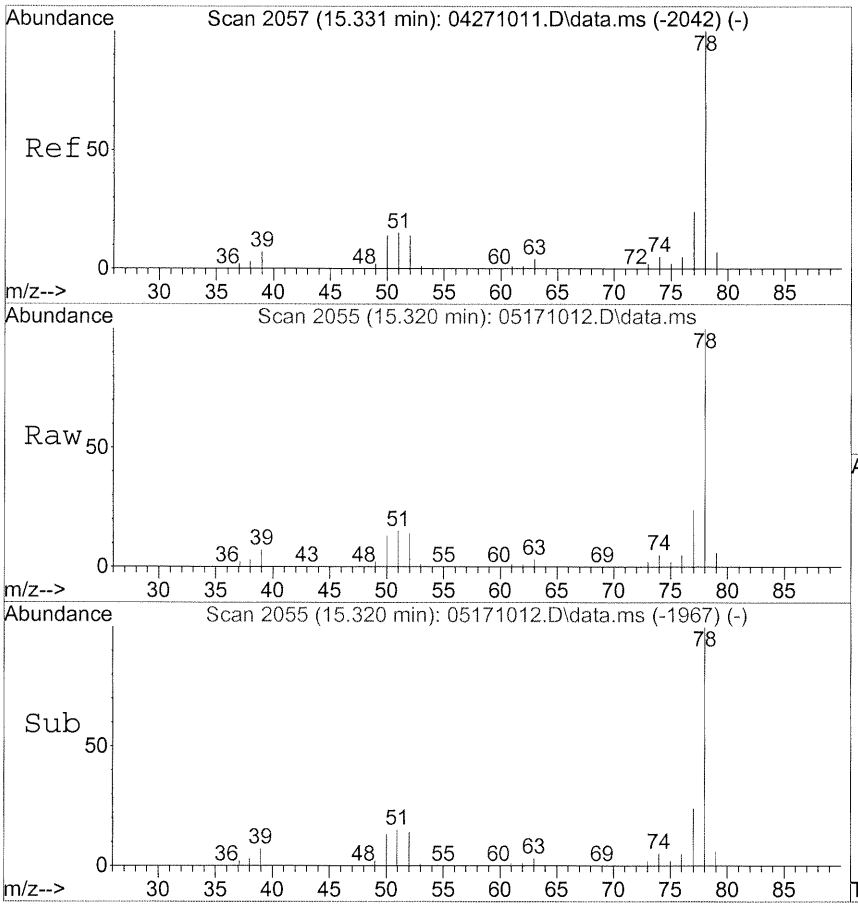




#36
1,2-Dichloroethane
Concen: 0.90 ng
RT: 14.22 min Scan# 1862
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 62 Resp: 27524

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.5 | 12.0 | 52.0 |

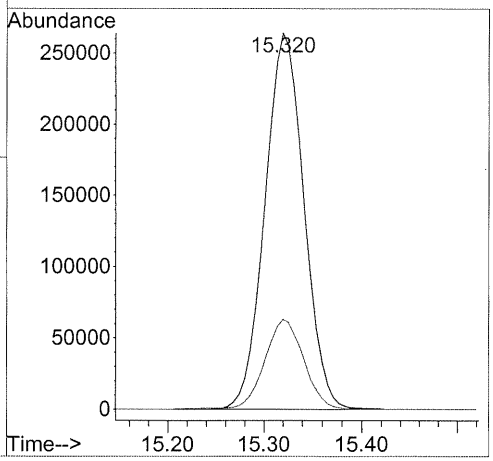


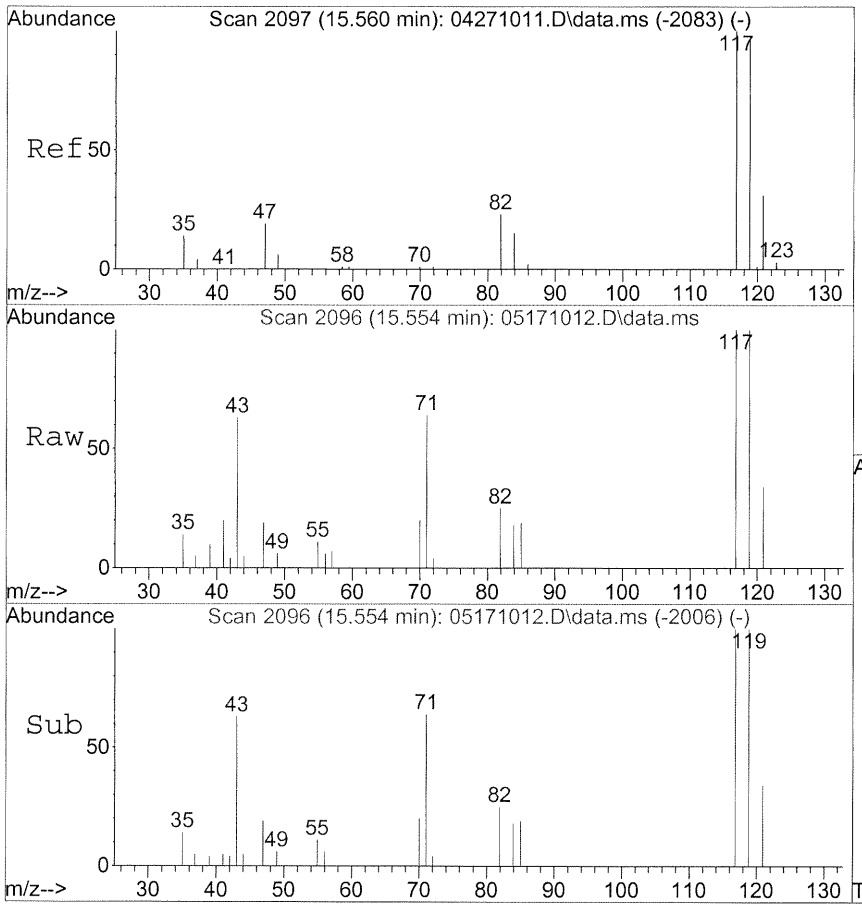



#41
Benzene
Concen: 7.30 ng
RT: 15.32 min Scan# 2055
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 78 Resp: 739839

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 23.7 | 4.4 | 44.4 |

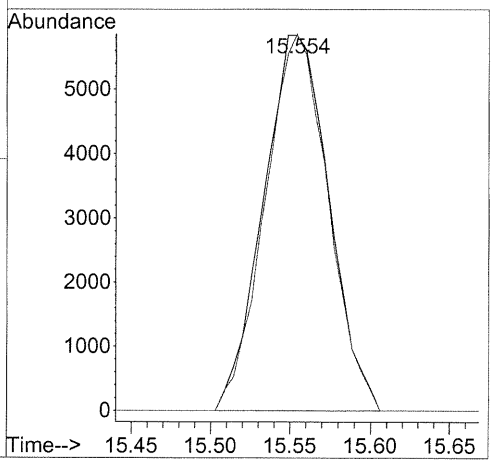


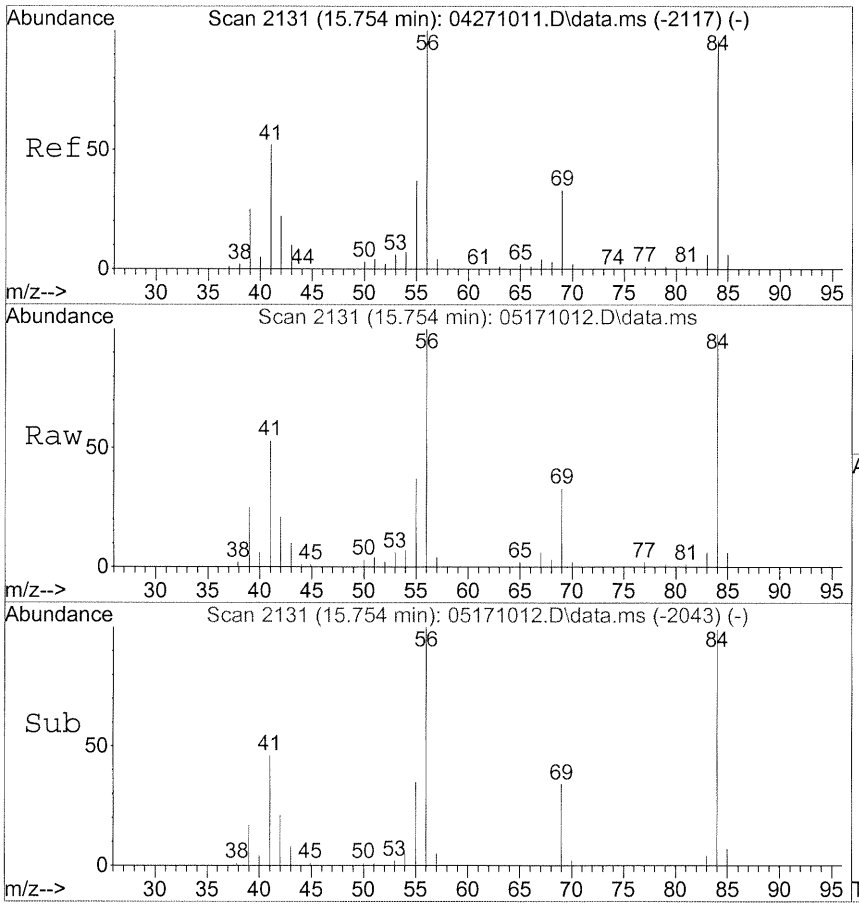




#42
Carbon Tetrachloride
Concen: 0.53 ng
RT: 15.55 min Scan# 2096
Delta R.T. 0.012 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:117 Resp: 16641

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 117 | 100 | | |
| 119 | 96.1 | 75.8 | 115.8 |

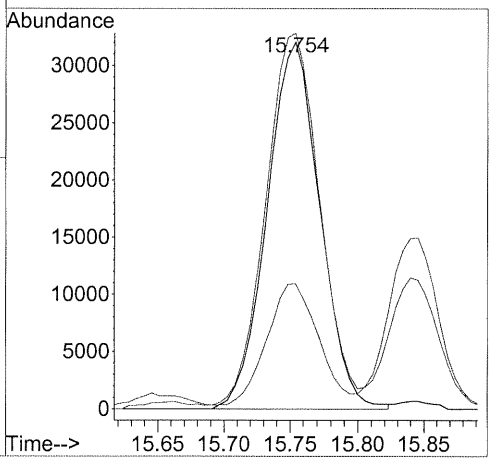


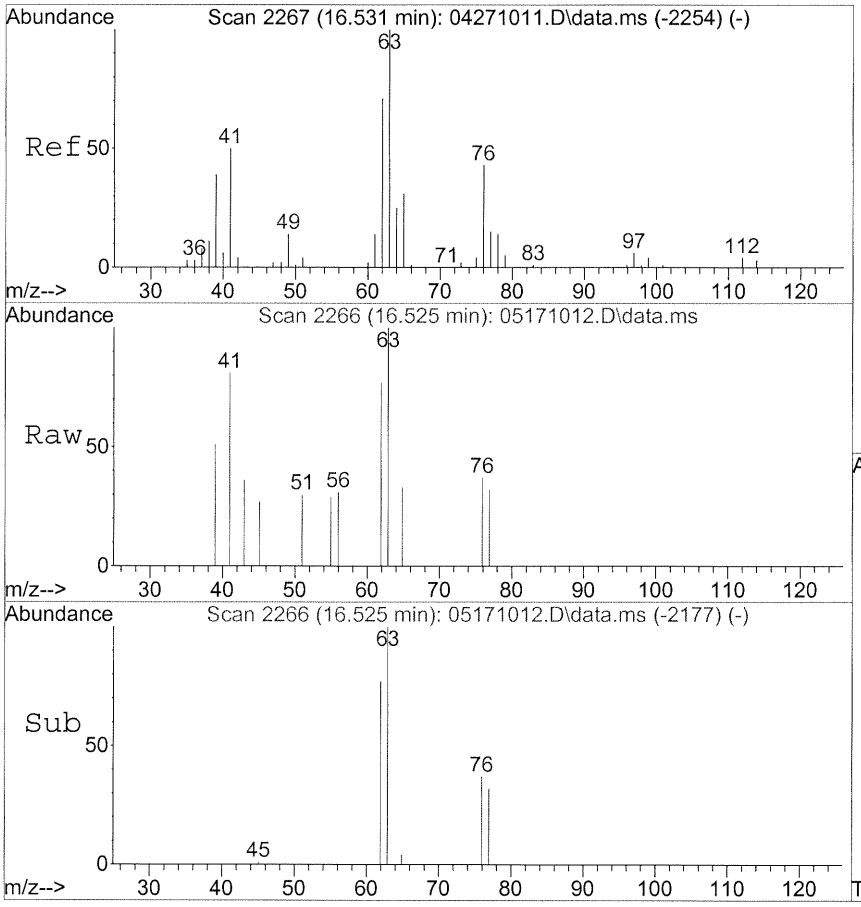



#43
Cyclohexane
Concen: 2.33 ng
RT: 15.75 min Scan# 2131
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 84 Resp: 87739

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 84 | 100 | | |
| 69 | 34.8 | 18.4 | 58.4 |
| 56 | 105.5 | 112.6 | 152.6# |

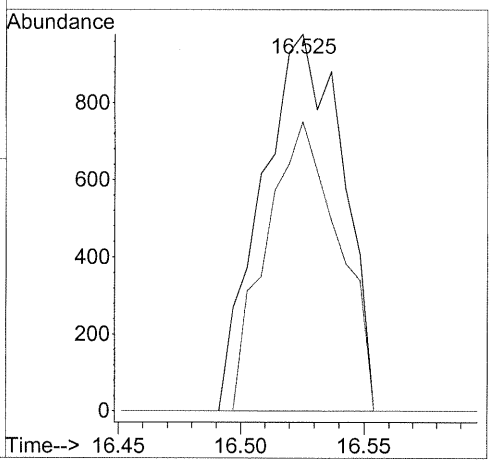


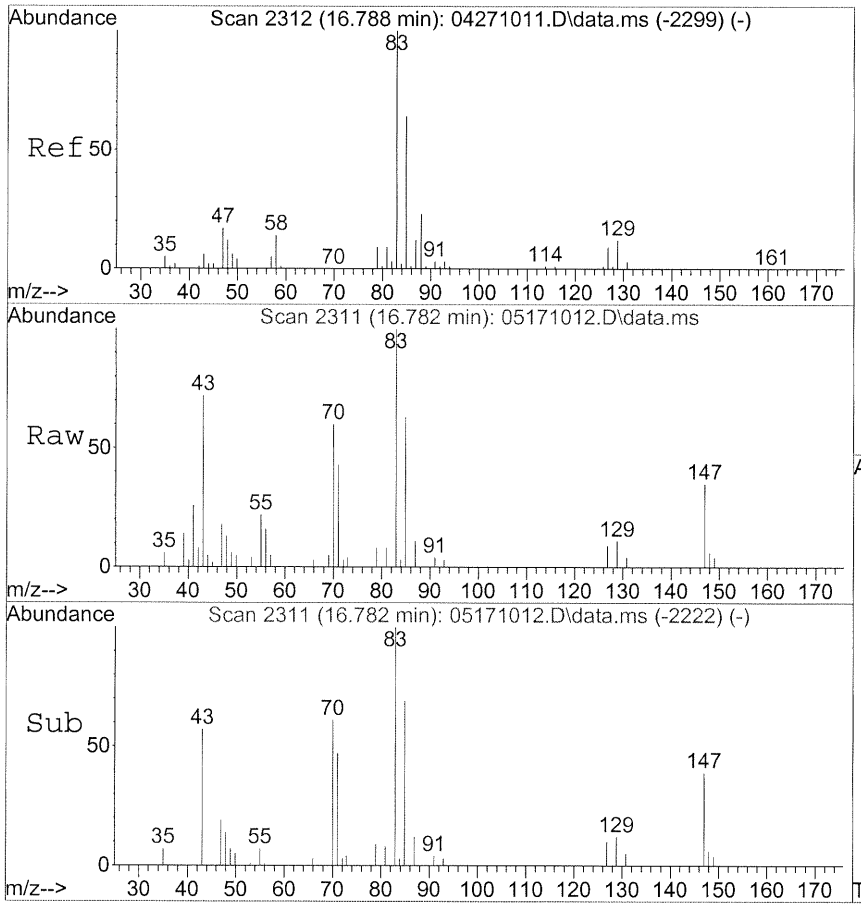




#45
1,2-Dichloropropane
Concen: 0.10 ng
RT: 16.53 min Scan# 2266
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 63 Resp: 2221

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 62 | 68.9 | 52.0 | 92.0 |

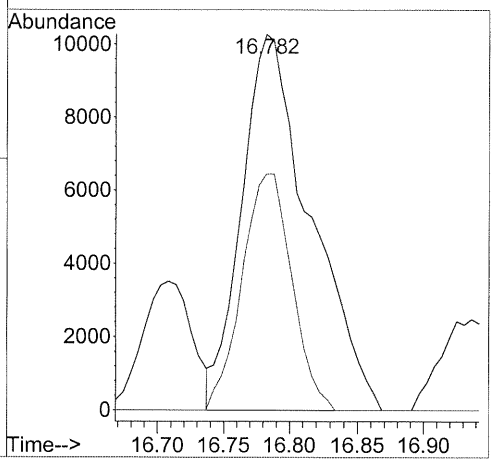


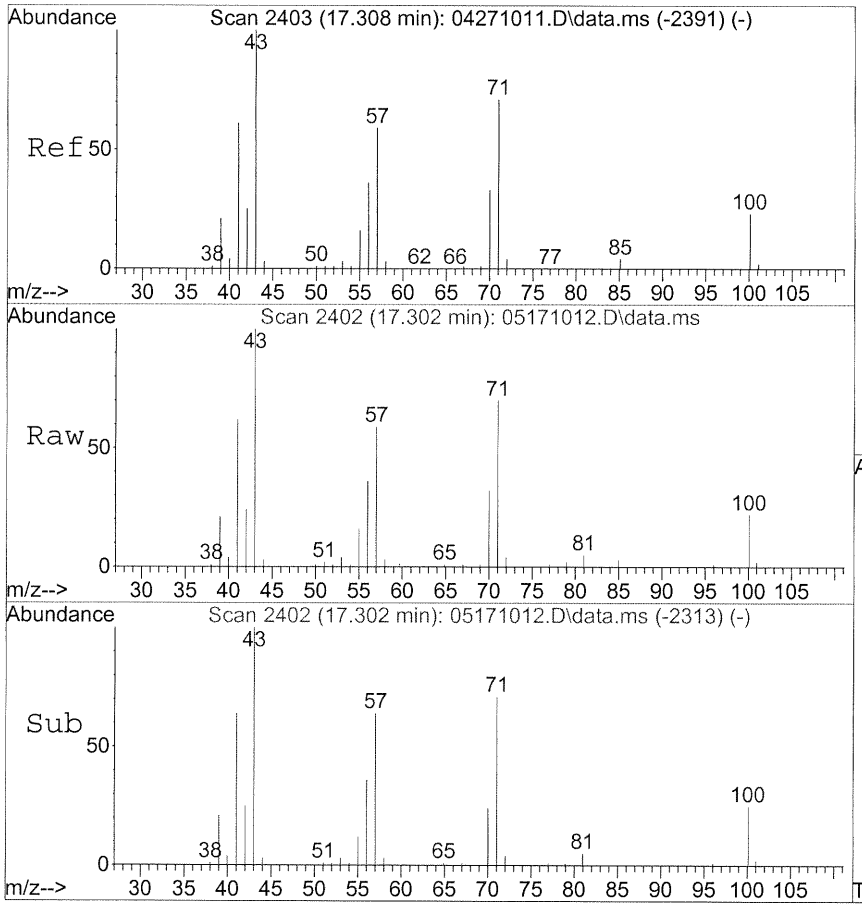



#46
Bromodichloromethane
Concen: 1.21 ng
RT: 16.78 min Scan# 2311
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 83 Resp: 36807

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 85 | 45.9 | 42.8 | 82.8 |

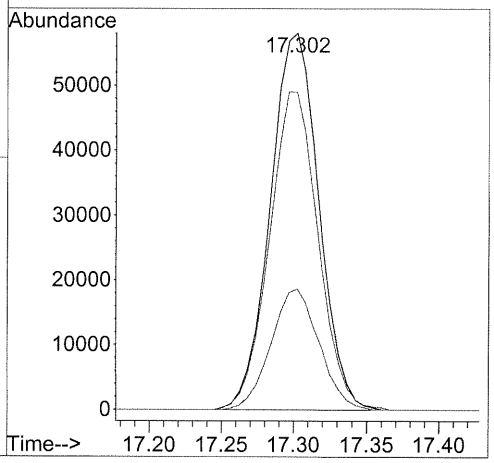


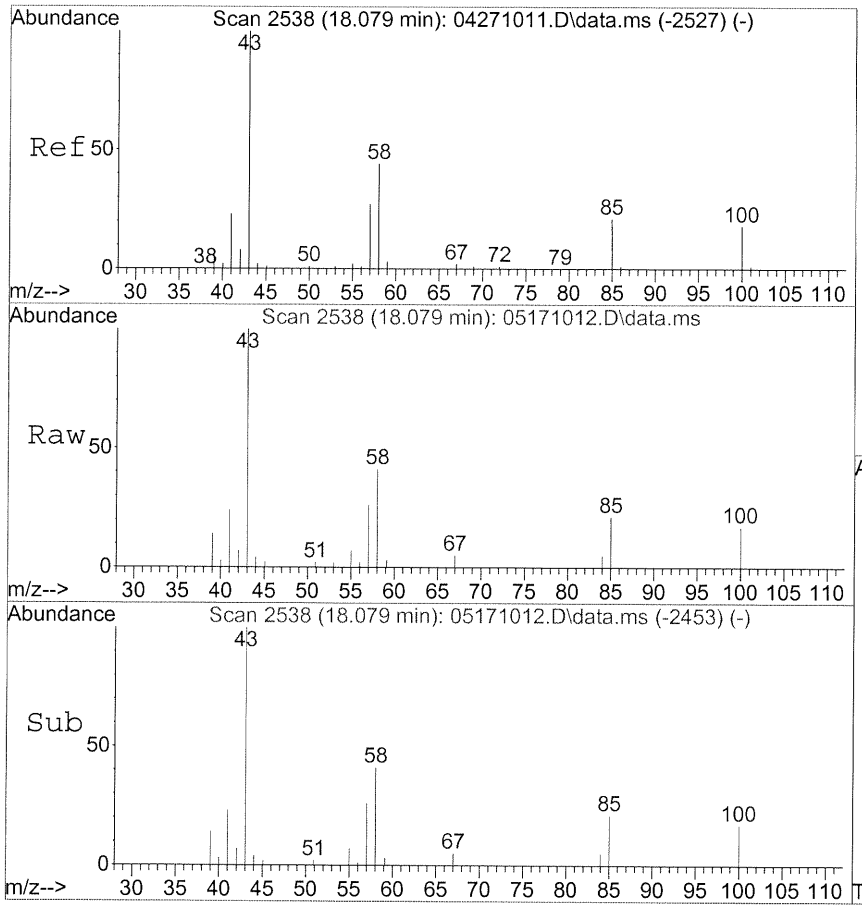




#51
n-Heptane
Concen: 5.62 ng
RT: 17.30 min Scan# 2402
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 71 Resp: 135396

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 71 | 100 | | |
| 57 | 84.4 | 74.9 | 114.9 |
| 100 | 31.7 | 5.0 | 45.0 |

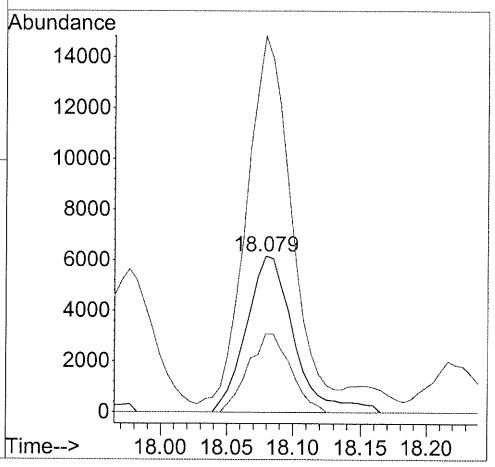


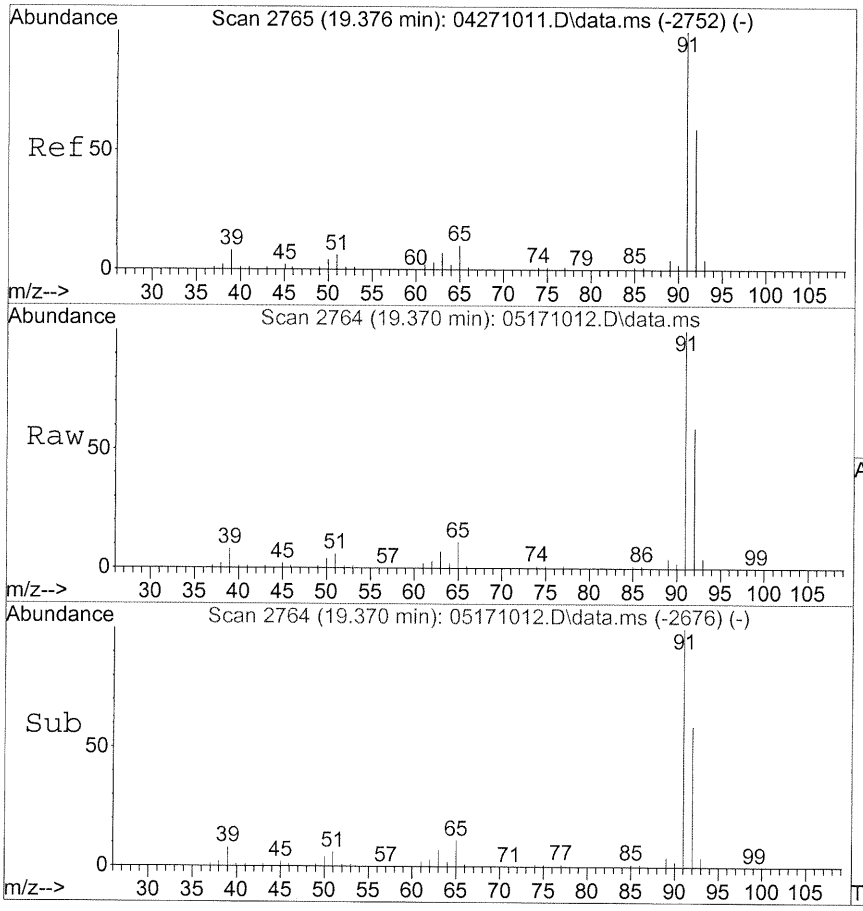



#53
4-Methyl-2-pentanone
Concen: 0.80 ng
RT: 18.08 min Scan# 2538
Delta R.T. -0.017 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 58 Resp: 15386

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 247.0 | 207.1 | 310.7 |
| 85 | 44.5 | 31.4 | 47.2 |

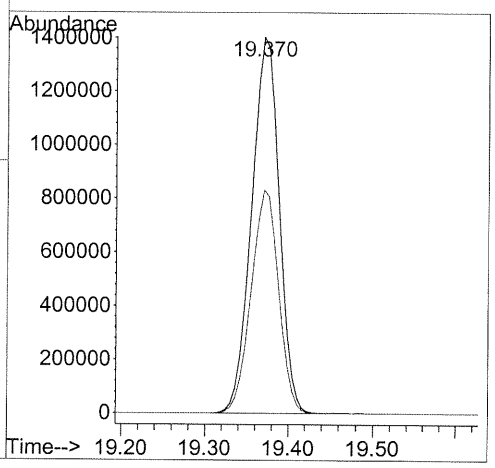


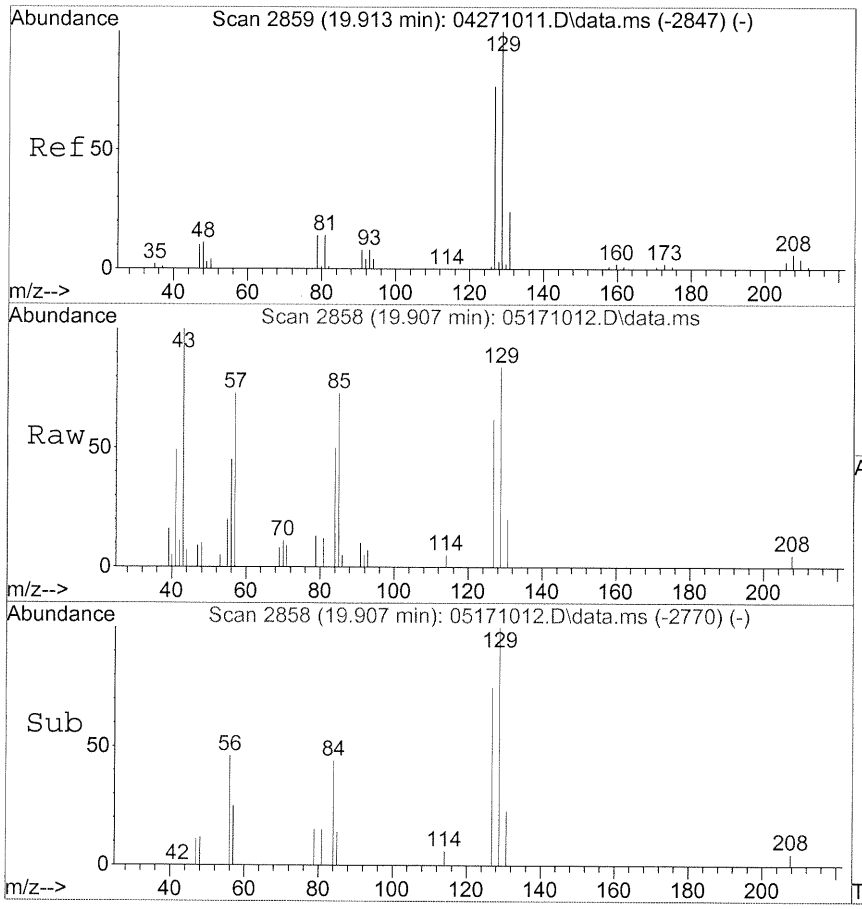




#58
Toluene
Concen: 30.15 ng
RT: 19.37 min Scan# 2764
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 91 Resp: 3224486

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 92 | 59.1 | 37.6 | 77.6 |

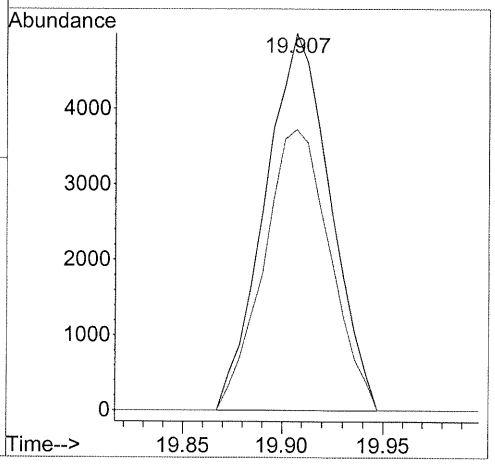


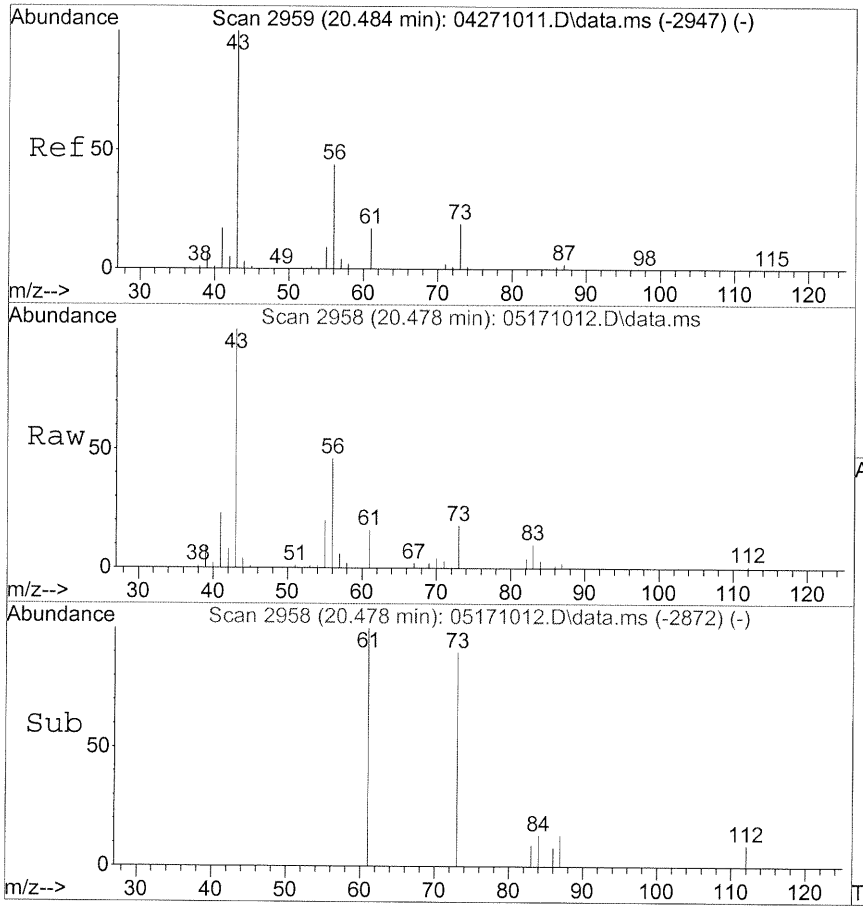



#60
Dibromochloromethane
Concen: 0.44 ng
RT: 19.91 min Scan# 2858
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:129 Resp: 11308

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 129 | 100 | | |
| 127 | 75.4 | 57.2 | 97.2 |

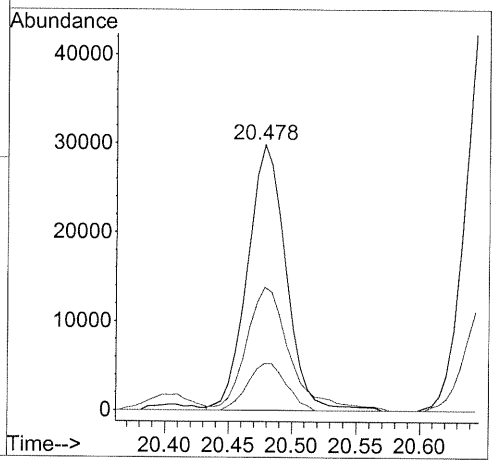


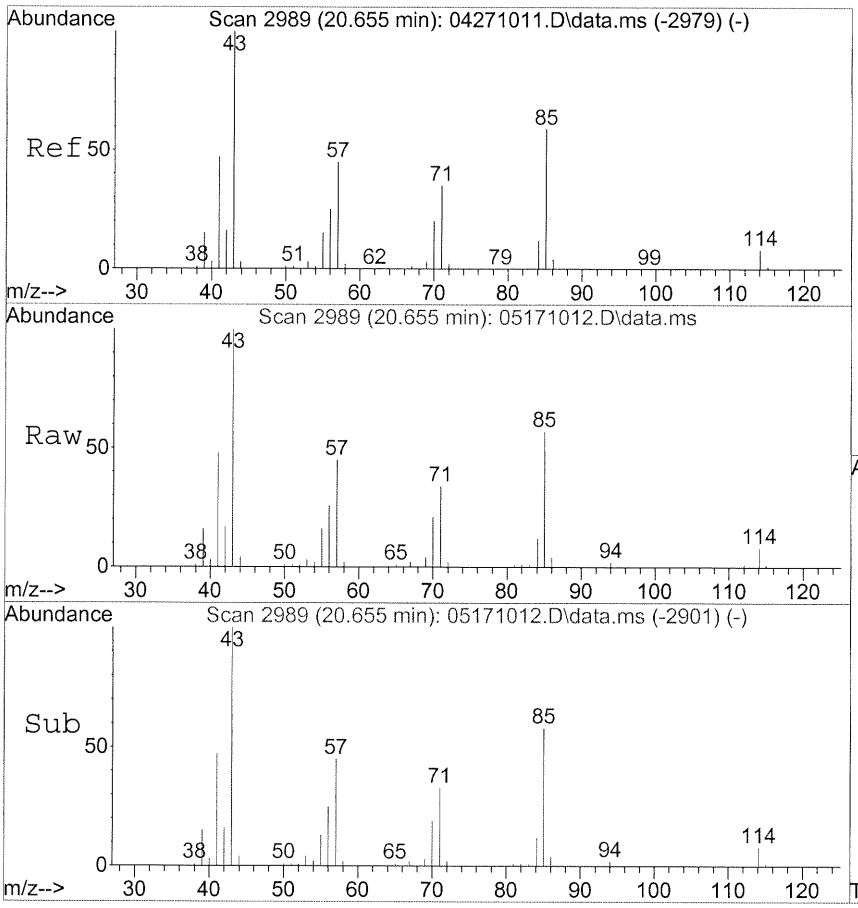




#62
n-Butyl Acetate
Concen: 1.22 ng
RT: 20.48 min Scan# 2958
Delta R.T. -0.011 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 43 Resp: 63102

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 56 | 52.1 | 19.7 | 59.7 |
| 73 | 17.6 | 0.0 | 34.2 |

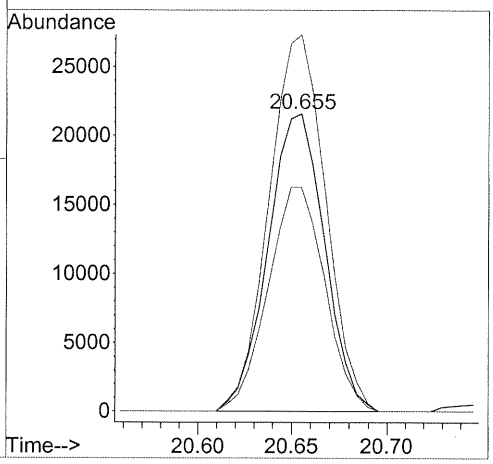


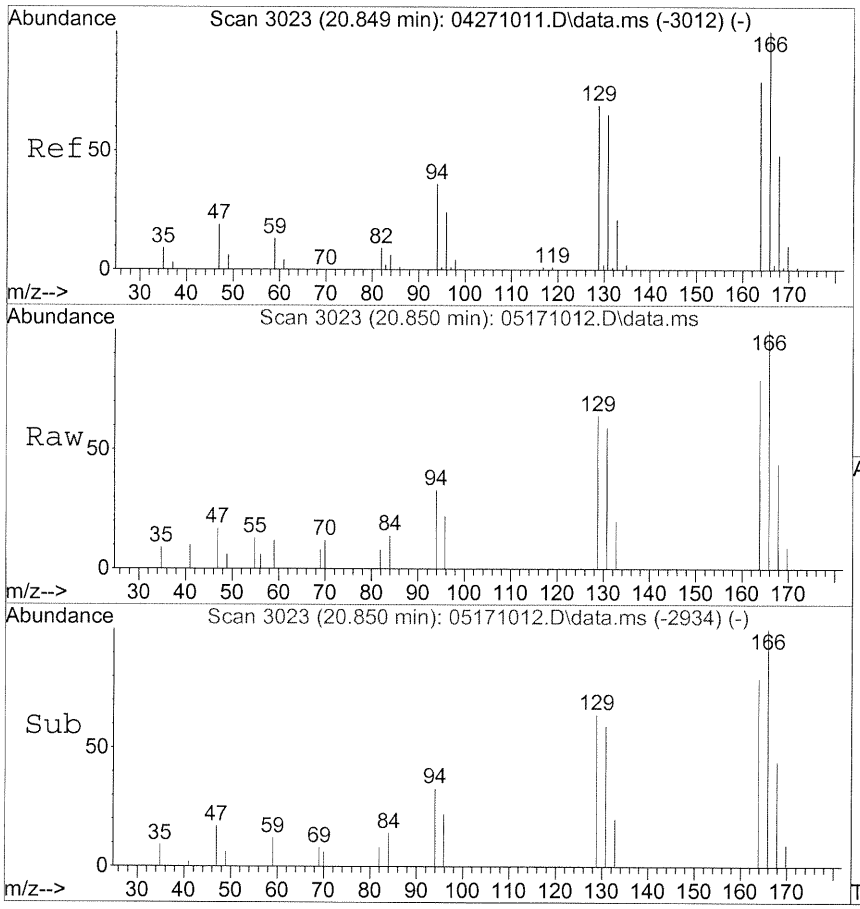



#63
n-Octane
Concen: 2.33 ng
RT: 20.66 min Scan# 2989
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 57 Resp: 44801

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 57 | 100 | | |
| 85 | 126.6 | 81.8 | 122.8# |
| 71 | 75.8 | 55.0 | 82.6 |

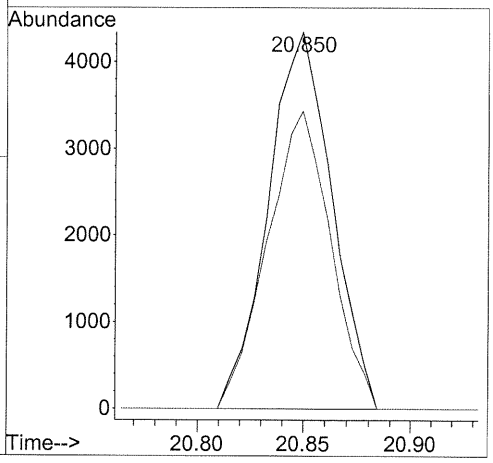


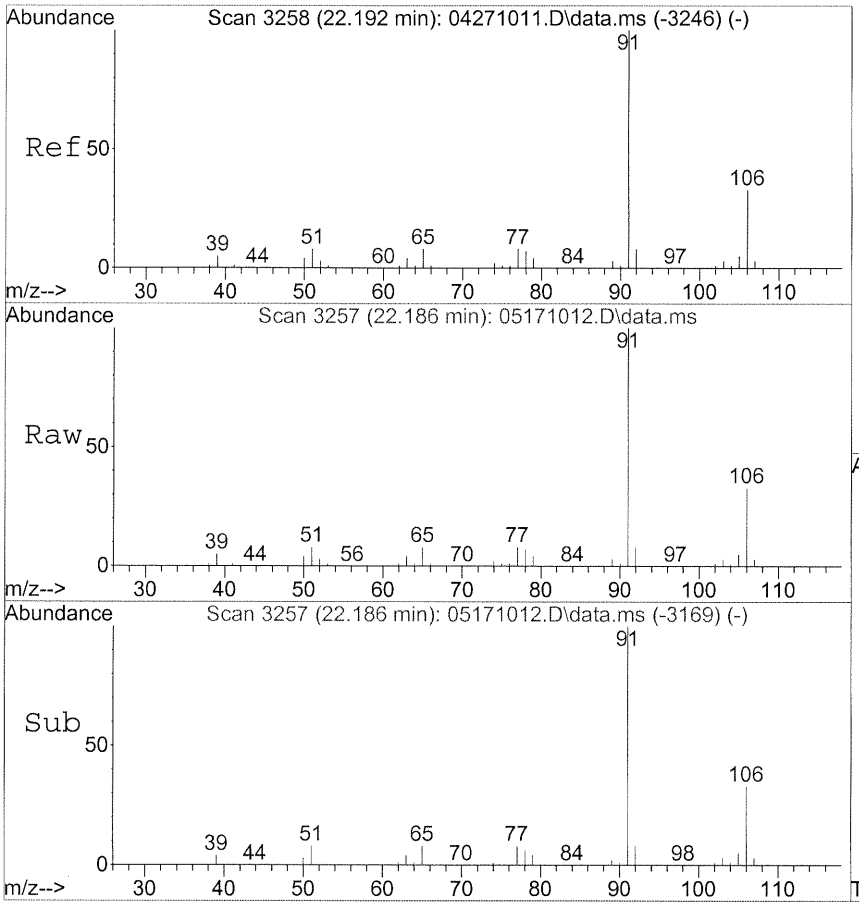




#64
Tetrachloroethene
Concen: 0.27 ng
RT: 20.85 min Scan# 3023
Delta R.T. 0.006 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:166 Resp: 8966

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 164 | 78.9 | 58.4 | 98.4 |

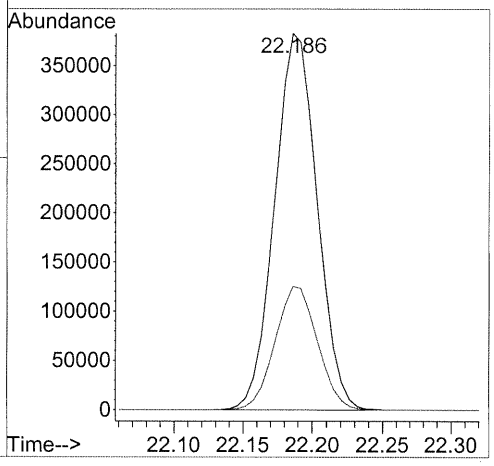


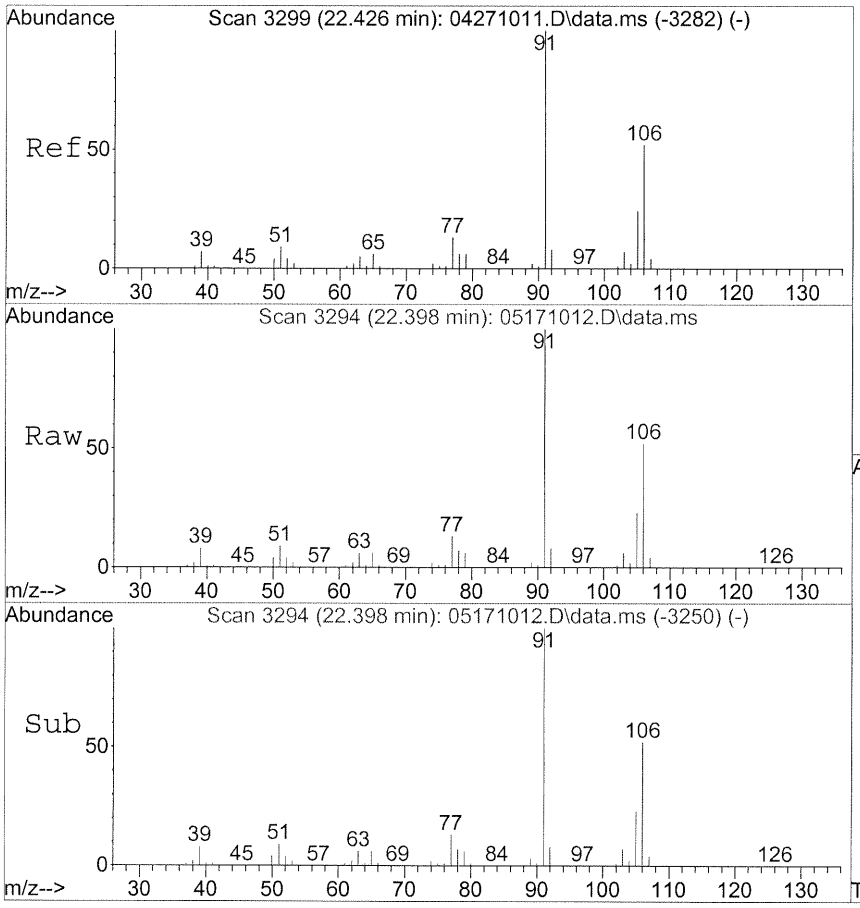



#66
Ethylbenzene
Concen: 6.90 ng
RT: 22.19 min Scan# 3257
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 91 Resp: 808355

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 32.5 | 9.8 | 49.8 |

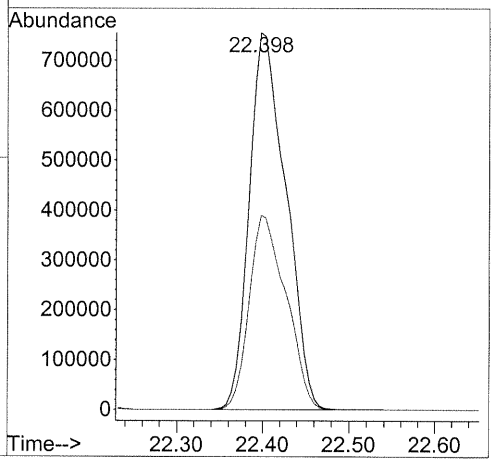


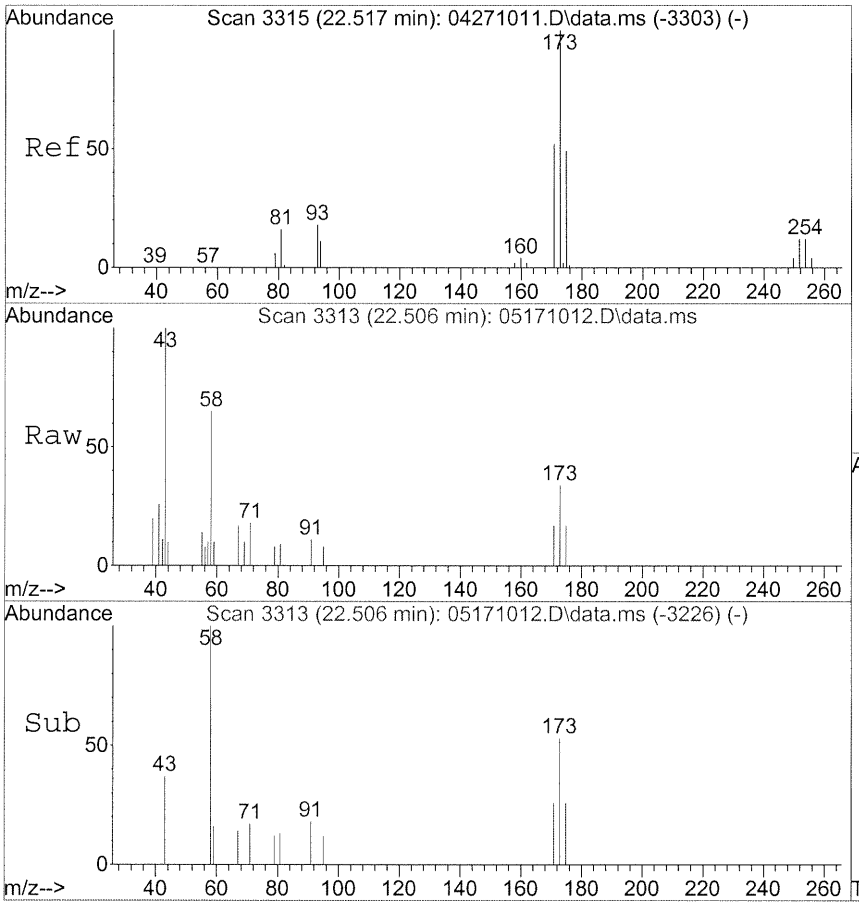




#67
m- & p-Xylenes
Concen: 24.32 ng
RT: 22.40 min Scan# 3294
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 91 Resp: 2252464

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 51.7 | 26.8 | 66.8 |

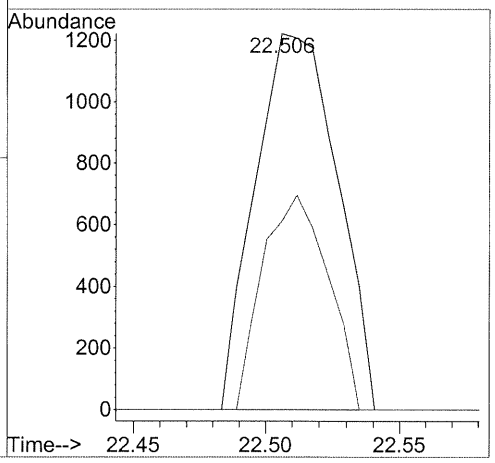


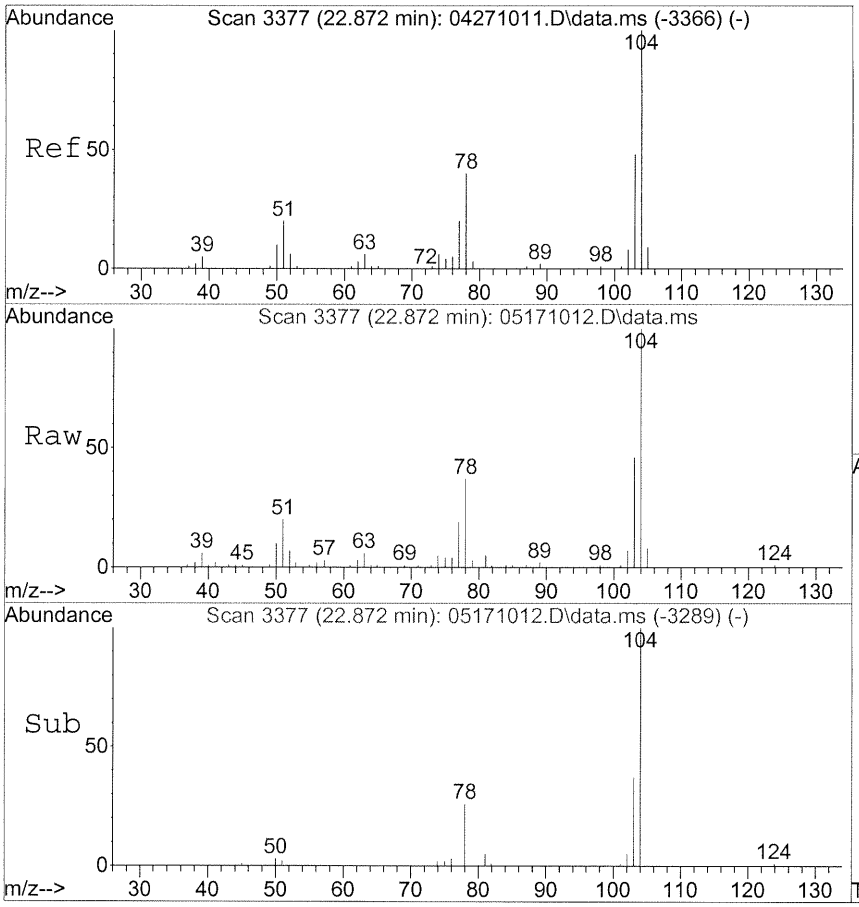



#68
Bromoform
Concen: 0.11 ng
RT: 22.51 min Scan# 3313
Delta R.T. -0.005 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:173 Resp: 2591

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 173 | 100 | | |
| 175 | 45.6 | 28.5 | 68.5 |

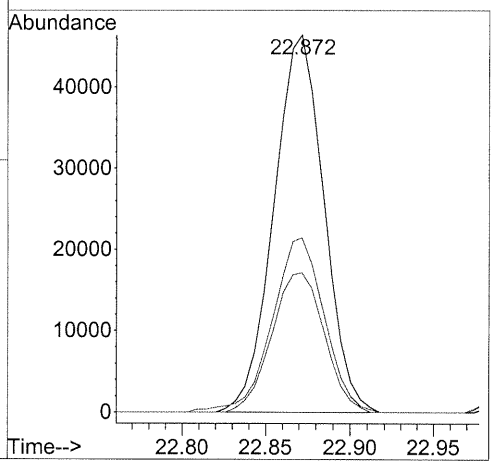


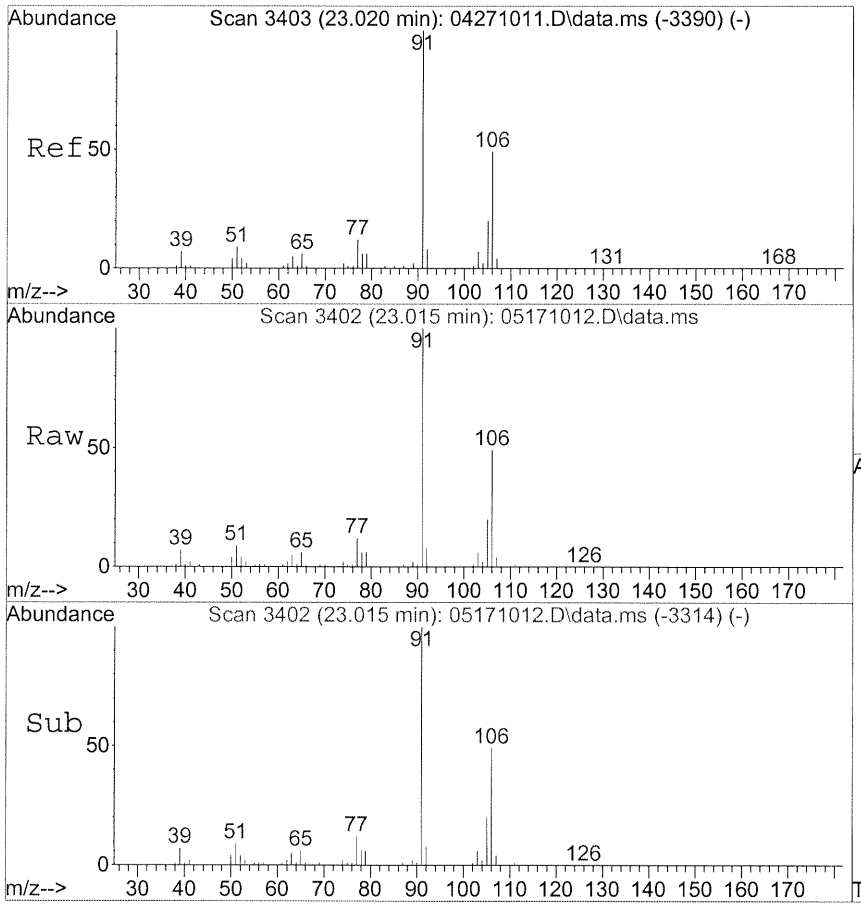




#69
Styrene
Concen: 1.31 ng
RT: 22.87 min Scan# 3377
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:104 Resp: 95672

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 104 | 100 | | |
| 78 | 38.6 | 26.1 | 66.1 |
| 103 | 47.9 | 28.7 | 68.7 |

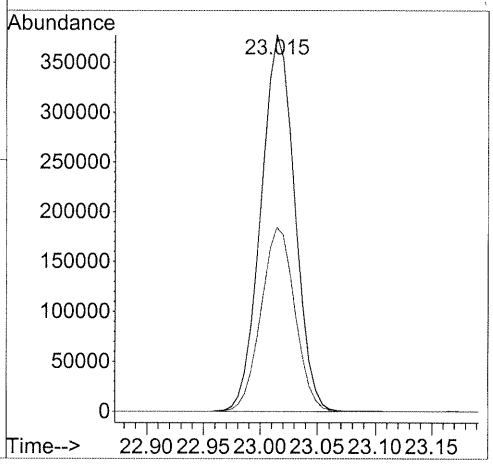


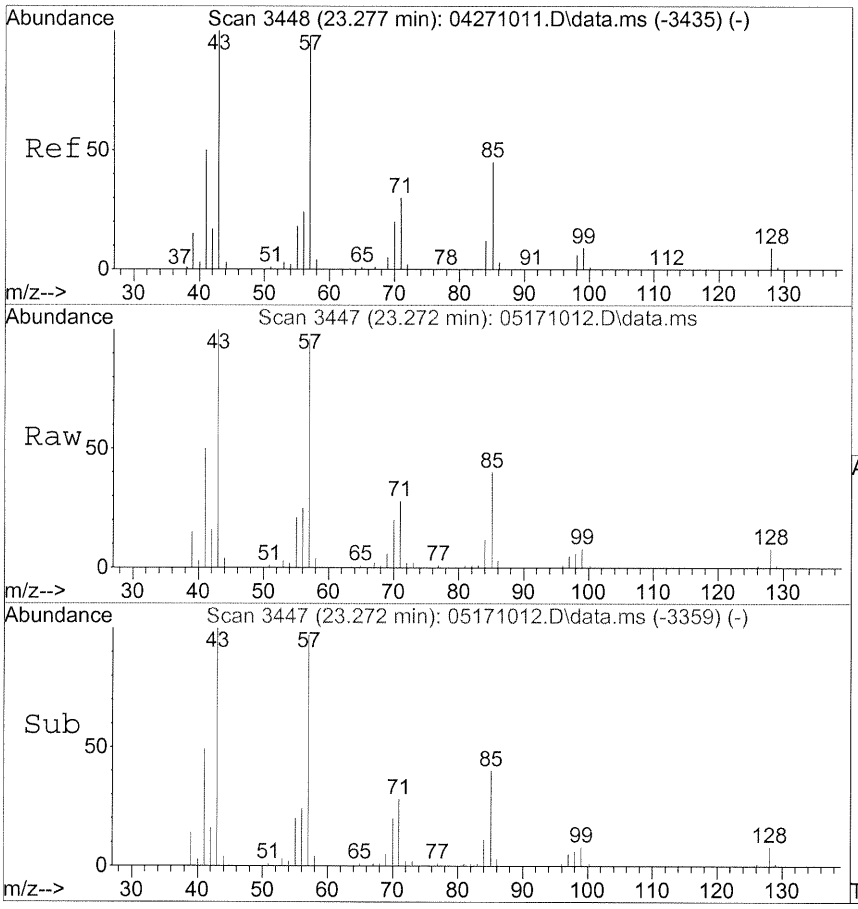



#70
o-Xylene
Concen: 8.28 ng
RT: 23.01 min Scan# 3402
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 91 Resp: 782054

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 106 | 49.0 | 24.4 | 64.4 |

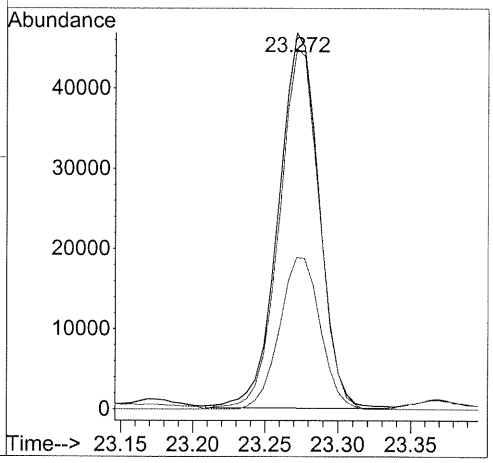


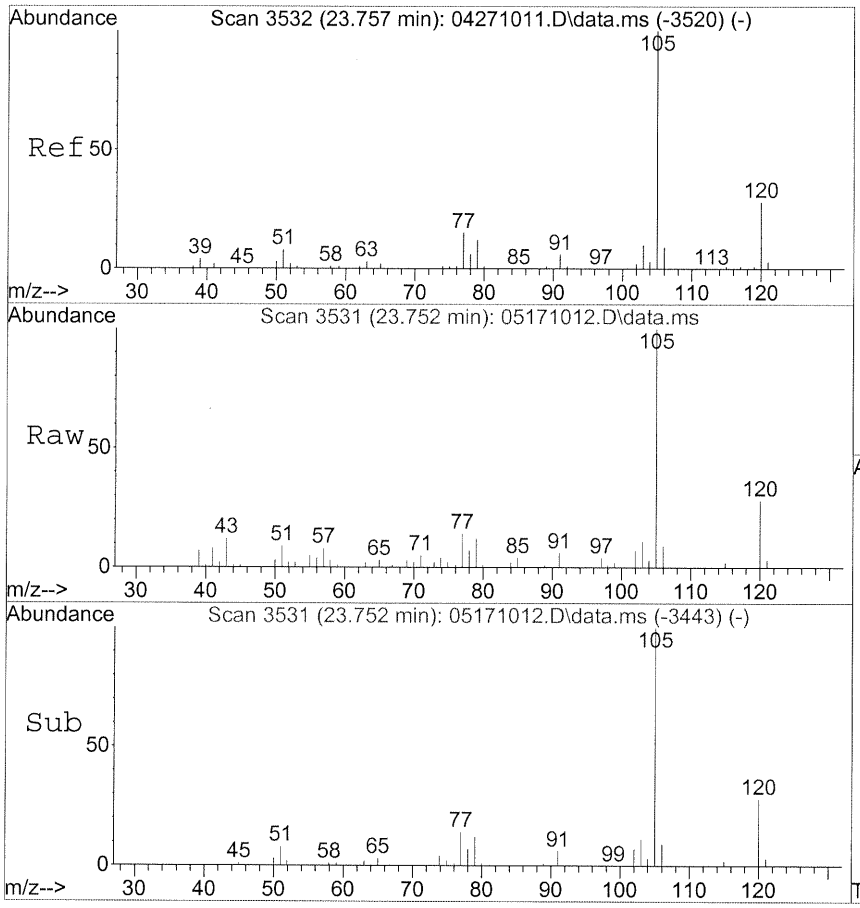




#71
n-Nonane
Concen: 2.21 ng
RT: 23.27 min Scan# 3447
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 43 Resp: 91077

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 43 | 100 | | |
| 57 | 93.7 | 65.6 | 105.6 |
| 85 | 40.2 | 9.9 | 49.9 |

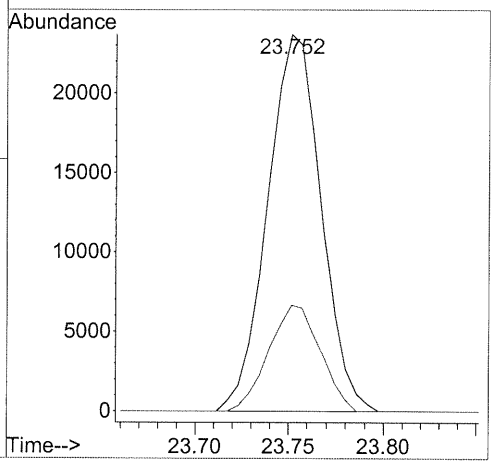


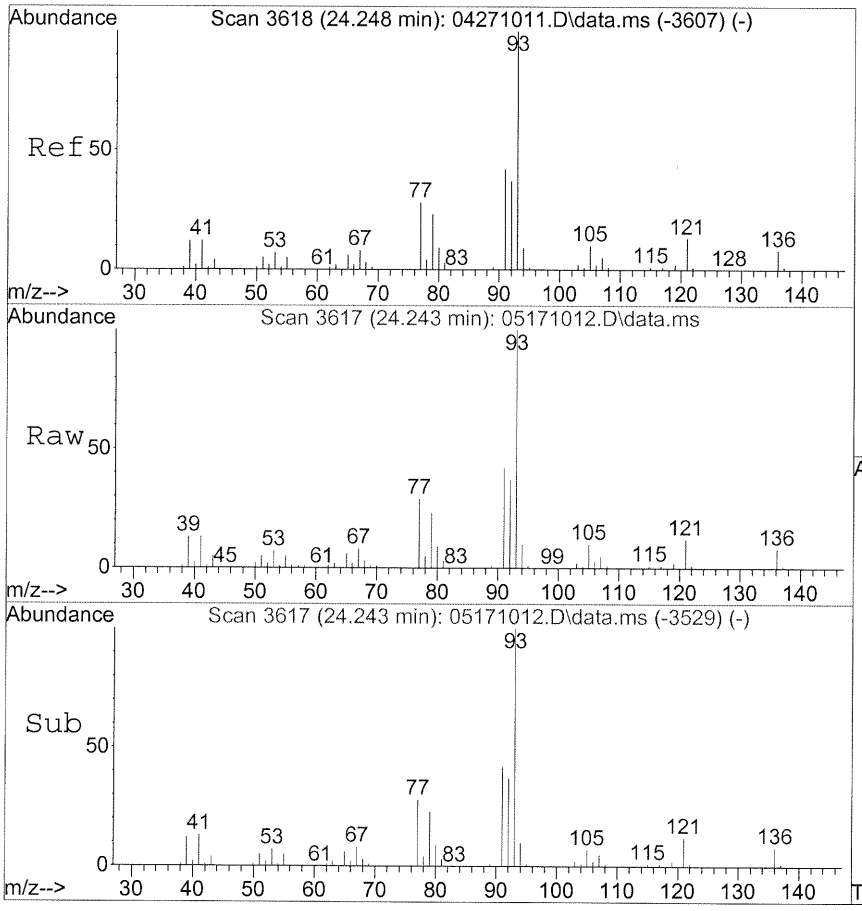



#74
Cumene
Concen: 0.36 ng
RT: 23.75 min Scan# 3531
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:105 Resp: 46721

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.1 | 5.2 | 45.2 |

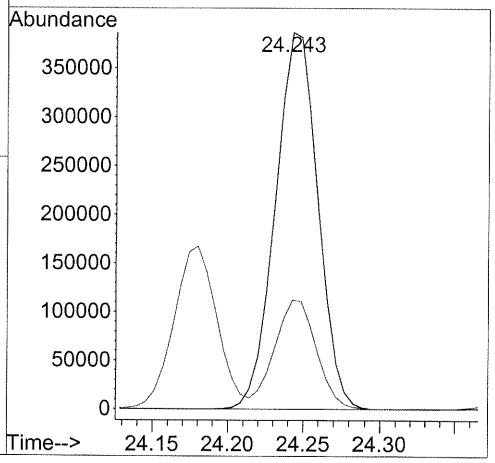


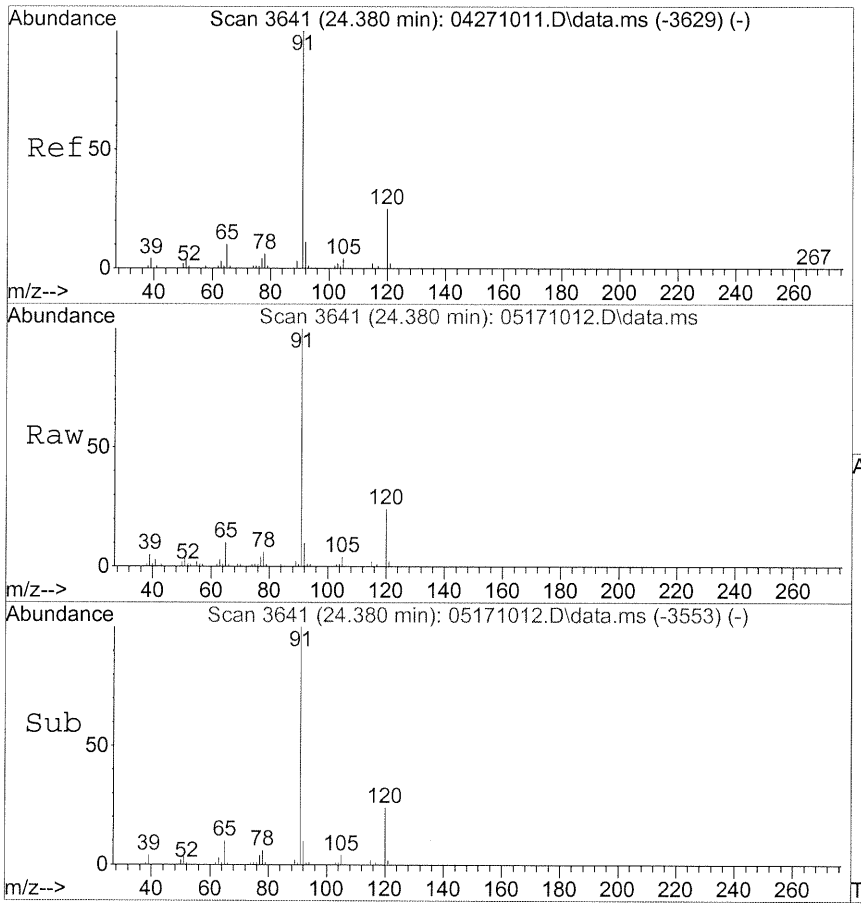




#75
alpha-Pinene
Concen: 12.61 ng
RT: 24.24 min Scan# 3617
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 93 Resp: 754759

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 93 | 100 | | |
| 77 | 28.5 | 12.3 | 52.3 |

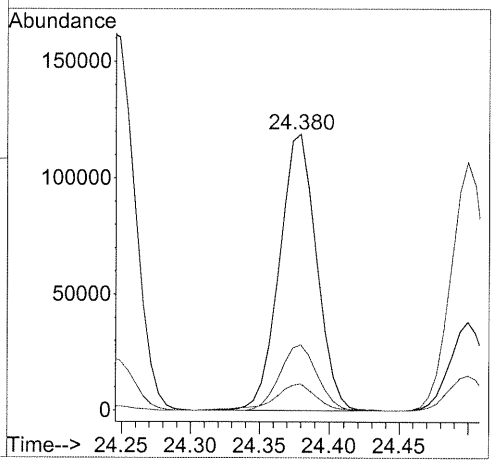


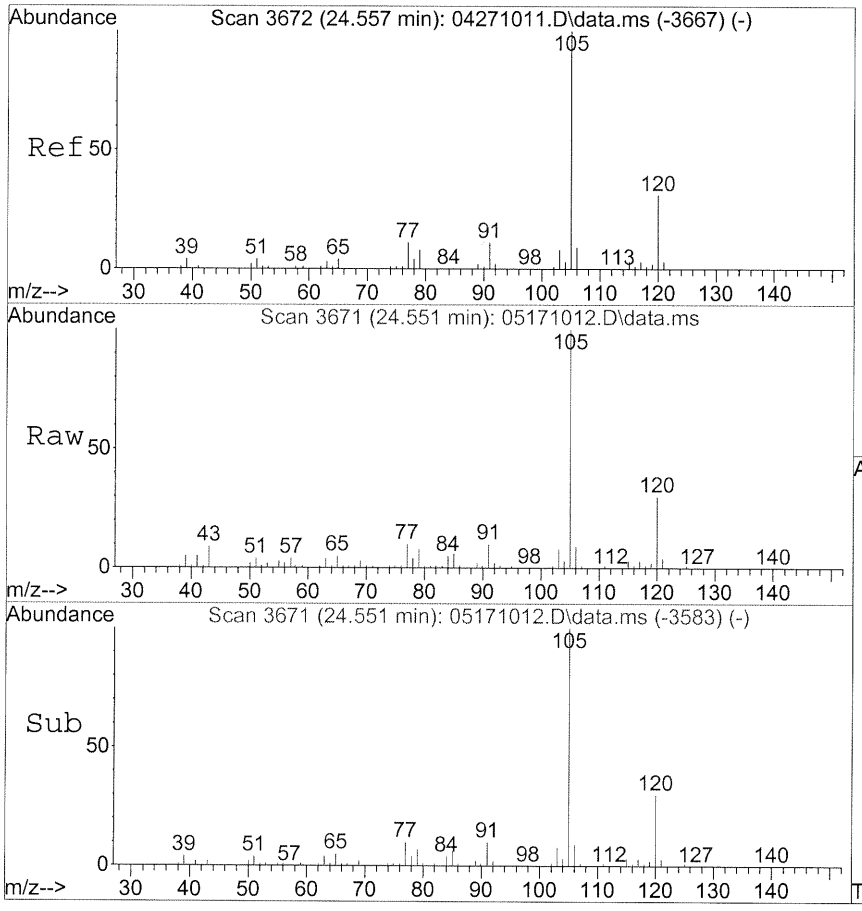



#76
n-Propylbenzene
Concen: 1.47 ng
RT: 24.38 min Scan# 3641
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 91 Resp: 219911

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 91 | 100 | | |
| 120 | 23.6 | 0.9 | 40.9 |
| 65 | 10.7 | 0.0 | 31.2 |

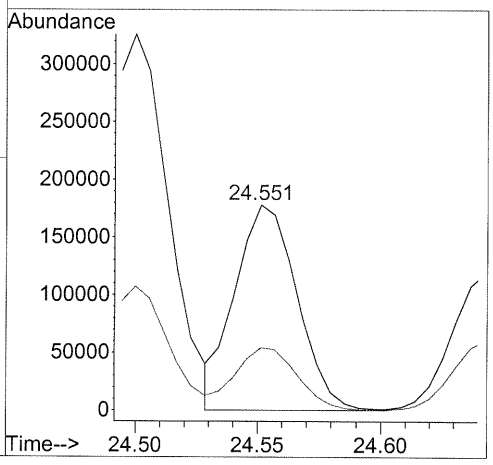


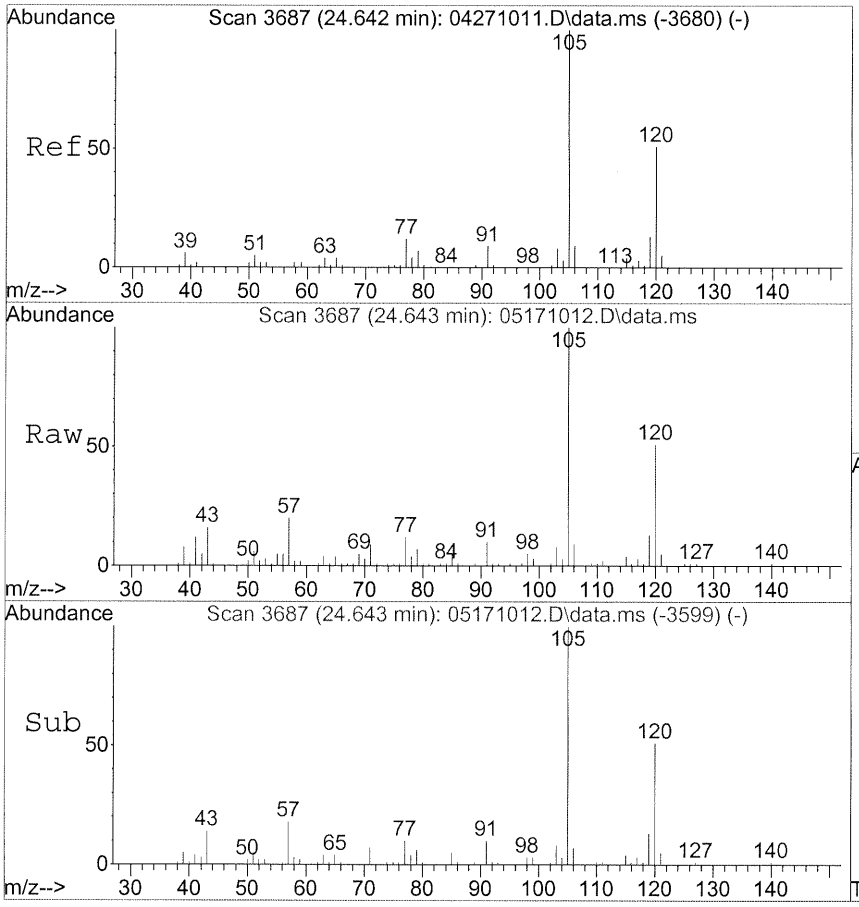




#78
4-Ethyltoluene
Concen: 2.65 ng
RT: 24.55 min Scan# 3671
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:105 Resp: 315197

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 30.3 | 8.2 | 48.2 |

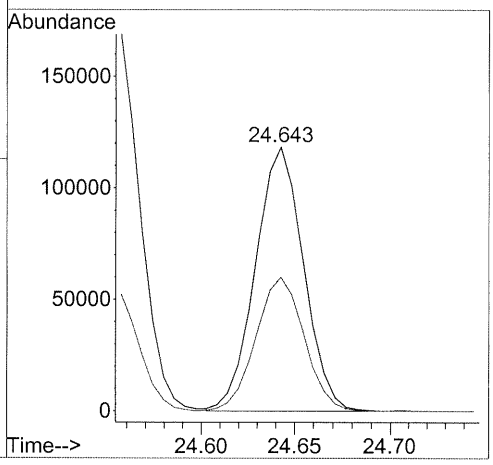


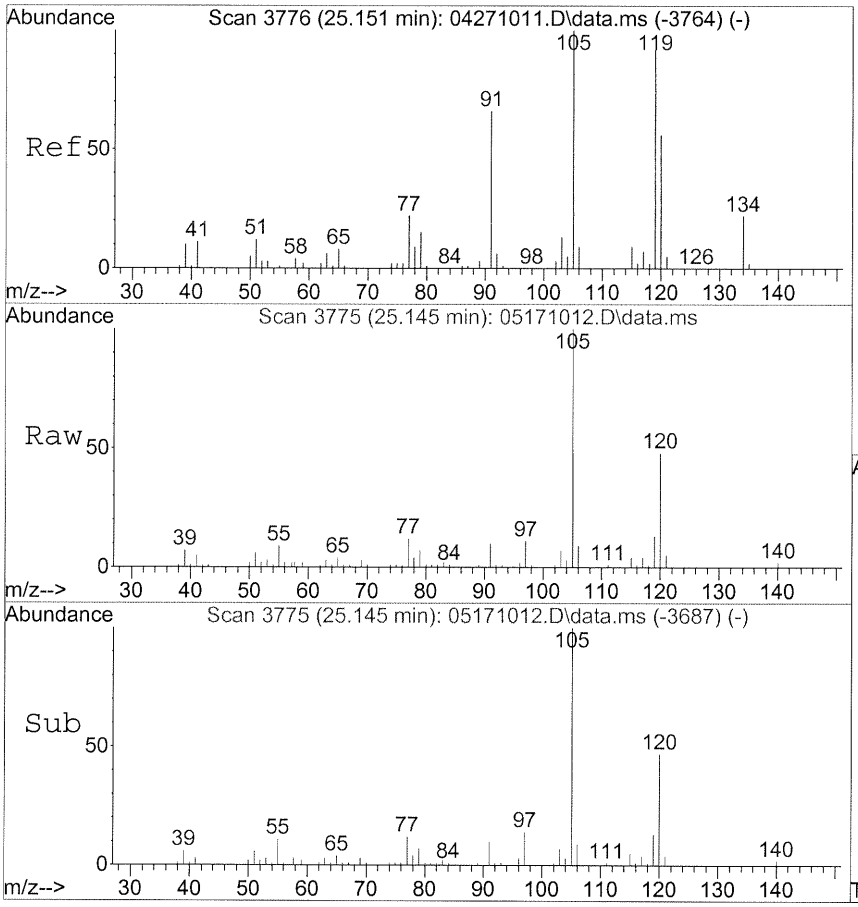



#79
1,3,5-Trimethylbenzene
Concen: 2.17 ng
RT: 24.64 min Scan# 3687
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:105 Resp: 211089

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 50.7 | 26.2 | 66.2 |

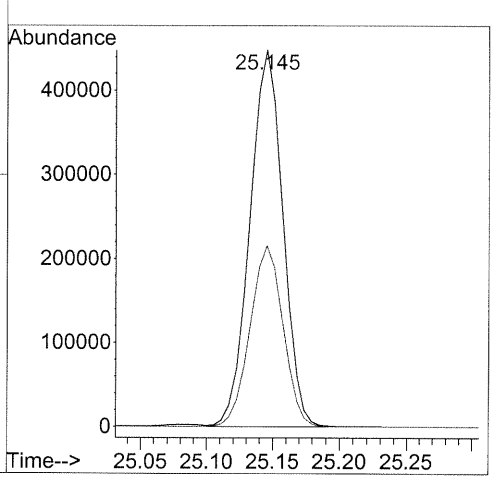


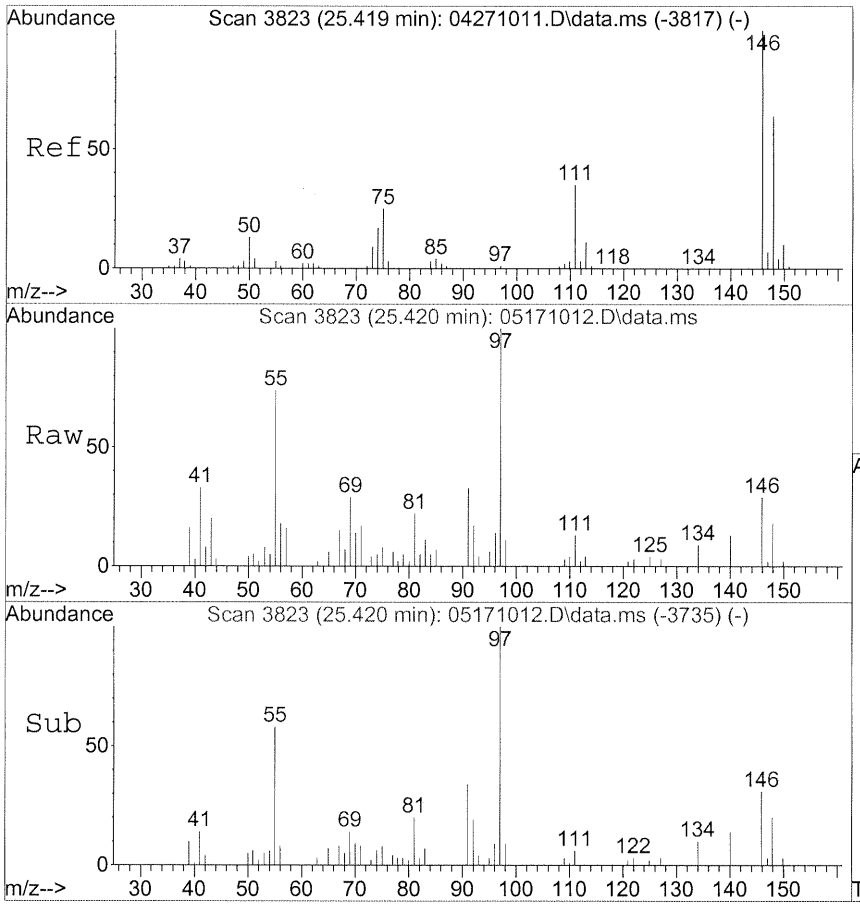




#82
1,2,4-Trimethylbenzene
Concen: 7.75 ng
RT: 25.15 min Scan# 3775
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:105 Resp: 779069

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 48.0 | 30.1 | 70.1 |

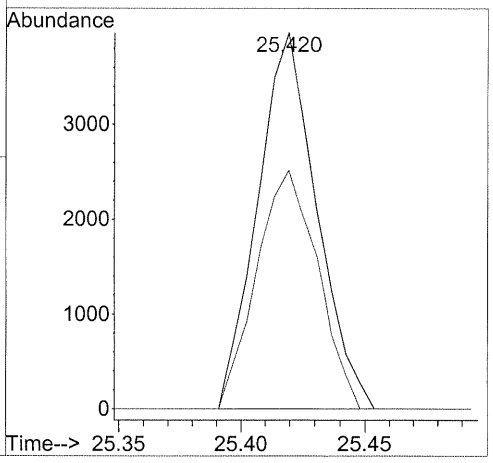


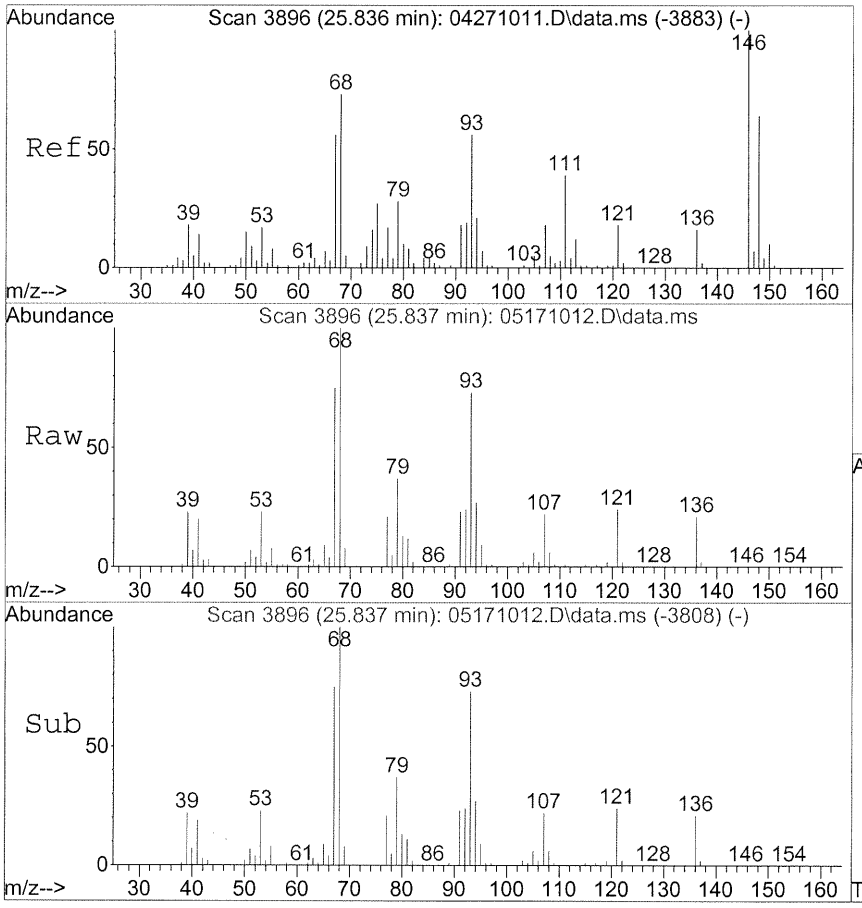



#86
1,4-Dichlorobenzene
Concen: 0.10 ng
RT: 25.42 min Scan# 3823
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:146 Resp: 6598

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 148 | 65.8 | 43.8 | 83.8 |

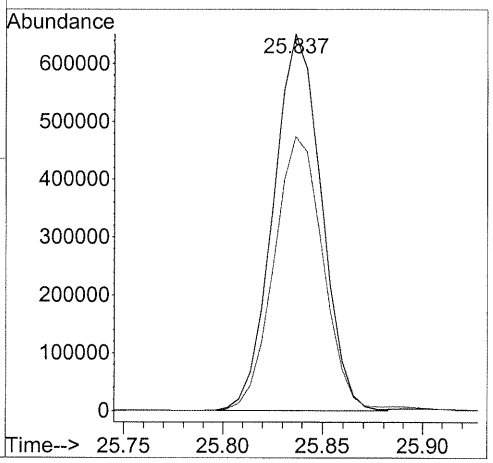


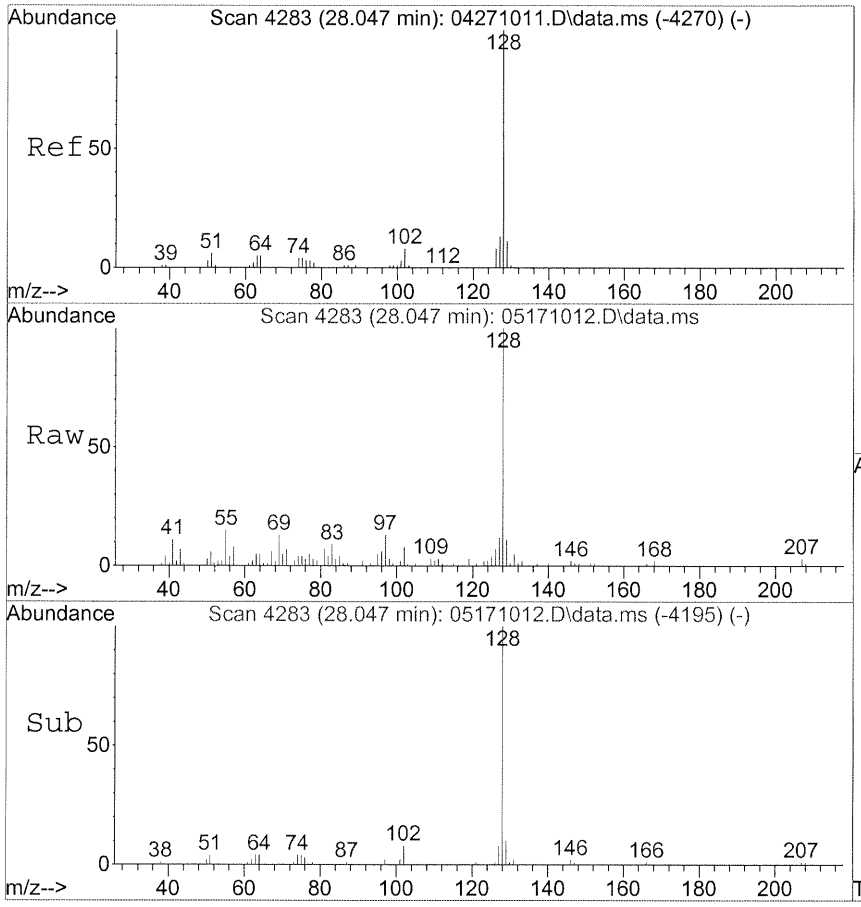




#91
d-Limonene
Concen: 31.10 ng
RT: 25.84 min Scan# 3896
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion: 68 Resp: 1085236

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 68 | 100 | | |
| 93 | 75.2 | 42.0 | 82.0 |

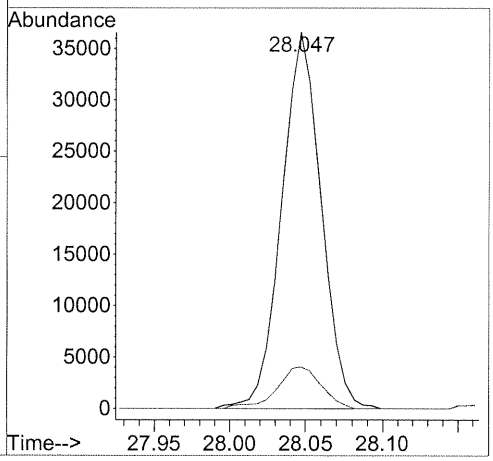





#95
Naphthalene
Concen: 0.51 ng
RT: 28.05 min Scan# 4283
Delta R.T. 0.000 min
Lab File: 05171012.D
Acq: 17 May 2010 19:00

Tgt Ion:128 Resp: 65350

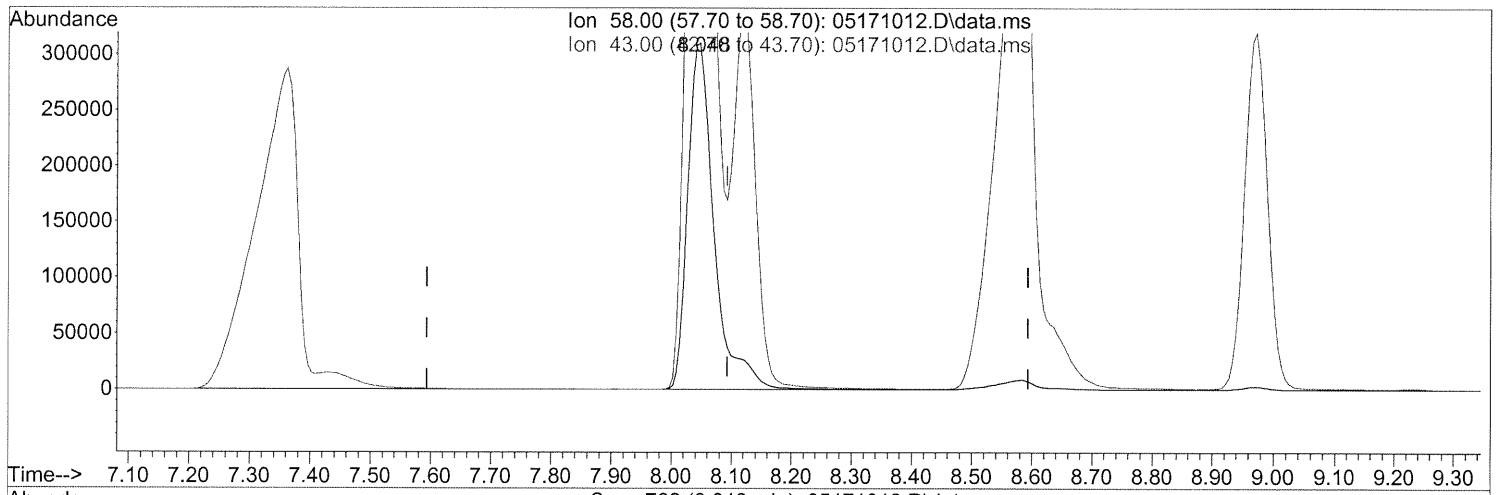
| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 128 | 100 | | |
| 129 | 12.3 | 0.0 | 31.1 |

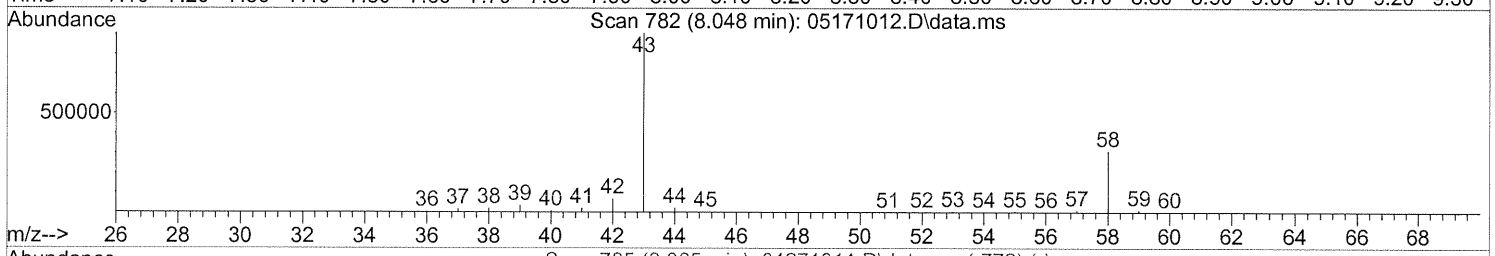


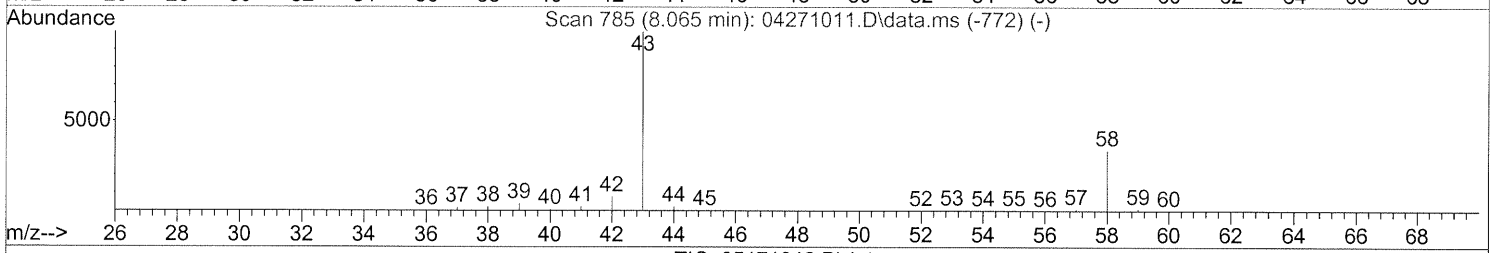
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171012.D\data.ms

(13) Acetone (T)

8.048min (-0.045) 57.42ng

response 948480

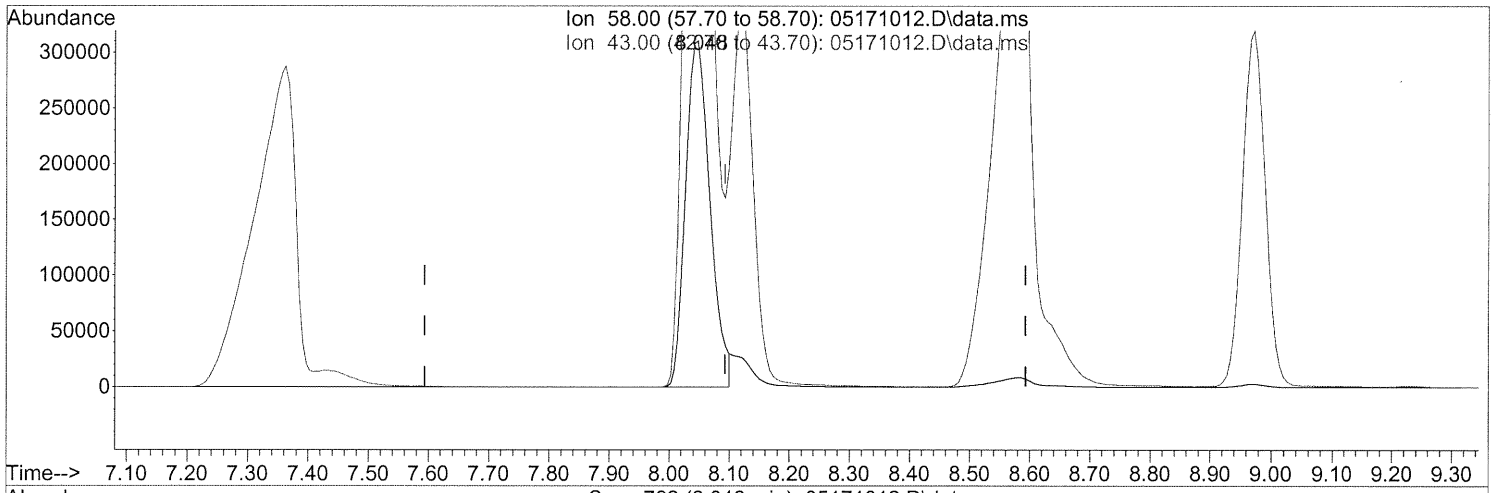
| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 274.98# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

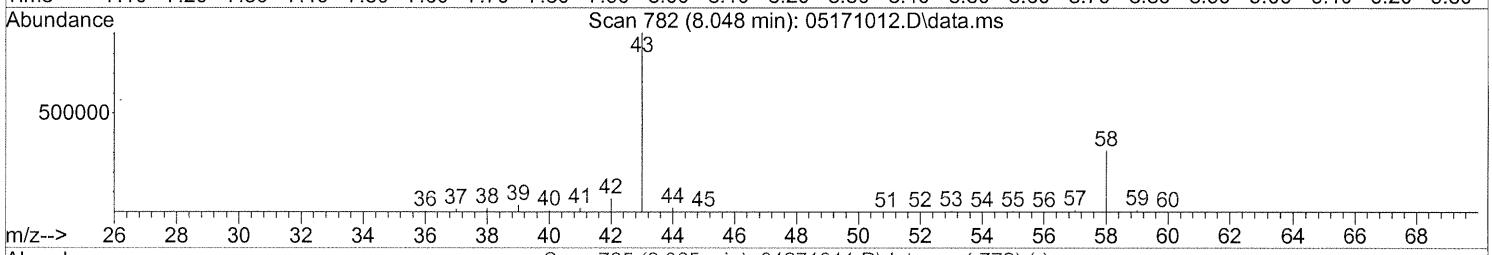
SH

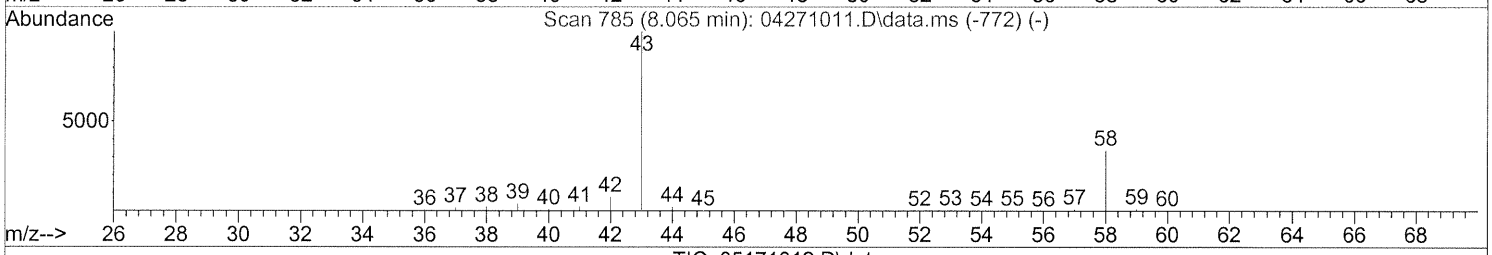
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171012.D\data.ms

(13) Acetone (T)

8.048min (-0.045) 53.05ng m

response 876192

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 297.66 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SH-71C

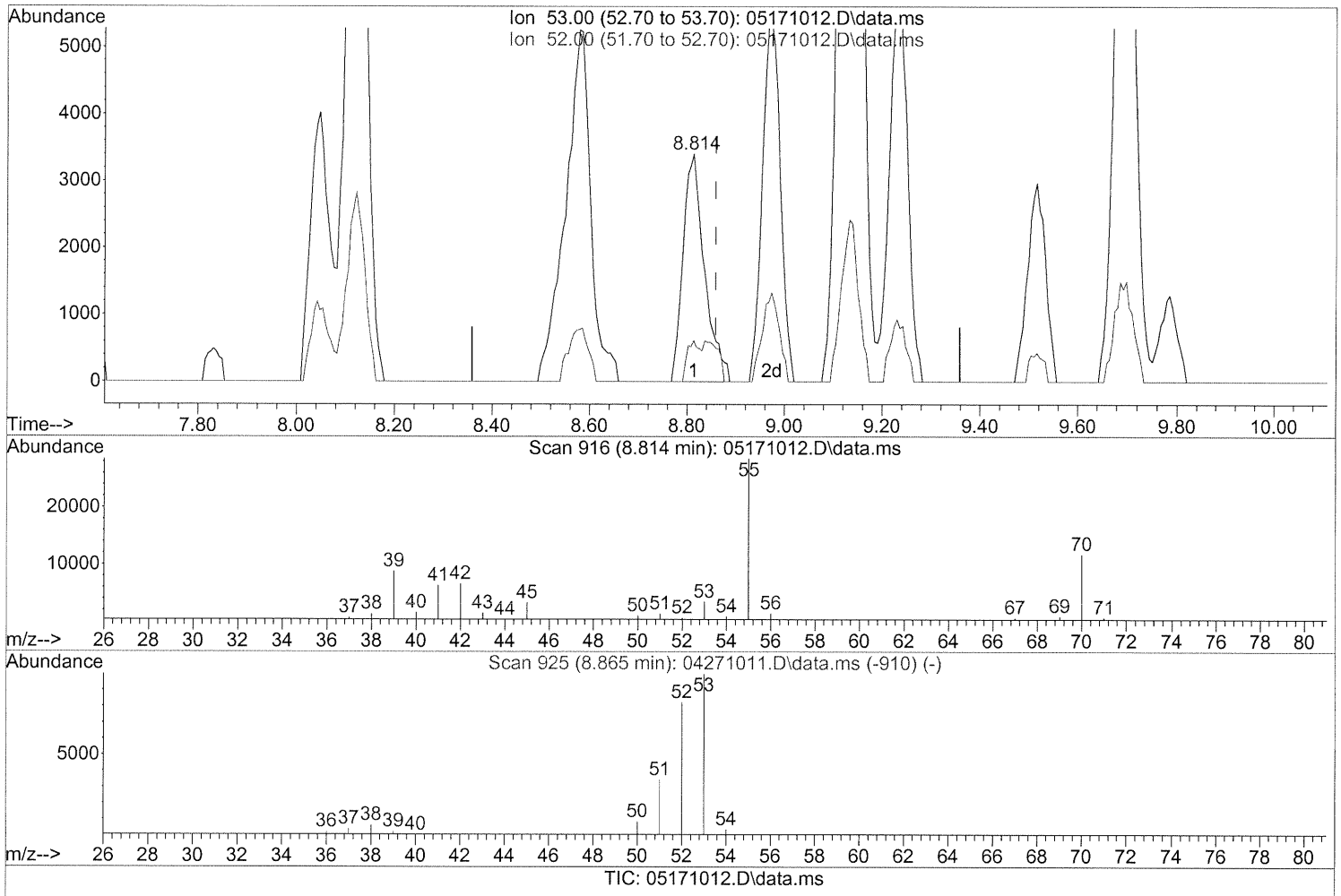
5/19/10

5/20/10

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




(16) Acrylonitrile (T)

8.814min (-0.045) 0.41ng

response 10361

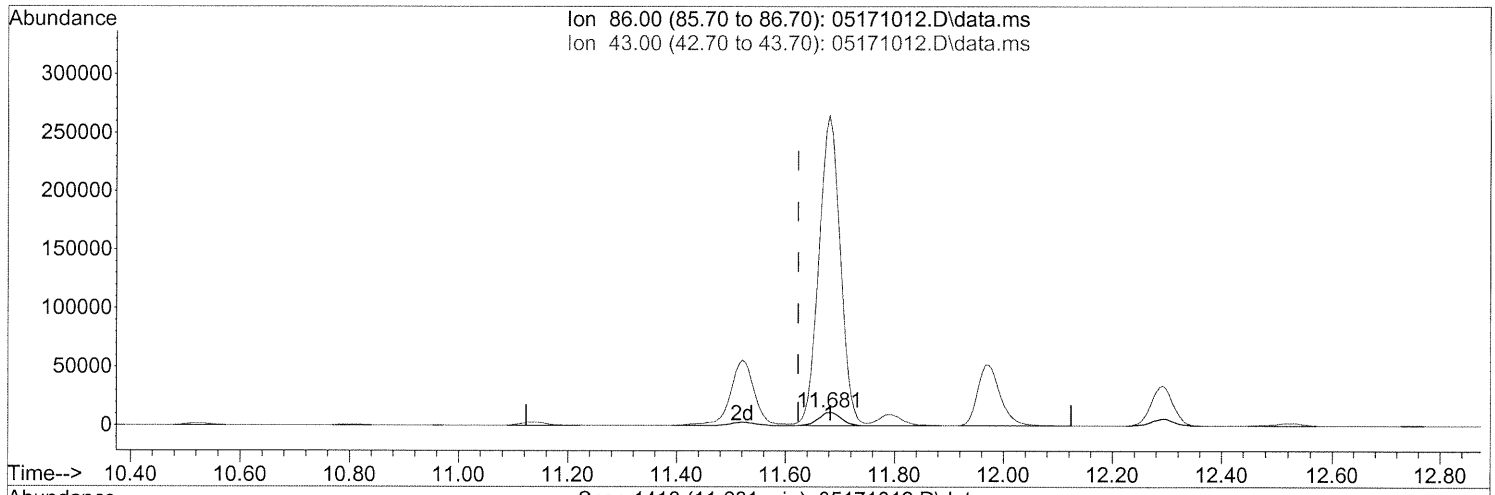
| Ion | Exp% | Act% |
|---|---|---|
| 53.00 | 100 | 100 |
| 52.00 | 84.10 | 11.26# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

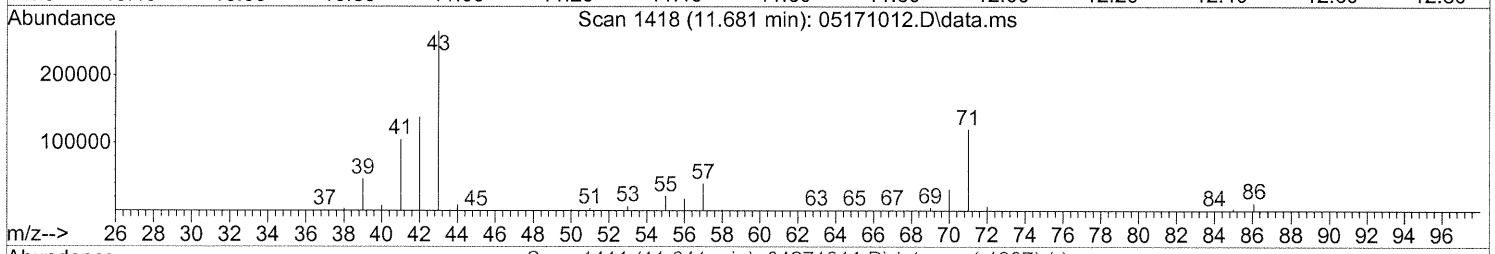
7P

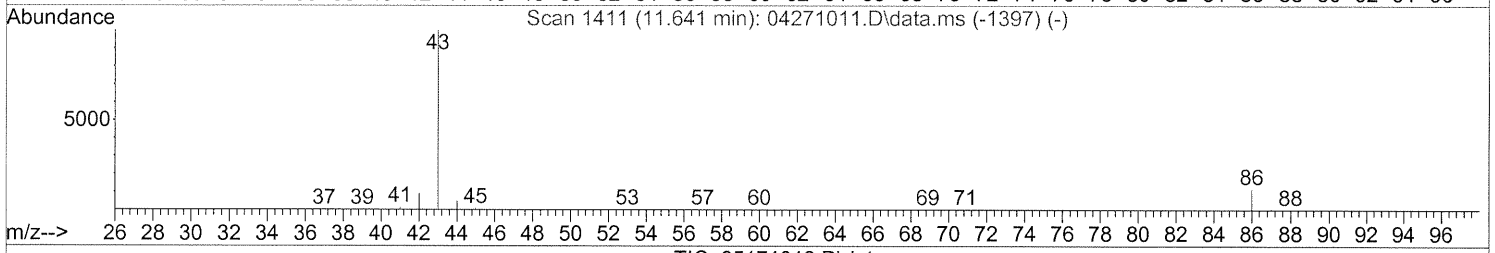
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171012.D\data.ms

(26) Vinyl Acetate (T)

11.681min (+0.057) 5.40ng

response 31063

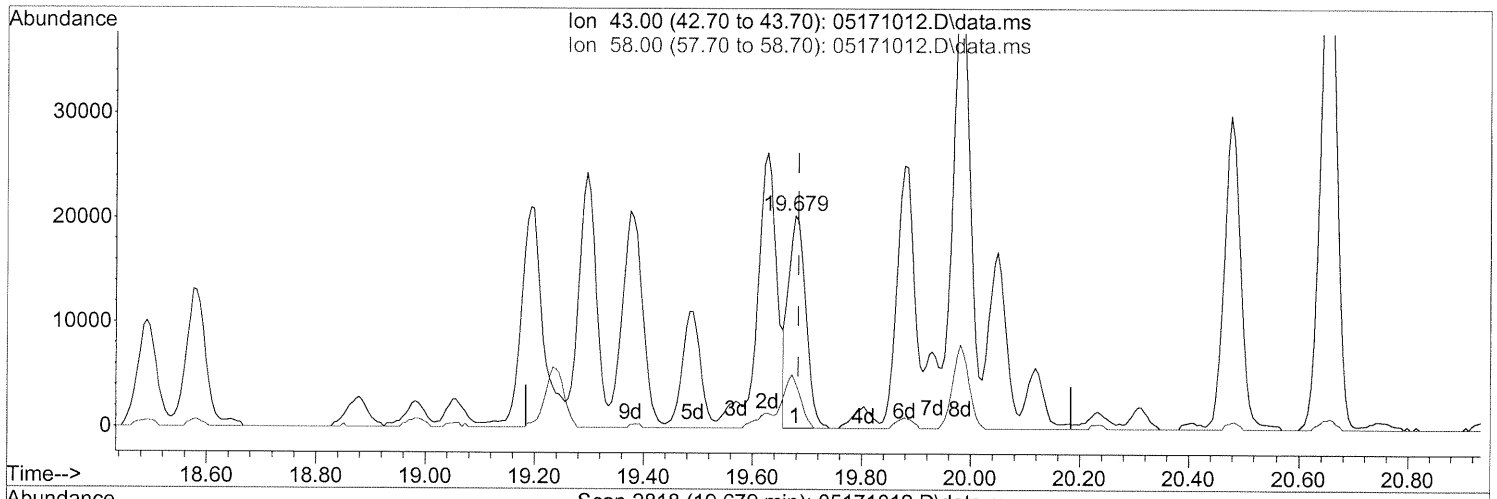
| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 43.00 | 1305.50 | 2312.01# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

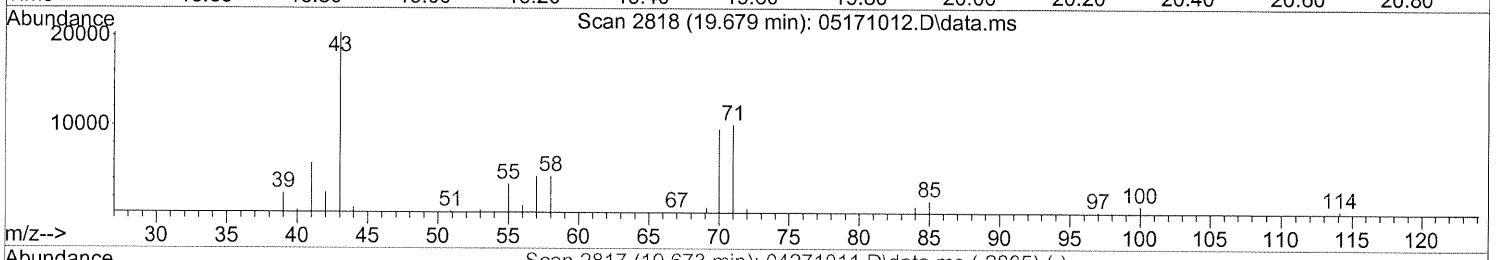
TP

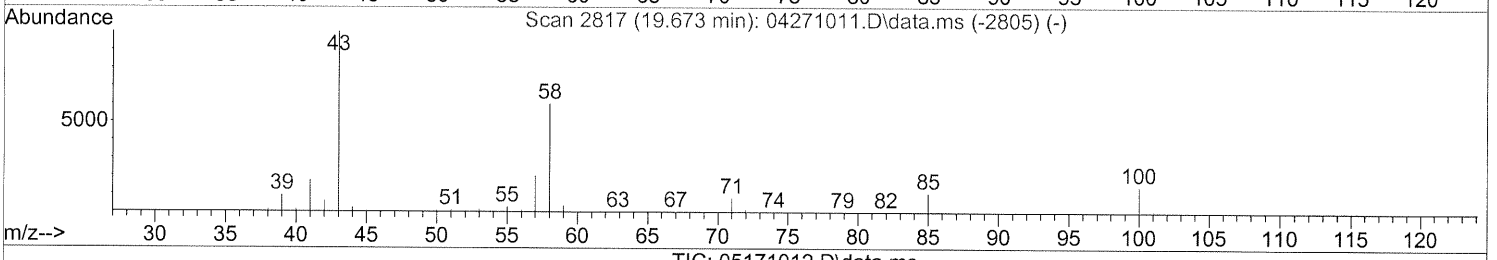
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171012.D\data.ms

(59) 2-Hexanone (T)

19.679min (-0.006) 0.99ng

response 44965

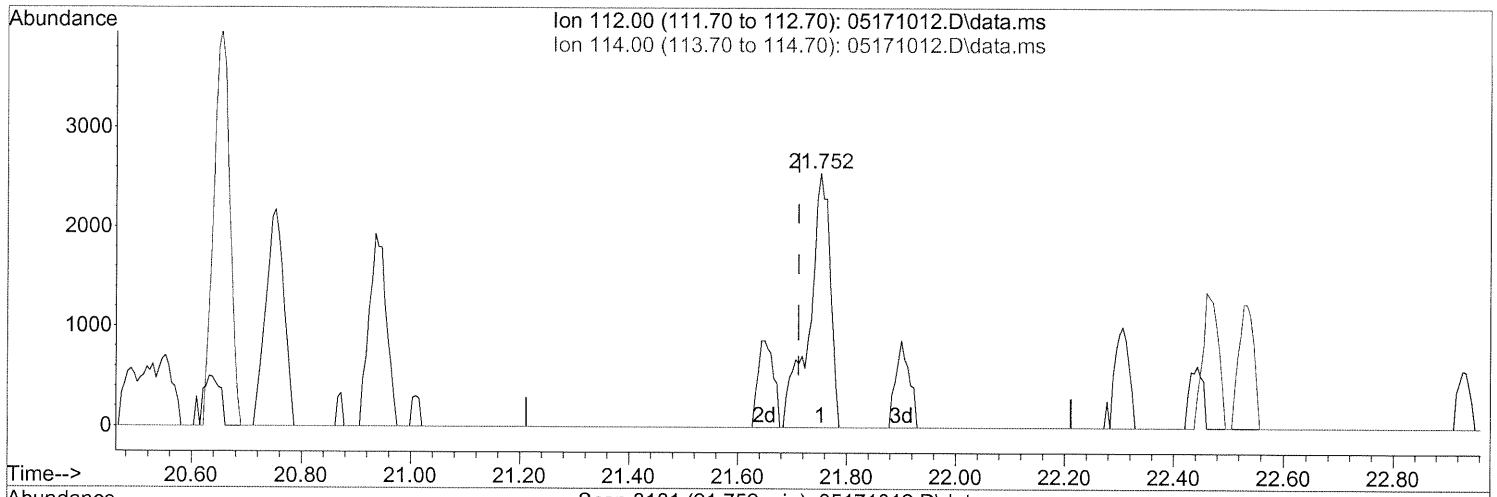
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 58.00 | 53.30 | 24.82# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

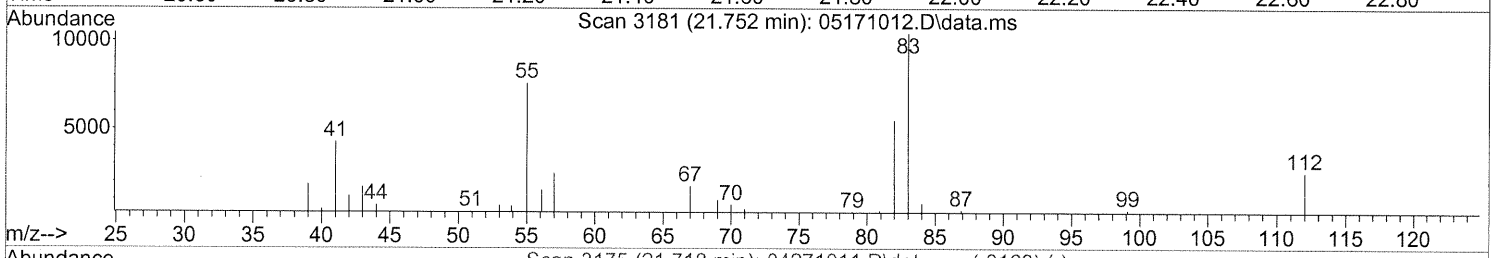
#p

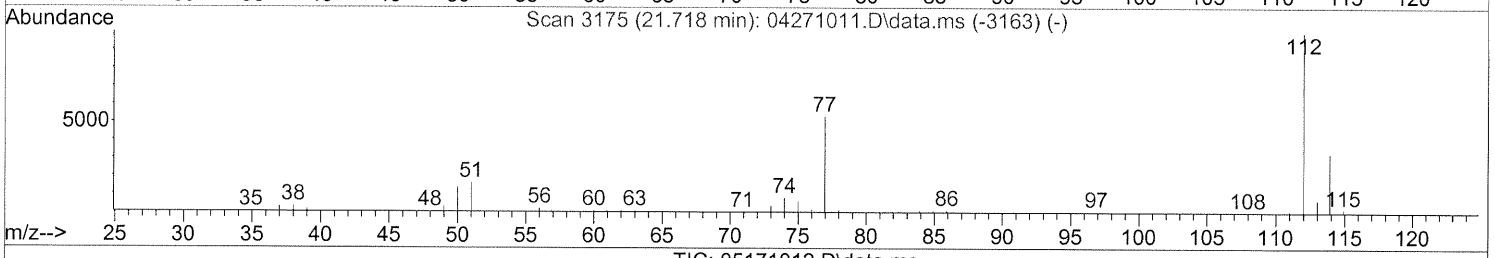
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171012.D\data.ms

(65) Chlorobenzene (T)

21.752min (+0.040) 0.10ng

response 6784

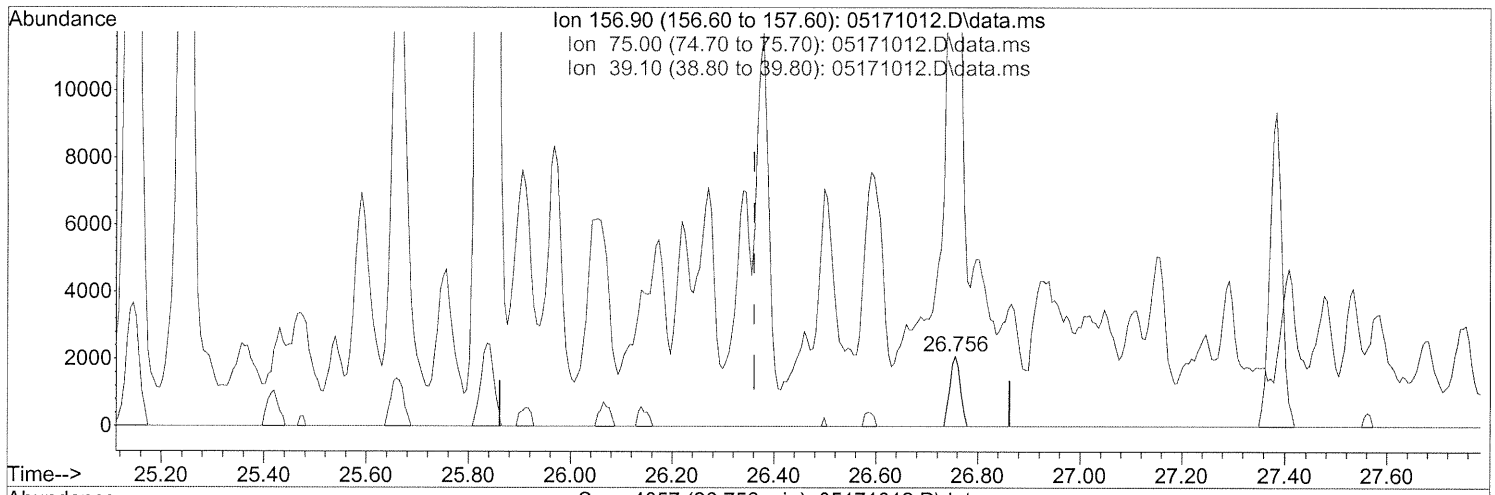
| Ion | Exp% | Act% |
|---|---|---|
| 112.00 | 100 | 100 |
| 114.00 | 32.10 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

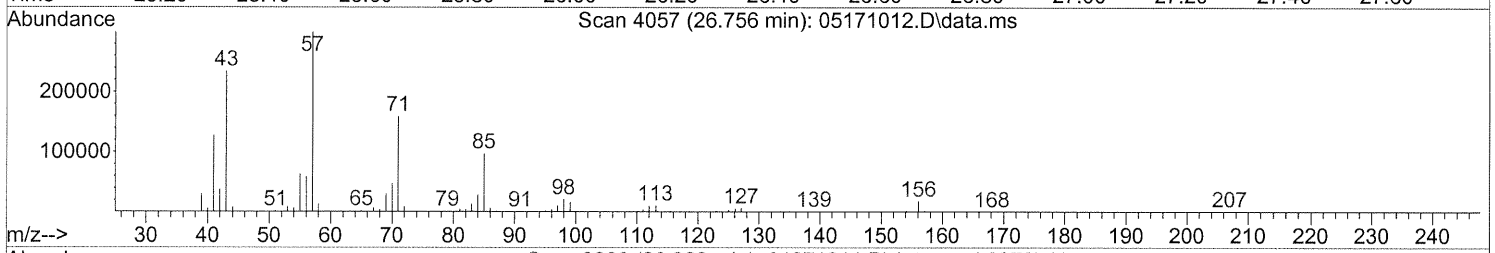
TP

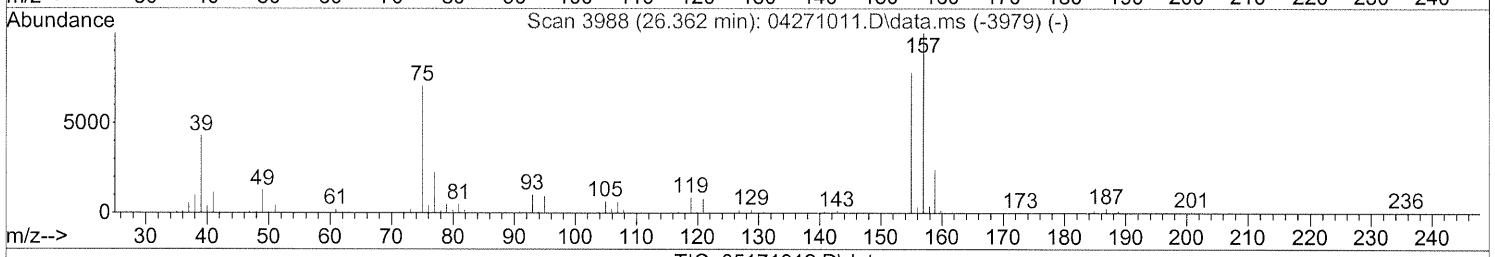
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171012.D\data.ms

(92) 1,2-Dibromo-3-Chloropropane (T)

26.756min (+0.394) 0.16ng

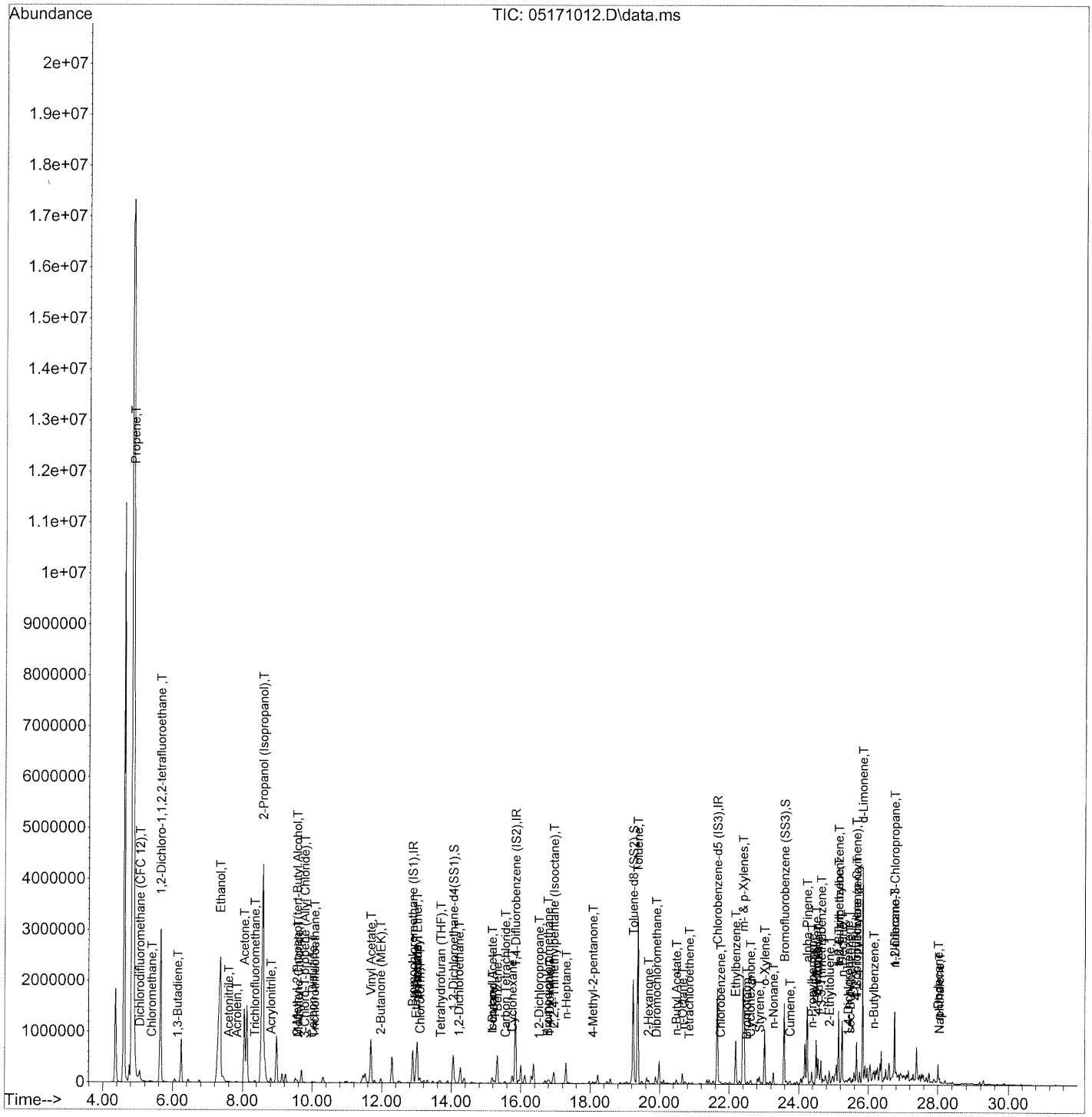
response 3009

| Ion | Exp% | Act% |
|---|---|---|
| 156.90 | 100 | 100 |
| 75.00 | 110.30 | 0.00# |
| 39.10 | 79.90 | 1557.13# |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 374588 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1780102 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 751929 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 554019 | 24.506 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.04% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1868667 | 24.640 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.56% | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 628350 | 23.653 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.60% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 882803 | 41.600 | ng | | 95 |
| 3) Dichlorodifluoromethan... | 5.06 | 85 | 83244 | 1.668 | ng | | 99 |
| 4) Chloromethane | 5.40 | 50 | 17595 | 0.582 | ng | | 97 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.65 | 135 | 1765 | 0.061 | ng | | 72 |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 6.14 | 54 | 2137 | 0.087 | ng | | 95 |
| 8) Bromomethane | 6.64 | 94 | 310 | N.D. | | | |
| 9) Chloroethane | 6.98 | 64 | 509 | N.D. | | | |
| 10) Ethanol | 7.36 | 45 | 7034425 | 544.209 | ng | | 99 |
| 11) Acetonitrile | 7.60 | 41 | 14955 | 0.477 | ng | | 92 |
| 12) Acrolein | 7.83 | 56 | 19800 | 1.553 | ng | | 99 |
| 13) Acetone | 8.05 | 58 | 948480 | 57.423 | ng | # | 76 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 38863 | 0.856 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.58 | 45 | 11343469 | 235.711 | ng | | 99 |
| 16) Acrylonitrile | 8.81 | 53 | 10361 | 0.412 | ng | # | 20 |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.56 | 59 | 18749 | 0.330 | ng | # | 1 |
| 19) Methylene Chloride | 9.60 | 84 | 5027 | 0.202 | ng | # | 78 |
| 20) 3-Chloro-1-propene (Al... | 9.78 | 41 | 1835 | 0.073 | ng | # | 42 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 7855 | 0.345 | ng | # | 76 |
| 22) Carbon Disulfide | 10.01 | 76 | 41563 | 0.518 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 24) 1,1-Dichloroethane | 11.46 | 63 | 1025 | N.D. | | | |
| 25) Methyl tert-Butyl Ether | 11.50 | 73 | 2270 | N.D. | | | |
| 26) Vinyl Acetate | 11.68 | 86 | 31063 | 5.404 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 42144 | 2.778 | ng | # | 69 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 13.01 | 87 | 7775 | 0.374 | ng | # | 1 |
| 30) Ethyl Acetate | 12.98 | 61 | 69996 | 8.687 | ng | | 83 |
| 31) n-Hexane | 13.02 | 57 | 506735 | 13.195 | ng | # | 96 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.10 | 83 | 94381 | 2.312 ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.69 | 72 | 3192 | 0.217 ng | # | 1 |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 14.22 | 62 | 27524 | 0.899 ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 586 | N.D. | | |
| 39) Isopropyl Acetate | 15.17 | 61 | 2940 | 0.215 ng | # | 1 |
| 40) 1-Butanol | 15.18 | 56 | 99732 | 4.646 ng | | 83 |
| 41) Benzene | 15.32 | 78 | 739839 | 7.301 ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 16641 | 0.534 ng | | 100 |
| 43) Cyclohexane | 15.75 | 84 | 87739 | 2.325 ng | # | 81 |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | | |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 2221 | 0.101 ng | | 96 |
| 46) Bromodichloromethane | 16.78 | 83 | 36807 | 1.210 ng | | 78 |
| 47) Trichloroethene | 16.86 | 130 | 333 | N.D. | | |
| 48) 1,4-Dioxane | 16.82 | 88 | 1133 | 0.057 ng | | 87 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 255588 | 2.746 ng | | 94 |
| 50) Methyl Methacrylate | 17.11 | 100 | 354 | N.D. | | |
| 51) n-Heptane | 17.30 | 71 | 135396 | 5.616 ng | | 89 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 15386 | 0.802 ng | | 93 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 18.87 | 97 | 1030 | N.D. | | |
| 58) Toluene | 19.37 | 91 | 3224486 | 30.147 ng | | 98 |
| 59) 2-Hexanone | 19.68 | 43 | 44965 | 0.993 ng | # | 60 |
| 60) Dibromochloromethane | 19.91 | 129 | 11308 | 0.442 ng | | 98 |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.48 | 43 | 63102 | 1.221 ng | | 83 |
| 63) n-Octane | 20.66 | 57 | 44801 | 2.334 ng | # | 82 |
| 64) Tetrachloroethene | 20.85 | 166 | 8966 | 0.268 ng | | 99 |
| 65) Chlorobenzene | 21.75 | 112 | 6784 | 0.095 ng | # | 43 |
| 66) Ethylbenzene | 22.19 | 91 | 808355 | 6.896 ng | | 95 |
| 67) m- & p-Xylenes | 22.40 | 91 | 2252464 | 24.317 ng | | 93 |
| 68) Bromoform | 22.51 | 173 | 2591 | 0.108 ng | | 96 |
| 69) Styrene | 22.87 | 104 | 95672 | 1.313 ng | | 94 |
| 70) o-Xylene | 23.01 | 91 | 782054 | 8.281 ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 91077 | 2.211 ng | | 89 |
| 72) 1,1,2,2-Tetrachloroethane | 23.01 | 83 | 1824 | N.D. | | |
| 74) Cumene | 23.75 | 105 | 46721 | 0.362 ng | | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 754759 | 12.605 ng | | 93 |
| 76) n-Propylbenzene | 24.38 | 91 | 219911 | 1.469 ng | | 96 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 596962 | 5.051 ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 315197 | 2.647 ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 211089 | 2.172 ng | | 93 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171012.D
Acq On : 17 May 2010 19:00
Operator : LM
Sample : P1001650-002 dup (1000ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:44 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

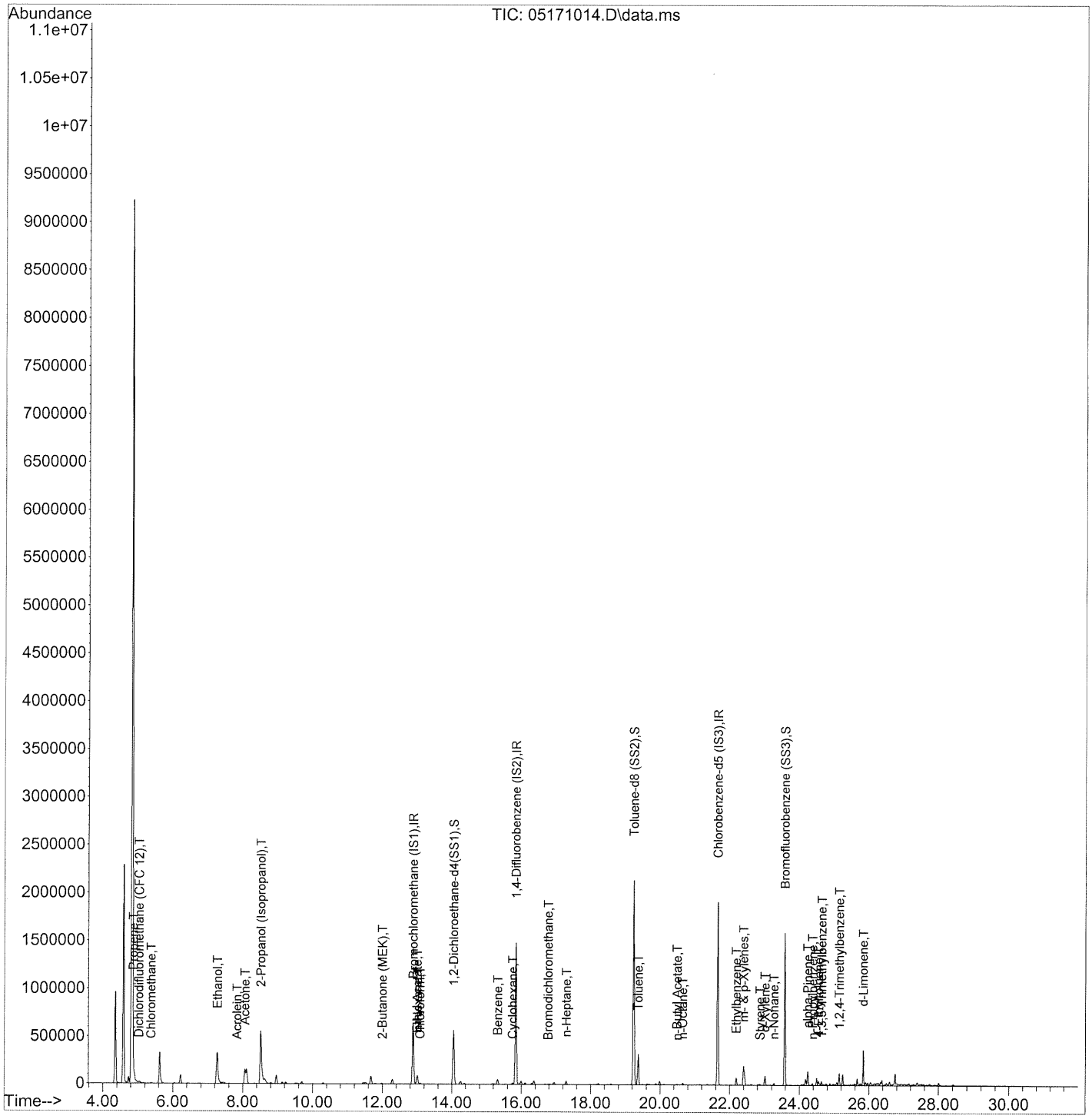
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 2398 | N.D. | | |
| 81) 2-Ethyltoluene | 24.88 | 105 | 193878 | 1.581 ng | | 96 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 779069 | 7.753 ng | | 97 |
| 83) n-Decane | 25.25 | 57 | 446272 | 9.745 ng | | 87 |
| 84) Benzyl Chloride | 25.31 | 91 | 1151 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.34 | 146 | 103 | N.D. | | |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 6598 | 0.104 ng | | 97 |
| 87) sec-Butylbenzene | 25.48 | 105 | 13959 | 0.102 ng | | 84 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 216012 | 1.665 ng | | 92 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 160664 | 1.587 ng | | 89 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 187 | N.D. | | |
| 91) d-Limonene | 25.84 | 68 | 1085236 | 31.102 ng | | 83 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.76 | 157 | 3009 | 0.160 ng | # | 1 |
| 93) n-Undecane | 26.76 | 57 | 475684 | 10.490 ng | | 78 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 558 | N.D. | | |
| 95) Naphthalene | 28.05 | 128 | 65350 | 0.512 ng | | 97 |
| 96) n-Dodecane | 28.01 | 57 | 120562 | 2.564 ng | | 92 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.61 | 55 | 25619 | 0.835 ng | # | 70 |
| 99) tert-Butylbenzene | 25.15 | 119 | 99124 | 0.954 ng | # | 57 |
| 100) n-Butylbenzene | 26.16 | 91 | 44924 | 0.434 ng | # | 35 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:32:13 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:32:13 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 375901 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1810285 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 757397 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 567580 | 25.018 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 100.08% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1900207 | 24.875 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 99.48% | | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 628750 | 23.498 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.00% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 70745 | 3.322 | ng | | 96 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 8147 | 0.163 | ng | # | 93 |
| 4) Chloromethane | 5.37 | 50 | 5360 | 0.177 | ng | | 93 |
| 10) Ethanol | 7.27 | 45 | 654723m | 50.475 | ng | | |
| 12) Acrolein | 7.84 | 56 | 1591 | 0.124 | ng | | 92 |
| 13) Acetone | 8.06 | 58 | 89820 | 5.419 | ng | # | 76 |
| 15) 2-Propanol (Isopropanol) | 8.51 | 45 | 1260666 | 26.104 | ng | | 100 |
| 27) 2-Butanone (MEK) | 12.00 | 72 | 4212 | 0.277 | ng | # | 79 |
| 30) Ethyl Acetate | 13.00 | 61 | 6017 | 0.744 | ng | | 83 |
| 31) n-Hexane | 13.01 | 57 | 47433 | 1.231 | ng | | 97 |
| 32) Chloroform | 13.09 | 83 | 8853 | 0.216 | ng | | 99 |
| 41) Benzene | 15.32 | 78 | 70308 | 0.682 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 8096 | 0.211 | ng | # | 82 |
| 46) Bromodichloromethane | 16.78 | 83 | 3103 | 0.100 | ng | | 78 |
| 51) n-Heptane | 17.30 | 71 | 12325 | 0.503 | ng | | 88 |
| 58) Toluene | 19.37 | 91 | 314877 | 2.923 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 5173 | 0.099 | ng | | 92 |
| 63) n-Octane | 20.65 | 57 | 3955 | 0.205 | ng | | 86 |
| 66) Ethylbenzene | 22.19 | 91 | 73268 | 0.620 | ng | | 95 |
| 67) m- & p-Xylenes | 22.40 | 91 | 209155 | 2.242 | ng | | 93 |
| 69) Styrene | 22.87 | 104 | 8184 | 0.111 | ng | | 94 |
| 70) o-Xylene | 23.01 | 91 | 70851 | 0.745 | ng | | 94 |
| 71) n-Nonane | 23.27 | 43 | 7994 | 0.193 | ng | | 90 |
| 75) alpha-Pinene | 24.24 | 93 | 67822 | 1.125 | ng | | 94 |
| 76) n-Propylbenzene | 24.38 | 91 | 19897 | 0.132 | ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 28399 | 0.237 | ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 18836 | 0.192 | ng | | 92 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 70227 | 0.694 | ng | | 96 |
| 91) d-Limonene | 25.84 | 68 | 92367 | 2.628 | ng | | 83 |



181 5/19/10

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 19 16:32:13 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

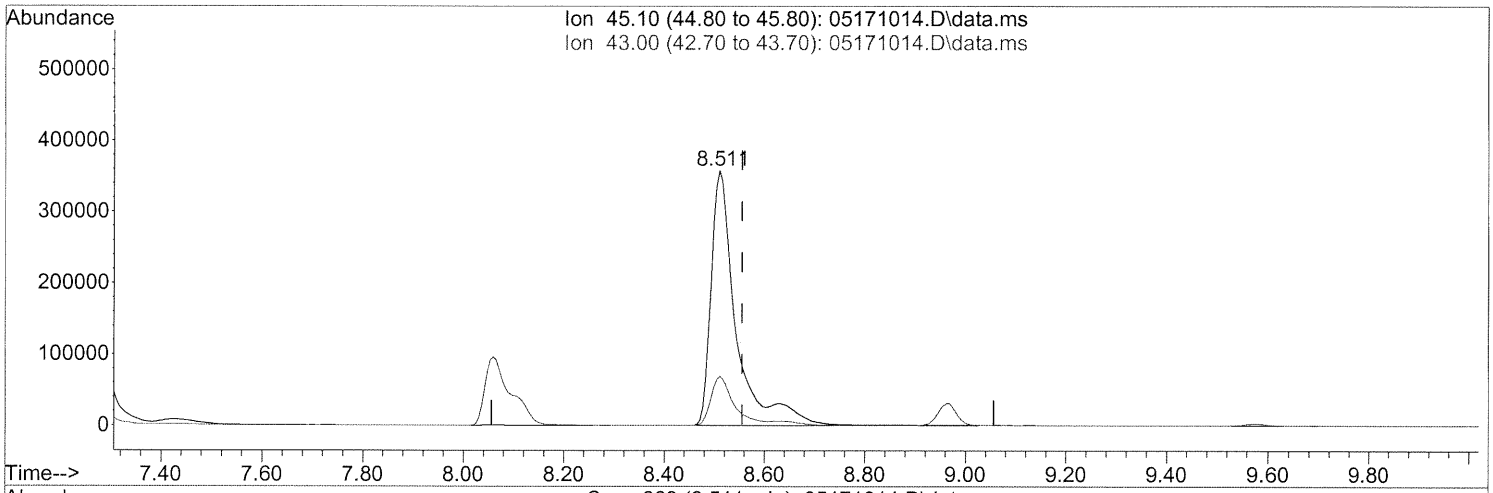
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|

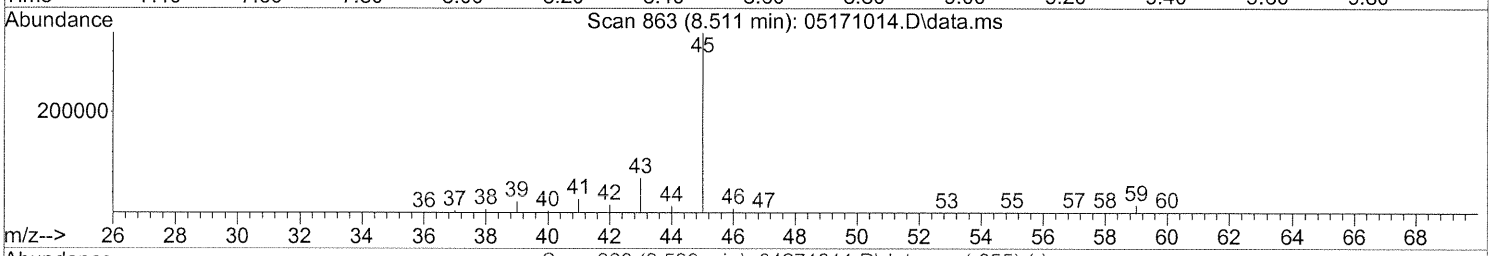
(#) = qualifier out of range (m) = manual integration (+) = signals summed

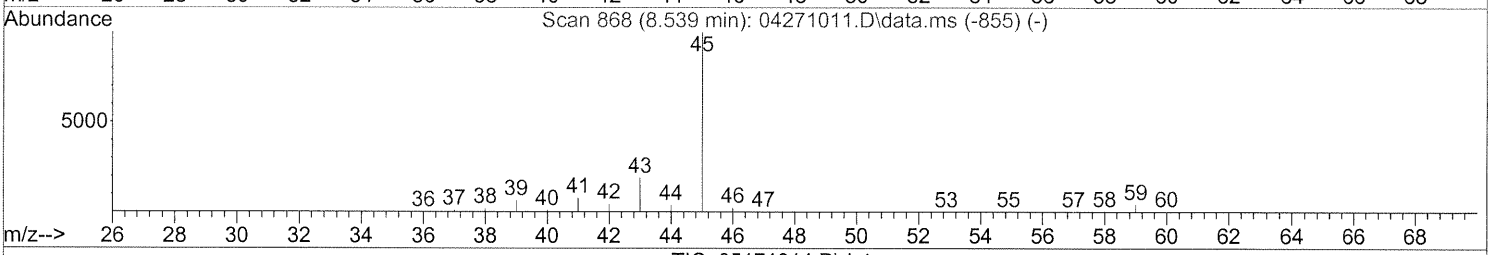
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171014.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.511min (-0.046) 26.10ng

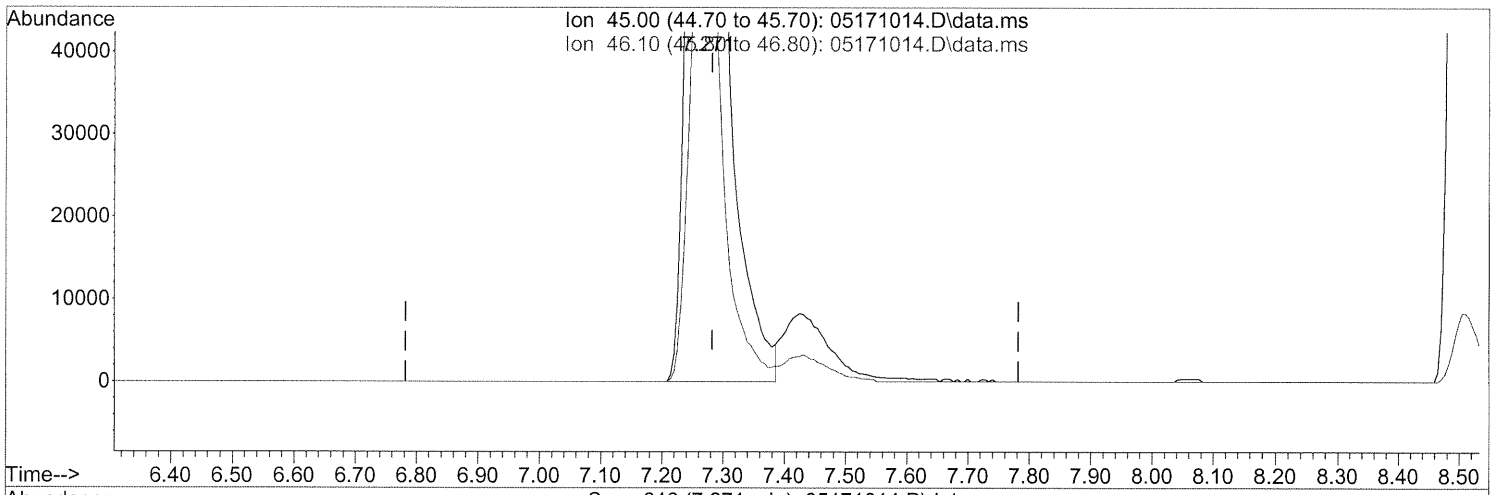
response 1260666

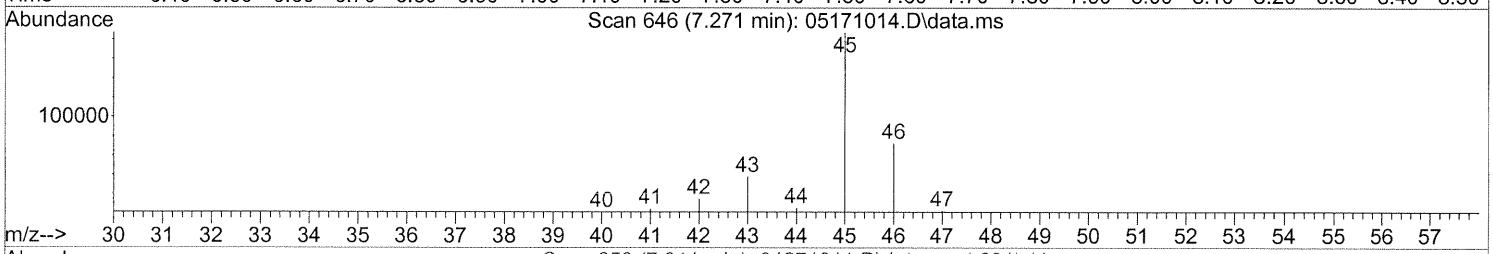
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 19.32 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

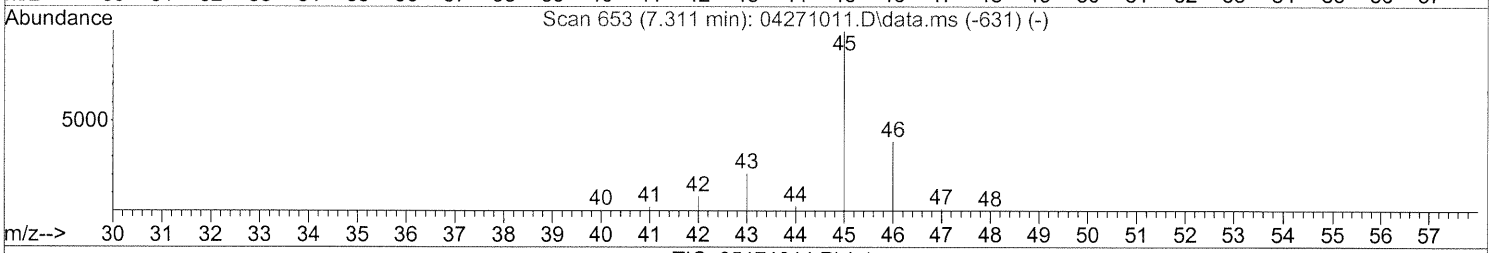
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171014.D\data.ms

(10) Ethanol (T)

7.271min (-0.011) 47.07ng

response 610566

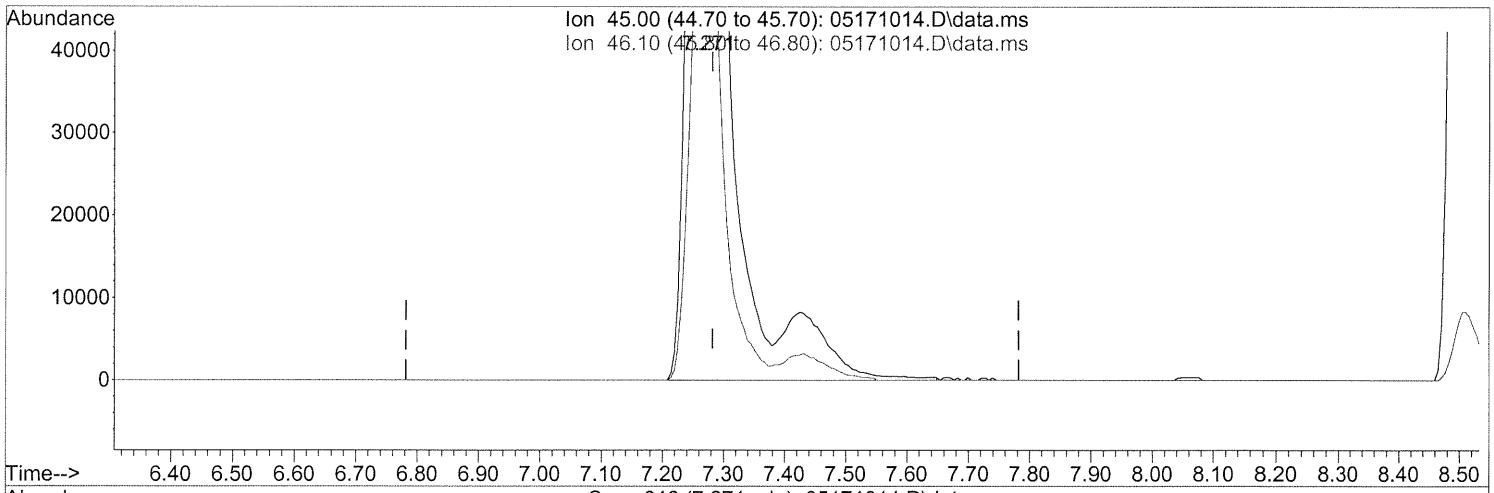
SP

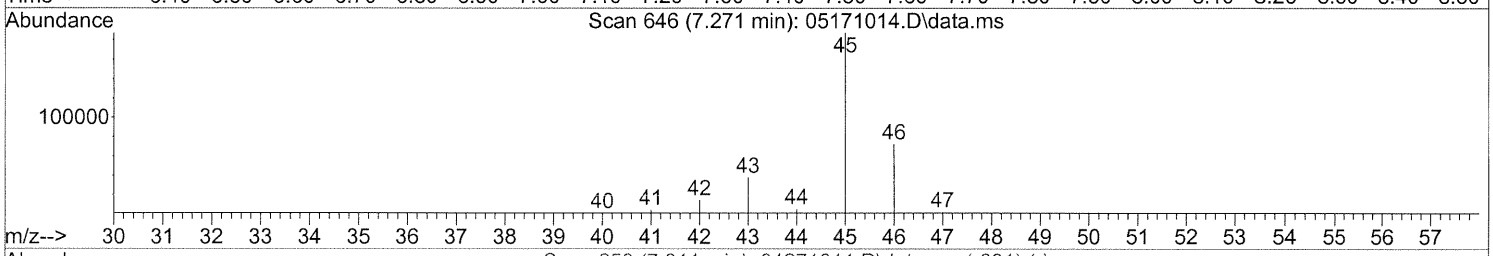
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.72 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

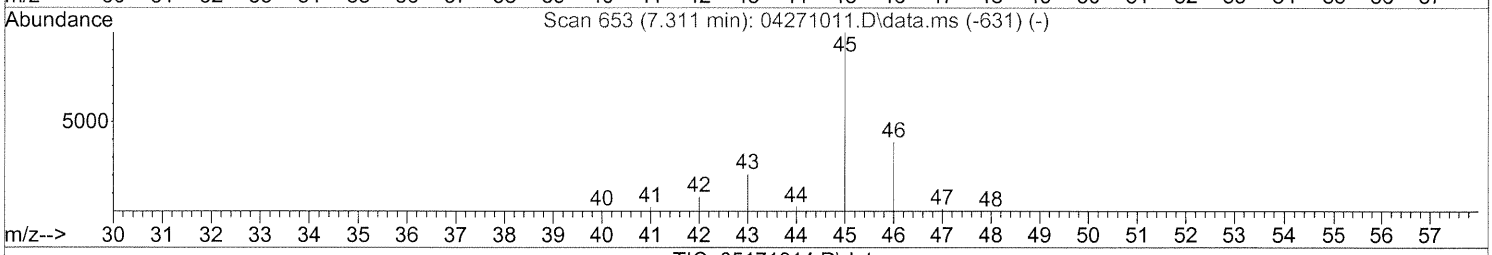
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171014.D\data.ms

(10) Ethanol (T)

7.271min (-0.011) 50.47ng m

response 654723

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 36.11 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP-71C

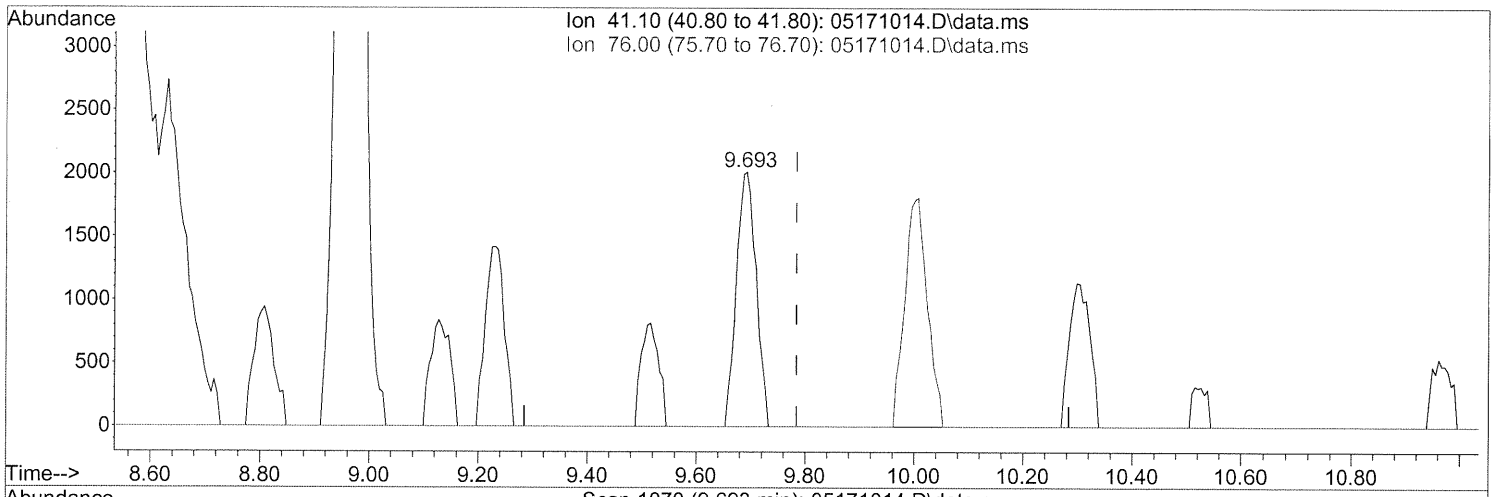
MA 5/27/10

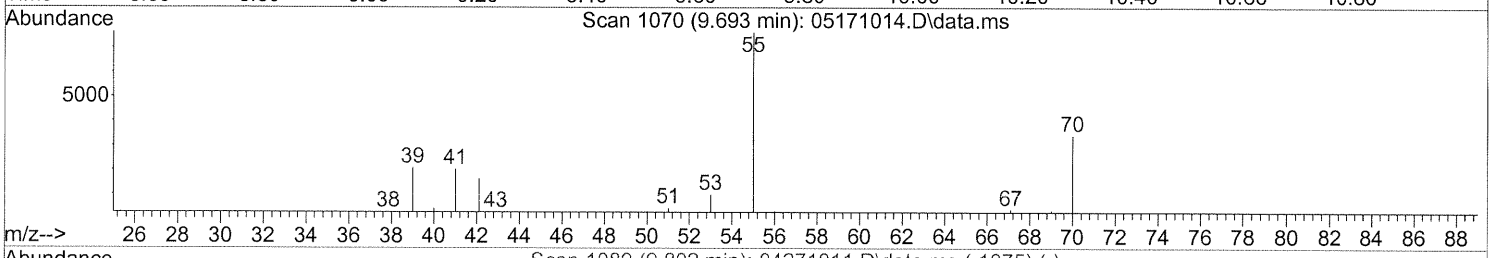
5/20/10

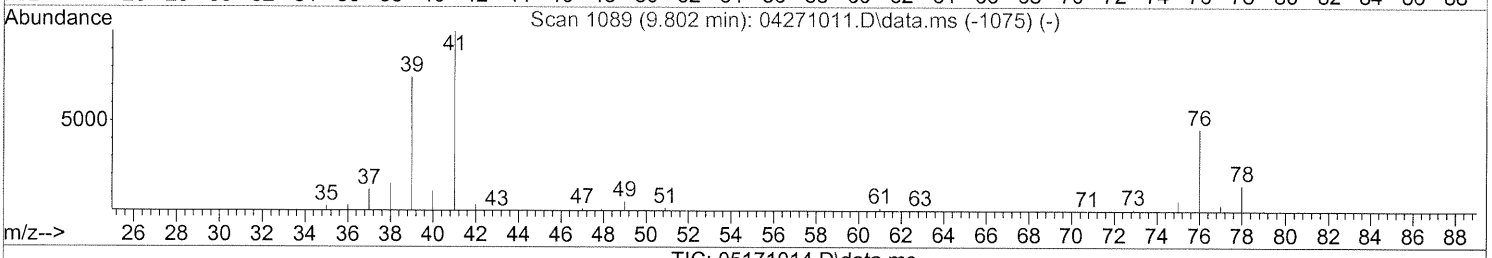
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171014.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)

9.693min (-0.091) 0.20ng

response 5054

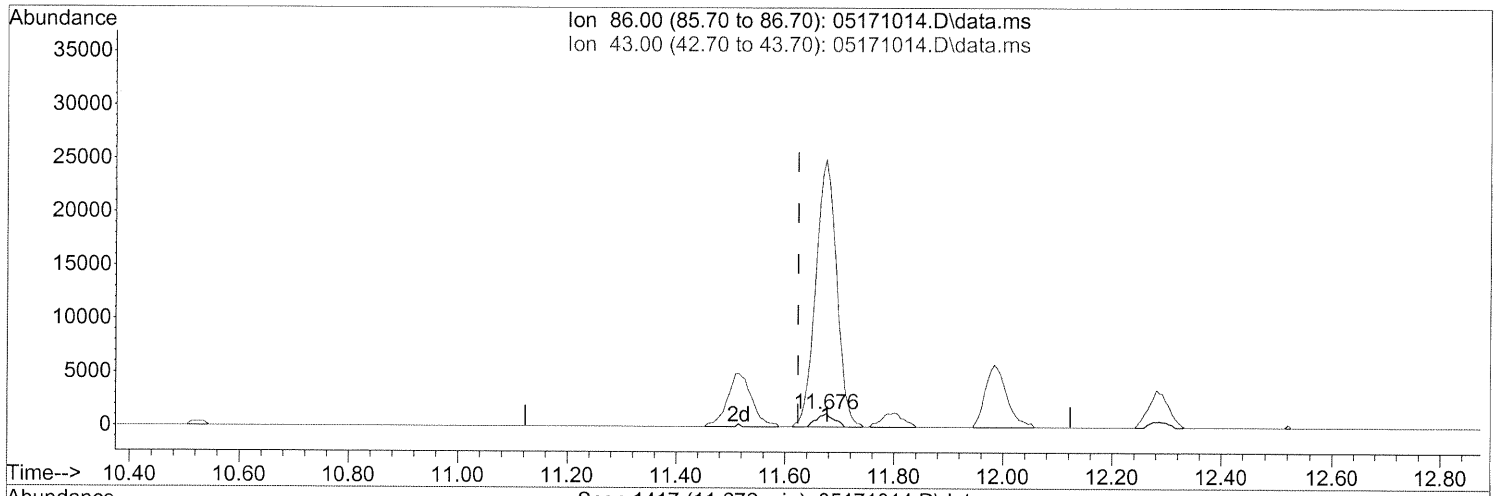
| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 76.00 | 32.80 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

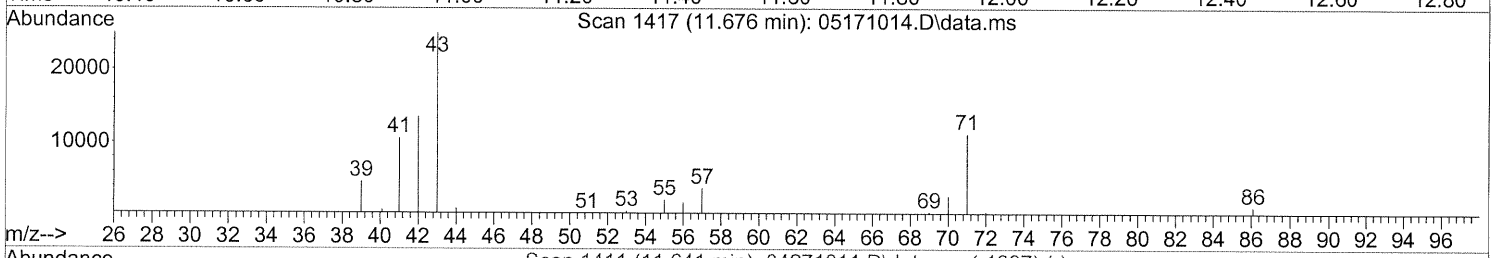
TP

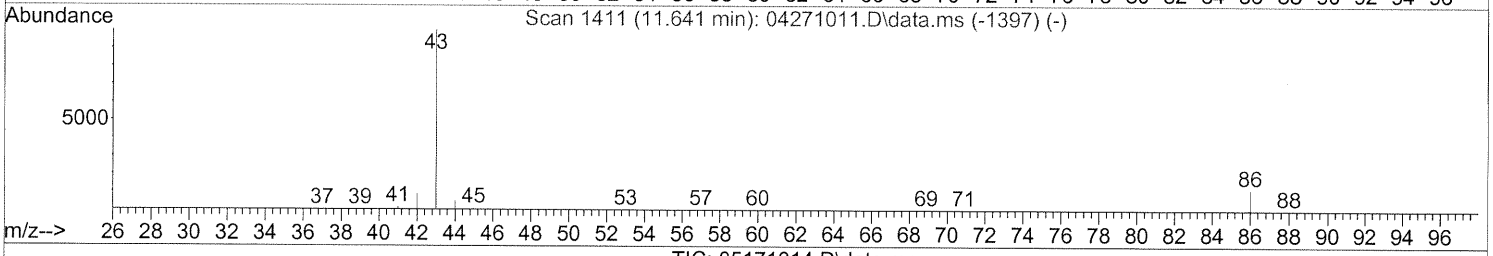
# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171014.D\data.ms

(26) Vinyl Acetate (T)

11.676min (+0.052) 0.46ng

response 2670

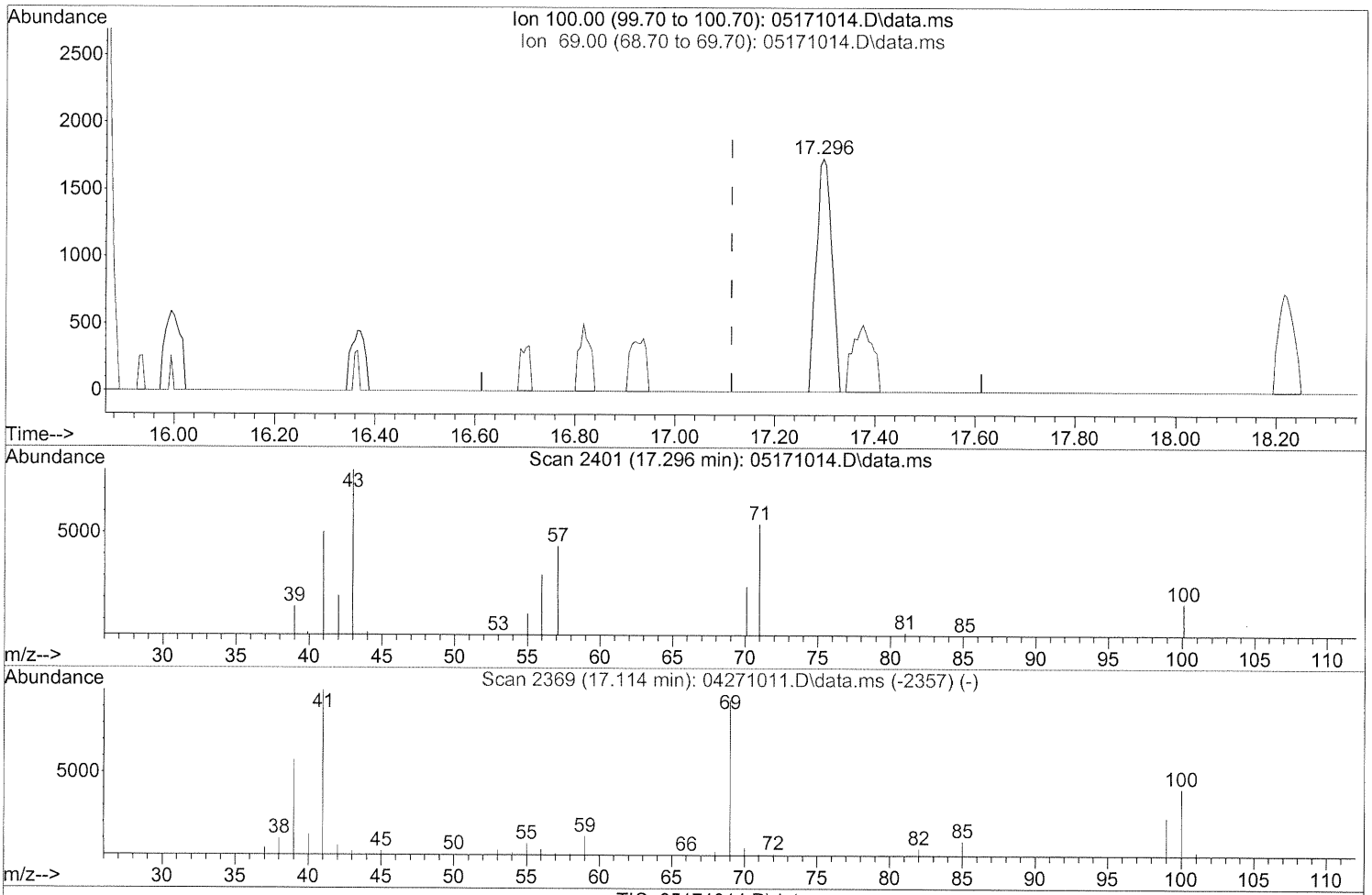
| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 43.00 | 1305.50 | 2498.46# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

TP

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




(50) Methyl Methacrylate (T)

17.296min (+0.183) 0.35ng

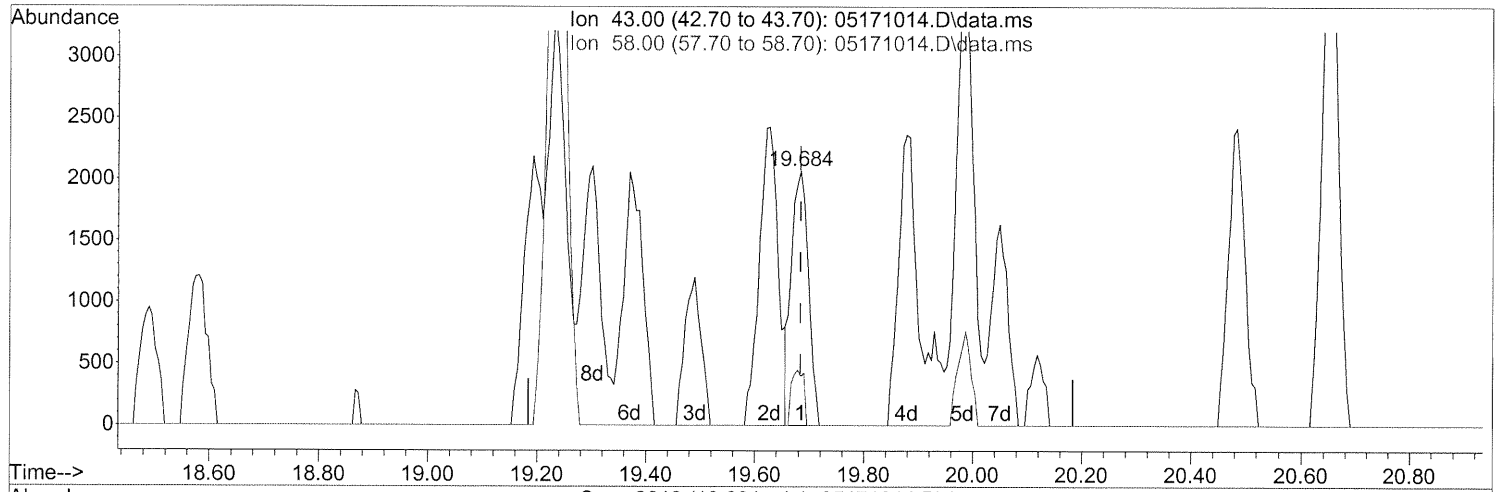
response 3787

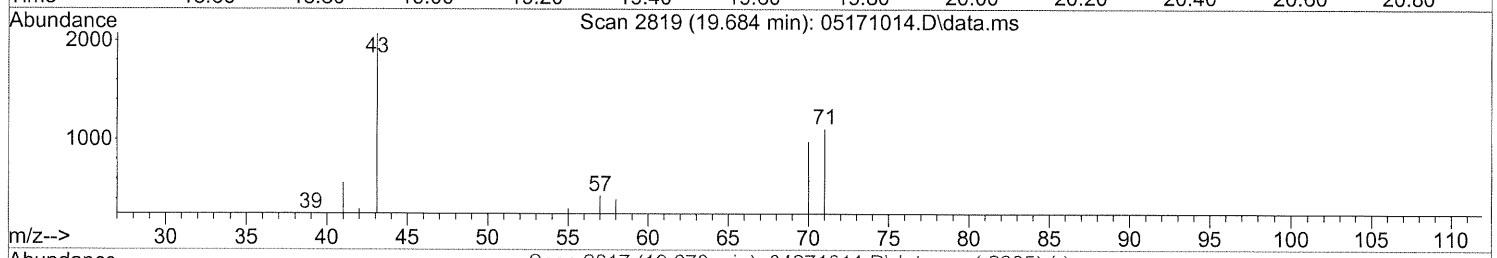
| Ion | Exp% | Act% |
|---|---|---|
| 100.00 | 100 | 100 |
| 69.00 | 311.50 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

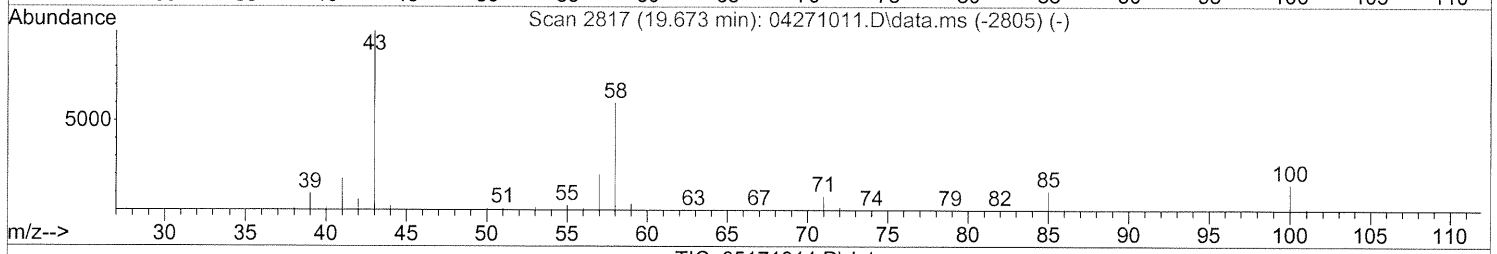
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171014.D\data.ms

(59) 2-Hexanone (T)

19.684min (+0.000) 0.10ng

response 4465

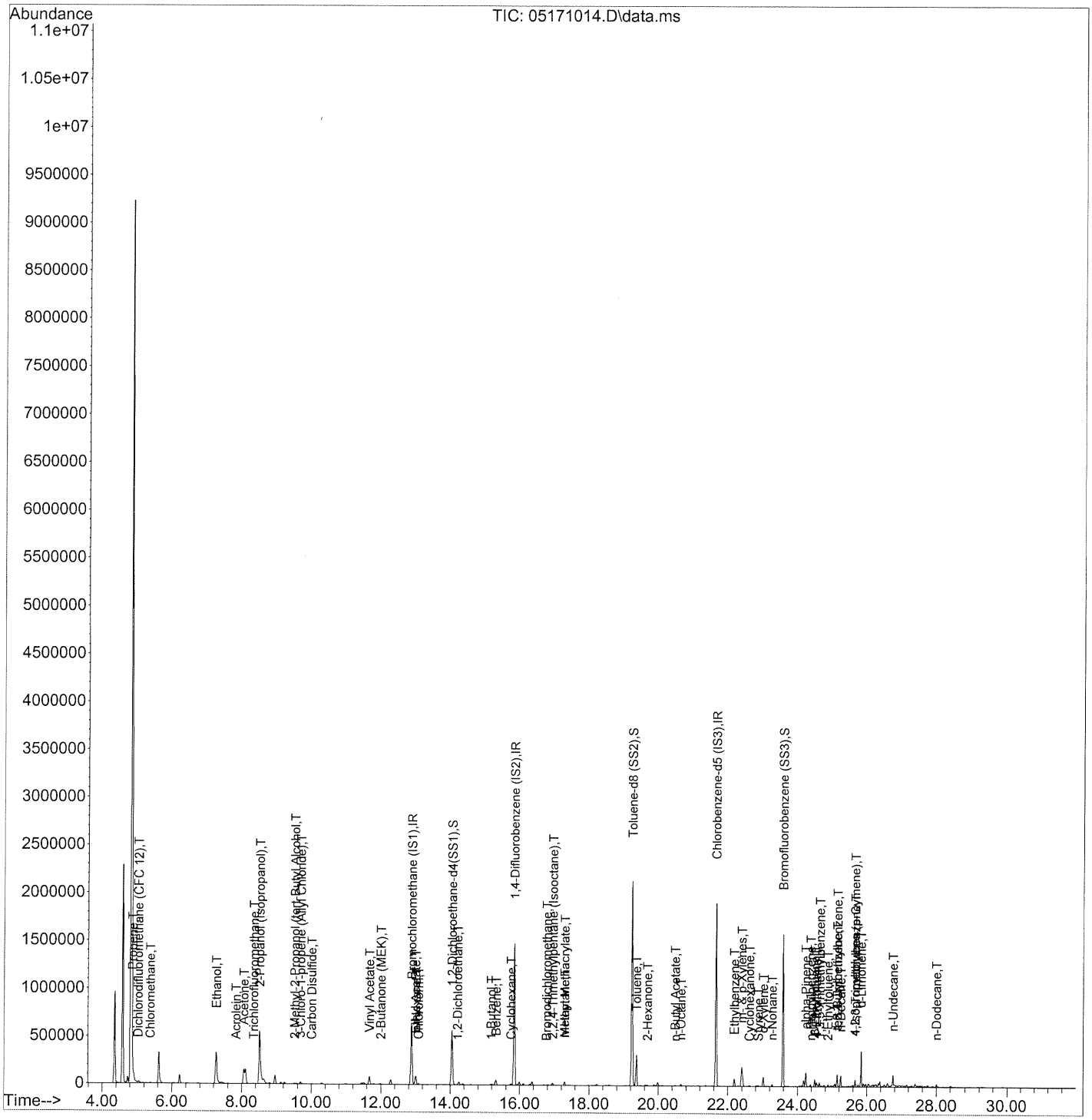
TP

| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 58.00 | 53.30 | 15.52# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 375901 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1810285 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 757397 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 567580 | 25.018 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 100.08% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1900207 | 24.875 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 99.48% | | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 628750 | 23.498 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.00% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 70745 | 3.322 | ng | | 96 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 8147 | 0.163 | ng | # | 93 |
| 4) Chloromethane | 5.37 | 50 | 5360 | 0.177 | ng | | 93 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 0.00 | 135 | 0 | N.D. | | | |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 0.00 | 54 | 0 | N.D. | | | |
| 8) Bromomethane | 0.00 | 94 | 0 | N.D. | | | |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | | | |
| 10) Ethanol | 7.27 | 45 | 610566 | 47.071 | ng | | 99 |
| 11) Acetonitrile | 7.61 | 41 | 1266 | N.D. | | | |
| 12) Acrolein | 7.84 | 56 | 1591 | 0.124 | ng | | 92 |
| 13) Acetone | 8.06 | 58 | 89820 | 5.419 | ng | # | 76 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 3827 | 0.084 | ng | | 93 |
| 15) 2-Propanol (Isopropanol) | 8.51 | 45 | 1260666 | 26.104 | ng | | 100 |
| 16) Acrylonitrile | 8.81 | 53 | 1005 | N.D. | | | |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.52 | 59 | 3672 | 0.064 | ng | # | 57 |
| 19) Methylene Chloride | 9.59 | 84 | 1006 | N.D. | | | |
| 20) 3-Chloro-1-propene (Al... | 9.69 | 41 | 5054 | 0.201 | ng | # | 42 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 303 | N.D. | | | |
| 22) Carbon Disulfide | 10.01 | 76 | 5201 | 0.065 | ng | # | 75 |
| 23) trans-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 24) 1,1-Dichloroethane | 0.00 | 63 | 0 | N.D. | | | |
| 25) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | | | |
| 26) Vinyl Acetate | 11.68 | 86 | 2670 | 0.463 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 12.00 | 72 | 4212 | 0.277 | ng | # | 79 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 13.01 | 87 | 185 | N.D. | | | |
| 30) Ethyl Acetate | 13.00 | 61 | 6017 | 0.744 | ng | | 83 |
| 31) n-Hexane | 13.01 | 57 | 47433 | 1.231 | ng | | 97 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.09 | 83 | 8853 | 0.216 ng | | 99 |
| 34) Tetrahydrofuran (THF) | 0.00 | 72 | 0 | N.D. | | |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 2401 | 0.078 ng | | 66 |
| 38) 1,1,1-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 39) Isopropyl Acetate | 0.00 | 61 | 0 | N.D. | | |
| 40) 1-Butanol | 15.18 | 56 | 8414 | 0.385 ng | | 87 |
| 41) Benzene | 15.32 | 78 | 70308 | 0.682 ng | | 99 |
| 42) Carbon Tetrachloride | 15.56 | 117 | 1353 | N.D. | | |
| 43) Cyclohexane | 15.75 | 84 | 8096 | 0.211 ng | # | 82 |
| 44) tert-Amyl Methyl Ether | 0.00 | 73 | 0 | N.D. | | |
| 45) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | | |
| 46) Bromodichloromethane | 16.78 | 83 | 3103 | 0.100 ng | | 78 |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | | |
| 48) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 23473 | 0.248 ng | | 93 |
| 50) Methyl Methacrylate | 17.30 | 100 | 3787 | 0.347 ng | # | 1 |
| 51) n-Heptane | 17.30 | 71 | 12325 | 0.503 ng | | 88 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 18.10 | 58 | 959 | N.D. | | |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 58) Toluene | 19.37 | 91 | 314877 | 2.923 ng | | 99 |
| 59) 2-Hexanone | 19.68 | 43 | 4465 | 0.098 ng | # | 47 |
| 60) Dibromochloromethane | 19.90 | 129 | 759 | N.D. | | |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.48 | 43 | 5173 | 0.099 ng | | 92 |
| 63) n-Octane | 20.65 | 57 | 3955 | 0.205 ng | | 86 |
| 64) Tetrachloroethene | 20.84 | 166 | 604 | N.D. | | |
| 65) Chlorobenzene | 21.75 | 112 | 269 | N.D. | | |
| 66) Ethylbenzene | 22.19 | 91 | 73268 | 0.620 ng | | 95 |
| 67) m- & p-Xylenes | 22.40 | 91 | 209155 | 2.242 ng | | 93 |
| 68) Bromoform | 0.00 | 173 | 0 | N.D. | | |
| 69) Styrene | 22.87 | 104 | 8184 | 0.111 ng | | 94 |
| 70) o-Xylene | 23.01 | 91 | 70851 | 0.745 ng | | 94 |
| 71) n-Nonane | 23.27 | 43 | 7994 | 0.193 ng | | 90 |
| 72) 1,1,2,2-Tetrachloroethane | 0.00 | 83 | 0 | N.D. | | |
| 74) Cumene | 23.75 | 105 | 4417 | N.D. | | |
| 75) alpha-Pinene | 24.24 | 93 | 67822 | 1.125 ng | | 94 |
| 76) n-Propylbenzene | 24.38 | 91 | 19897 | 0.132 ng | | 96 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 53770 | 0.452 ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 28399 | 0.237 ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 18836 | 0.192 ng | | 92 |

Quantitation Report (Not Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171014.D
Acq On : 17 May 2010 20:24
Operator : LM
Sample : P1001650-002 dupdil (100ml)
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 18 04:02:50 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 25.14 | 118 | 517 | N.D. | | |
| 81) 2-Ethyltoluene | 24.88 | 105 | 17625 | 0.143 ng | | 96 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 70227 | 0.694 ng | | 96 |
| 83) n-Decane | 25.25 | 57 | 40735 | 0.883 ng | | 87 |
| 84) Benzyl Chloride | 25.42 | 91 | 751 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.43 | 146 | 664 | N.D. | | |
| 86) 1,4-Dichlorobenzene | 25.43 | 146 | 664 | N.D. | | |
| 87) sec-Butylbenzene | 25.47 | 105 | 1177 | N.D. | | |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 19191 | 0.147 ng | | 95 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 14485 | 0.142 ng | | 93 |
| 90) 1,2-Dichlorobenzene | 25.43 | 146 | 664 | N.D. | | |
| 91) d-Limonene | 25.84 | 68 | 92367 | 2.628 ng | | 83 |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 93) n-Undecane | 26.76 | 57 | 41918 | 0.918 ng | | 72 |
| 94) 1,2,4-Trichlorobenzene | 0.00 | 180 | 0 | N.D. | | |
| 95) Naphthalene | 28.05 | 128 | 5892 | N.D. | | |
| 96) n-Dodecane | 28.00 | 57 | 11440 | 0.242 ng | | 97 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.61 | 55 | 2783 | 0.090 ng | # | 73 |
| 99) tert-Butylbenzene | 25.15 | 119 | 8890 | 0.085 ng | # | 57 |
| 100) n-Butylbenzene | 26.16 | 91 | 4173 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

INITIAL CALIBRATION STANDARDS

# Response Factor Report MS09

Method Path : J:\MS09\Methods\
Method File : R9042710.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 14:31:40 2010
Response Via : Initial Calibration

Calibration Files
0.1 =04271006.D 0.2 =04271007.D 0.5 =04271008.D 1.0 =04271009.D 5.0 =04271010.D 25 =04271011.D
50 =04271012.D 100 =04271013.D

| | | Compound | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 25 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | IR | Bromochloromethane... | ----------ISTD---------- | | | | | | | | | |
| 2) | T | Propene | 1.491 | 1.286 | 1.374 | 1.211 | 1.442 | 1.532 | 1.539 | 1.456 | 1.416 | 8.33 |
| 3) | T | Dichlorodifluo... | 3.810 | 3.527 | 3.949 | 3.430 | 3.126 | 3.193 | 2.857 | 2.753 | 3.331 | 12.83 |
| 4) | T | Chloromethane | 2.410 | 2.178 | 2.447 | 2.137 | 1.792 | 1.980 | 1.736 | 1.471 | 2.019 | 16.84 |
| 5) | T | 1,2-Dichloro-1... | 2.070 | 1.953 | 2.311 | 2.004 | 1.824 | 1.870 | 1.728 | 1.719 | 1.935 | 10.16 |
| 6) | T | Vinyl Chloride | 2.393 | 2.246 | 2.674 | 2.306 | 2.152 | 2.226 | 2.054 | 2.041 | 2.262 | 9.07 |
| 7) | T | 1,3-Butadiene | 1.708 | 1.477 | 1.842 | 1.637 | 1.560 | 1.718 | 1.605 | 1.638 | 1.648 | 6.69 |
| 8) | T | Bromomethane | 1.684 | 1.522 | 1.702 | 1.542 | 1.395 | 1.492 | 1.362 | 1.382 | 1.510 | 8.67 |
| 9) | T | Chloroethane | 1.240 | 1.107 | 1.322 | 1.189 | 1.093 | 1.150 | 1.070 | 1.059 | 1.154 | 7.94 |
| 10) | T | Ethanol | 0.795 | 0.748 | 0.950 | 0.836 | 0.783 | 0.974 | 0.903 | 0.912 | 0.863 | 9.68 |
| 11) | T | Acetonitrile | 2.184 | 1.826 | 2.326 | 2.086 | 1.956 | 2.233 | 2.055 | 2.056 | 2.090 | 7.56 |
| 12) | T | Acrolein | 1.239 | 0.881 | 0.931 | 0.779 | 0.715 | 0.791 | 0.728 | 0.743 | 0.851 | 20.47 |
| 13) | T | Acetone | 1.275 | 1.149 | 1.302 | 1.117 | 0.990 | 1.042 | 0.961 | 0.983 | 1.102 | 12.01 |
| 14) | T | Trichlorofluor... | 3.258 | 3.055 | 3.578 | 3.101 | 2.831 | 2.959 | 2.726 | 2.741 | 3.031 | 9.48 |
| 15) | T | 2-Propanol (Is... | 3.962 | 3.591 | 4.122 | 3.697 | 2.676 | 3.045 | 2.289 | 2.314 | 3.212 | 22.77 |
| 16) | T | Acrylonitrile | 1.601 | 1.450 | 1.841 | 1.688 | 1.628 | 1.837 | 1.686 | 1.708 | 1.680 | 7.56 |
| 17) | T | 1,1-Dichloroet... | 1.544 | 1.477 | 1.761 | 1.554 | 1.421 | 1.552 | 1.428 | 1.432 | 1.521 | 7.39 |
| 18) | T | 2-Methyl-2-Pro... | 4.173 | 3.715 | 4.374 | 3.869 | 3.672 | 3.915 | 2.816 | | 3.791 | 13.10 |
| 19) | T | Methylene Chlo... | 2.066 | 1.768 | 1.893 | 1.631 | 1.475 | 1.568 | 1.430 | 1.433 | 1.658 | 14.04 |
| 20) | T | 3-Chloro-1-pro... | 1.586 | 1.465 | 1.802 | 1.642 | 1.622 | 1.842 | 1.706 | 1.732 | 1.675 | 7.28 |
| 21) | T | Trichlorotrifl... | 1.633 | 1.524 | 1.773 | 1.542 | 1.408 | 1.513 | 1.382 | 1.380 | 1.519 | 8.92 |
| 22) | T | Carbon Disulfide | 5.957 | 5.263 | 5.891 | 5.280 | 5.100 | 5.467 | 4.979 | 4.913 | 5.356 | 7.33 |
| 23) | T | trans-1,2-Dich... | 1.954 | 1.930 | 2.278 | 2.006 | 1.905 | 2.096 | 1.929 | 1.940 | 2.005 | 6.28 |
| 24) | T | 1,1-Dichloroet... | 2.798 | 2.586 | 3.014 | 2.654 | 2.448 | 2.611 | 2.391 | 2.378 | 2.610 | 8.31 |
| 25) | T | Methyl tert-Bu... | 5.019 | 4.564 | 5.261 | 4.664 | 4.438 | 4.722 | 4.340 | 4.336 | 4.668 | 7.05 |
| 26) | T | Vinyl Acetate | 0.328 | 0.338 | 0.399 | 0.381 | 0.382 | 0.430 | 0.402 | 0.410 | 0.384 | 9.11 |
| 27) | T | 2-Butanone (MEK) | 0.978 | 0.958 | 1.148 | 1.034 | 1.016 | 1.083 | 0.993 | 0.892 | 1.013 | 7.74 |
| 28) | T | cis-1,2-Dichlo... | 2.016 | 1.815 | 2.238 | 1.958 | 1.846 | 2.007 | 1.836 | 1.847 | 1.945 | 7.34 |
| 29) | T | Diisopropyl Ether | 1.321 | 1.317 | 1.609 | 1.393 | 1.321 | 1.440 | 1.336 | 1.354 | 1.387 | 7.18 |
| 30) | T | Ethyl Acetate | 0.442 | 0.481 | 0.597 | 0.540 | 0.528 | 0.595 | 0.554 | 0.564 | 0.538 | 10.00 |
| 31) | T | n-Hexane | 2.793 | 2.545 | 2.862 | 2.550 | 2.379 | 2.566 | 2.385 | 2.425 | 2.563 | 7.03 |



4/28/10

Method Path : J:\MS09\Methods\
Method File : R9042710.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32) | T | Chloroform | 2.907 | 2.716 | 3.171 | 2.798 | 2.549 | 2.709 | 2.465 | 2.478 | 2.724 | 8.74 |
| 33) | S | 1,2-Dichloroet... | 1.524 | 1.542 | 1.528 | 1.526 | 1.520 | 1.491 | 1.477 | 1.464 | 1.509 | 1.85 |
| 34) | T | Tetrahydrofura... | 0.974 | 0.994 | 1.092 | 1.005 | 0.950 | 1.027 | 0.909 | 0.918 | 0.984 | 6.10 |
| 35) | T | Ethyl tert-But... | 2.099 | 1.913 | 2.282 | 2.044 | 1.944 | 2.105 | 1.941 | 1.990 | 2.040 | 5.97 |
| 36) | T | 1,2-Dichloroet... | 2.223 | 2.002 | 2.363 | 2.093 | 1.913 | 2.034 | 1.857 | 1.870 | 2.044 | 8.69 |
| 37) | IR | 1,4-Difluorobenzen... | ----------ISTD---------- | | | | | | | | | |
| 38) | T | 1,1,1-Trichlor... | 0.547 | 0.513 | 0.600 | 0.527 | 0.486 | 0.533 | 0.493 | 0.500 | 0.525 | 7.02 |
| 39) | T | Isopropyl Acetate | 0.176 | 0.160 | 0.206 | 0.191 | 0.188 | 0.213 | 0.197 | 0.204 | 0.192 | 9.03 |
| 40) | T | 1-Butanol | 0.320 | 0.242 | 0.303 | 0.272 | 0.272 | 0.349 | 0.322 | 0.332 | 0.302 | 12.06 |
| 41) | T | Benzene | 1.737 | 1.540 | 1.605 | 1.402 | 1.274 | 1.355 | 1.227 | 1.245 | 1.423 | 13.08 |
| 42) | T | Carbon Tetrach... | 0.427 | 0.408 | 0.484 | 0.439 | 0.412 | 0.457 | 0.428 | 0.443 | 0.437 | 5.65 |
| 43) | T | Cyclohexane | 0.564 | 0.503 | 0.601 | 0.533 | 0.499 | 0.539 | 0.492 | 0.508 | 0.530 | 7.09 |
| 44) | T | tert-Amyl Meth... | 0.966 | 0.908 | 1.049 | 0.949 | 0.913 | 1.005 | 0.928 | 0.954 | 0.959 | 4.99 |
| 45) | T | 1,2-Dichloropr... | 0.332 | 0.299 | 0.353 | 0.309 | 0.289 | 0.316 | 0.289 | 0.292 | 0.310 | 7.46 |
| 46) | T | Bromodichlorom... | 0.424 | 0.392 | 0.466 | 0.424 | 0.405 | 0.455 | 0.422 | 0.430 | 0.427 | 5.66 |
| 47) | T | Trichloroethene | 0.433 | 0.383 | 0.452 | 0.401 | 0.363 | 0.399 | 0.370 | 0.377 | 0.397 | 7.89 |
| 48) | T | 1,4-Dioxane | 0.279 | 0.244 | 0.304 | 0.276 | 0.263 | 0.298 | 0.276 | 0.280 | 0.277 | 6.79 |
| 49) | T | 2,2,4-Trimethy... | 1.376 | 1.281 | 1.466 | 1.316 | 1.236 | 1.336 | 1.218 | 1.229 | 1.307 | 6.50 |
| 50) | T | Methyl Methacr... | 0.138 | 0.127 | 0.161 | 0.150 | 0.148 | 0.166 | 0.155 | 0.162 | 0.151 | 8.70 |
| 51) | T | n-Heptane | 0.332 | 0.313 | 0.388 | 0.338 | 0.322 | 0.354 | 0.324 | 0.337 | 0.339 | 6.98 |
| 52) | T | cis-1,3-Dichlo... | 0.500 | 0.445 | 0.535 | 0.493 | 0.487 | 0.555 | 0.513 | 0.524 | 0.507 | 6.62 |
| 53) | T | 4-Methyl-2-pen... | 0.239 | 0.225 | 0.292 | 0.269 | 0.268 | 0.300 | 0.277 | 0.287 | 0.270 | 9.54 |
| 54) | T | trans-1,3-Dich... | 0.414 | 0.392 | 0.494 | 0.439 | 0.446 | 0.516 | 0.477 | 0.491 | 0.459 | 9.40 |
| 55) | T | 1,1,2-Trichlor... | 0.320 | 0.309 | 0.379 | 0.336 | 0.311 | 0.341 | 0.311 | 0.316 | 0.328 | 7.23 |
| 56) | IR | Chlorobenzene-d5 (... | ----------ISTD---------- | | | | | | | | | |
| 57) | S | Toluene-d8 (SS2) | 2.540 | 2.525 | 2.530 | 2.531 | 2.514 | 2.510 | 2.508 | 2.515 | 2.521 | 0.45 |
| 58) | T | Toluene | 3.995 | 3.524 | 4.061 | 3.585 | 3.304 | 3.543 | 3.221 | 3.215 | 3.556 | 9.15 |
| 59) | T | 2-Hexanone | 1.491 | 1.256 | 1.618 | 1.489 | 1.459 | 1.640 | 1.520 | 1.573 | 1.506 | 7.95 |
| 60) | T | Dibromochlorom... | 0.808 | 0.734 | 0.910 | 0.813 | 0.813 | 0.940 | 0.877 | 0.905 | 0.850 | 8.12 |
| 61) | T | 1,2-Dibromoethane | 0.875 | 0.824 | 1.000 | 0.910 | 0.855 | 0.964 | 0.885 | 0.905 | 0.902 | 6.31 |
| 62) | T | n-Butyl Acetate | 1.580 | 1.411 | 1.814 | 1.661 | 1.668 | 1.915 | 1.801 | 1.897 | 1.718 | 9.98 |
| 63) | T | n-Octane | 0.577 | 0.588 | 0.704 | 0.654 | 0.608 | 0.680 | 0.630 | 0.663 | 0.638 | 7.02 |
| 64) | T | Tetrachloroethene | 1.249 | 1.080 | 1.248 | 1.092 | 1.011 | 1.117 | 1.034 | 1.059 | 1.111 | 8.18 |
| 65) | T | Chlorobenzene | 2.688 | 2.318 | 2.721 | 2.344 | 2.168 | 2.344 | 2.139 | 2.181 | 2.363 | 9.56 |
| 66) | T | Ethylbenzene | 4.164 | 3.675 | 4.329 | 3.909 | 3.681 | 4.034 | 3.687 | 3.700 | 3.898 | 6.54 |
| 67) | T | m- & p-Xylenes | 3.227 | 2.808 | 3.410 | 3.089 | 2.917 | 3.202 | 2.972 | 3.012 | 3.080 | 6.29 |
| 68) | T | Bromoform | 0.661 | 0.614 | 0.822 | 0.743 | 0.765 | 0.939 | 0.898 | 0.946 | 0.798 | 15.63 |
| 69) | T | Styrene | 2.416 | 2.120 | 2.562 | 2.384 | 2.338 | 2.626 | 2.442 | 2.495 | 2.423 | 6.36 |
| 70) | T | o-Xylene | 3.352 | 2.851 | 3.445 | 3.141 | 2.941 | 3.255 | 3.025 | 3.109 | 3.140 | 6.47 |



ISA 4/28/10

Method Path : J:\MS09\Methods\
Method File : R9042710.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71) | T | n-Nonane | 1.389 | 1.257 | 1.491 | 1.359 | 1.297 | 1.419 | 1.332 | 1.414 | 1.370 | 5.45 |
| 72) | T | 1,1,2,2-Tetrac... | 1.250 | 1.171 | 1.452 | 1.321 | 1.270 | 1.422 | 1.320 | 1.372 | 1.322 | 7.02 |
| 73) | S | Bromofluoroben... | 0.869 | 0.864 | 0.868 | 0.871 | 0.882 | 0.887 | 0.906 | 0.918 | 0.883 | 2.23 |
| 74) | T | Cumene | 4.874 | 4.019 | 4.775 | 4.285 | 4.026 | 4.372 | 4.009 | 3.964 | 4.291 | 8.40 |
| 75) | T | alpha-Pinene | 1.943 | 1.818 | 2.110 | 1.963 | 1.940 | 2.120 | 1.992 | 2.042 | 1.991 | 4.99 |
| 76) | T | n-Propylbenzene | 5.229 | 4.538 | 5.574 | 5.059 | 4.799 | 5.201 | 4.772 | 4.644 | 4.977 | 7.02 |
| 77) | T | 3-Ethyltoluene | 4.047 | 3.451 | 4.301 | 3.966 | 3.757 | 4.154 | 3.896 | 3.863 | 3.929 | 6.58 |
| 78) | T | 4-Ethyltoluene | 4.130 | 3.568 | 4.420 | 4.055 | 3.836 | 4.162 | 3.789 | 3.714 | 3.959 | 7.07 |
| 79) | T | 1,3,5-Trimethy... | 3.406 | 2.840 | 3.465 | 3.218 | 3.084 | 3.422 | 3.196 | 3.217 | 3.231 | 6.39 |
| 80) | T | alpha-Methylst... | 1.566 | 1.412 | 1.856 | 1.776 | 1.797 | 2.046 | 1.918 | 1.951 | 1.790 | 11.66 |
| 81) | T | 2-Ethyltoluene | 4.173 | 3.682 | 4.510 | 4.128 | 3.903 | 4.306 | 3.971 | 3.944 | 4.077 | 6.33 |
| 82) | T | 1,2,4-Trimethy... | 3.304 | 2.907 | 3.632 | 3.324 | 3.218 | 3.701 | 3.421 | 3.219 | 3.341 | 7.51 |
| 83) | T | n-Decane | 1.509 | 1.321 | 1.604 | 1.504 | 1.445 | 1.630 | 1.543 | 1.625 | 1.523 | 6.86 |
| 84) | T | Benzyl Chloride | 1.907 | 1.693 | 2.352 | 2.299 | 2.513 | 3.145 | 3.015 | 3.131 | 2.507 | 22.08 |
| 85) | T | 1,3-Dichlorobe... | 2.070 | 1.810 | 2.231 | 2.017 | 1.913 | 2.169 | 2.023 | 2.065 | 2.037 | 6.55 |
| 86) | T | 1,4-Dichlorobe... | 2.174 | 1.839 | 2.317 | 2.088 | 1.983 | 2.258 | 2.110 | 2.130 | 2.112 | 7.13 |
| 87) | T | sec-Butylbenzene | 4.562 | 4.154 | 5.037 | 4.605 | 4.390 | 4.838 | 4.420 | 4.271 | 4.535 | 6.45 |
| 88) | T | 4-Isopropyltol... | 4.204 | 3.830 | 4.804 | 4.429 | 4.284 | 4.799 | 4.314 | 3.851 | 4.314 | 8.54 |
| 89) | T | 1,2,3-Trimethy... | 3.273 | 2.893 | 3.658 | 3.345 | 3.249 | 3.767 | 3.487 | 3.263 | 3.367 | 8.08 |
| 90) | T | 1,2-Dichlorobe... | 1.847 | 1.696 | 2.165 | 1.942 | 1.857 | 2.142 | 1.991 | 1.881 | 1.940 | 8.09 |
| 91) | T | d-Limonene | 0.973 | 0.945 | 1.192 | 1.109 | 1.147 | 1.347 | 1.290 | 1.279 | 1.160 | 12.66 |
| 92) | T | 1,2-Dibromo-3-... | 0.480 | 0.455 | 0.603 | 0.581 | 0.601 | 0.768 | 0.730 | 0.775 | 0.624 | 19.82 |
| 93) | T | n-Undecane | 1.415 | 1.271 | 1.527 | 1.422 | 1.433 | 1.686 | 1.608 | 1.700 | 1.508 | 9.93 |
| 94) | T | 1,2,4-Trichlor... | 1.271 | 1.110 | 1.394 | 1.261 | 1.254 | 1.599 | 1.518 | 1.571 | 1.372 | 12.86 |
| 95) | T | Naphthalene | 4.185 | 3.267 | 4.048 | 3.843 | 3.798 | 5.220 | 4.866 | 4.716 | 4.243 | 15.22 |
| 96) | T | n-Dodecane | 1.536 | 1.287 | 1.422 | 1.336 | 1.396 | 1.835 | 1.785 | 1.908 | 1.563 | 15.64 |
| 97) | T | Hexachlorobuta... | 0.810 | 0.735 | 0.936 | 0.855 | 0.818 | 0.987 | 0.946 | 0.992 | 0.885 | 10.63 |
| 98) | T | Cyclohexanone | 1.001 | 0.862 | 1.063 | 0.973 | 0.978 | 1.126 | 1.058 | 1.102 | 1.020 | 8.33 |
| 99) | T | tert-Butylbenzene | 3.565 | 3.147 | 3.799 | 3.534 | 3.344 | 3.724 | 3.382 | 3.146 | 3.455 | 7.07 |
| 100) | T | n-Butylbenzene | 3.357 | 2.976 | 3.725 | 3.469 | 3.349 | 3.768 | 3.475 | 3.409 | 3.441 | 7.14 |

(#) = Out of Range





4/28/10

# Primary Source Standards Concentrations
## (Working & Initial Calibration)

4ng/L Std. ID: S20-04191001
20ng/L Std. ID: S20-04261003

200ng/L Std. ID: S20-04191004

| Dilution Factors: | | 5 | 50 | 250 | Working STD Conc.(ng/L): | 4 | 4 | 20 | 20 | 20 | 200 | 200 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | ICAL Concentrations (Primary Source) | | | | | | | |
| | Source Std. | Primary Working Standards | | | Injection (L): | 0.025 | 0.05 | 0.025 | 0.050 | 0.25 | 0.125 | 0.25 | 0.50 |
| Compounds | mg/m$^3$ | 200ng/L | 20ng/L | 4ng/L | ICAL Points: | 0.1ng | 0.2ng | 0.5ng | 1ng | 5ng | 25ng | 50ng | 100ng |
| Propene | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| Dichlorodifluoromethane | 1.05 | 210 | 21.0 | 4.20 | | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| Chloromethane | 1.00 | 200 | 20.0 | 4.00 | | 0.100 | 0.200 | 0.500 | 1.00 | 5.00 | 25.0 | 50.0 | 100 |
| Freon-114 | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| Vinyl Chloride | 1.01 | 202 | 20.2 | 4.04 | | 0.101 | 0.202 | 0.505 | 1.01 | 5.05 | 25.3 | 50.5 | 101 |
| 1,3-Butadiene | 1.20 | 240 | 24.0 | 4.80 | | 0.120 | 0.240 | 0.600 | 1.20 | 6.00 | 30.0 | 60.0 | 120 |
| Bromomethane | 1.02 | 204 | 20.4 | 4.08 | | 0.102 | 0.204 | 0.510 | 1.02 | 5.10 | 25.5 | 51.0 | 102 |
| Chloroethane | 1.01 | 202 | 20.2 | 4.04 | | 0.101 | 0.202 | 0.505 | 1.01 | 5.05 | 25.3 | 50.5 | 101 |
| Ethanol | 5.20 | 1040 | 104 | 20.8 | | 0.520 | 1.040 | 2.60 | 5.20 | 26.0 | 130 | 260 | 520 |
| Acetonitrile | 1.05 | 210 | 21.0 | 4.20 | | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| Acrolein | 1.08 | 216 | 21.6 | 4.32 | | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| Acetone | 5.50 | 1100 | 110 | 22.0 | | 0.550 | 1.100 | 2.75 | 5.50 | 27.5 | 138 | 275 | 550 |
| Trichlorofluoromethane | 1.05 | 210 | 21.0 | 4.20 | | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| Isopropanol | 1.89 | 378 | 37.8 | 7.56 | | 0.189 | 0.378 | 0.945 | 1.89 | 9.45 | 47.3 | 94.5 | 189 |
| Acrylonitrile | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| 1,1-Dichloroethene | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| tert-Butanol | 2.02 | 404 | 40.4 | 8.08 | | 0.202 | 0.404 | 1.01 | 2.02 | 10.1 | 50.5 | 101 | 202 |
| Methylene Chloride | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| Allyl Chloride | 1.08 | 216 | 21.6 | 4.32 | | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| Trichlorotrifluoroethane | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| Carbon Disulfide | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| trans-1,2-Dichloroethene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| 1,1-Dichloroethane | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| Methyl tert-Butyl Ether | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| Vinyl Acetate | 5.02 | 1004 | 100 | 20.1 | | 0.502 | 1.004 | 2.51 | 5.02 | 25.1 | 126 | 251 | 502 |
| 2-Butanone | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| cis-1,2-Dichloroethene | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| Diisopropyl Ether | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| Ethyl Acetate | 2.13 | 426 | 42.6 | 8.52 | | 0.213 | 0.426 | 1.07 | 2.13 | 10.7 | 53.3 | 107 | 213 |
| n-Hexane | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| Chloroform | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| Tetrahydrofuran | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| Ethyl tert-Butyl Ether | 1.03 | 206 | 20.6 | 4.12 | | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| 1,2-Dichloroethane | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| 1,1,1-Trichloroethane | 1.05 | 210 | 21.0 | 4.20 | | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| Isopropyl Acetate | 2.09 | 418 | 41.8 | 8.36 | | 0.209 | 0.418 | 1.05 | 2.09 | 10.5 | 52.3 | 105 | 209 |
| 1-Butanol | 2.07 | 414 | 41.4 | 8.28 | | 0.207 | 0.414 | 1.04 | 2.07 | 10.4 | 51.8 | 104 | 207 |
| Benzene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| Carbon Tetrachloride | 1.08 | 216 | 21.6 | 4.32 | | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| Cyclohexane | 2.15 | 430 | 43.0 | 8.60 | | 0.215 | 0.430 | 1.08 | 2.15 | 10.8 | 53.8 | 108 | 215 |
| tert-Amyl Methyl Ether | 1.04 | 208 | 20.8 | 4.16 | | 0.104 | 0.208 | 0.520 | 1.04 | 5.20 | 26.0 | 52.0 | 104 |
| 1,2-Dichloropropane | 1.05 | 210 | 21.0 | 4.20 | | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| Bromodichloromethane | 1.08 | 216 | 21.6 | 4.32 | | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| Trichloroethene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| 1,4-Dioxane | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| Isooctane | 1.04 | 208 | 20.8 | 4.16 | | 0.104 | 0.208 | 0.520 | 1.04 | 5.20 | 26.0 | 52.0 | 104 |
| Methyl Methacrylate | 2.13 | 426 | 42.6 | 8.52 | | 0.213 | 0.426 | 1.07 | 2.13 | 10.7 | 53.3 | 107 | 213 |
| n-Heptane | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| cis-1,3-Dichloropropene | 0.99 | 198 | 19.8 | 3.96 | | 0.099 | 0.198 | 0.495 | 0.990 | 4.95 | 24.8 | 49.5 | 99.0 |
| 4-Methyl-2-pentanone | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| trans-1,3-Dichloropropene | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| 1,1,2-Trichloroethane | 1.05 | 210 | 21.0 | 4.20 | | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| Toluene | 1.08 | 216 | 21.6 | 4.32 | | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| 2-Hexanone | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| Dibromochloromethane | 1.15 | 230 | 23.0 | 4.60 | | 0.115 | 0.230 | 0.575 | 1.15 | 5.75 | 28.8 | 57.5 | 115 |
| 1,2-Dibromoethane | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| n-Butyl Acetate | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| n-Octane | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| Tetrachloroethene | 1.02 | 204 | 20.4 | 4.08 | | 0.102 | 0.204 | 0.510 | 1.02 | 5.10 | 25.5 | 51.0 | 102 |
| Chlorobenzene | 1.08 | 216 | 21.6 | 4.32 | | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| Ethylbenzene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| m-&p-Xylene | 2.08 | 416 | 41.6 | 8.32 | | 0.208 | 0.416 | 1.04 | 2.08 | 10.4 | 52.0 | 104 | 208 |



DA 4/28/10

# Primary Source Standards Concentrations
## (Working & Initial Calibration)

4ng/L Std. ID: S20-04191001
20ng/L Std. ID:
200ng/L Std. ID:

| Dilution Factors: | | 5 | 50 | 250 | Working STD Conc.(ng/L): | ICAL Concentrations (Primary Source) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 4 | 4 | 20 | 20 | 20 | 200 | 200 | 200 |
| | Source Std. | Primary Working Standards | | | Injection (L): | 0.025 | 0.050 | 0.025 | 0.05 | 0.25 | 0.125 | 0.25 | 0.50 |
| Compounds | mg/m³ | 200ng/L | 20ng/L | 4ng/L | ICAL Points: | 0.1ng | 0.2ng | 0.5ng | 1ng | 5ng | 25ng | 50ng | 100ng |
| Bromoform | 1.03 | 206 | 20.6 | 4.12 | | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| Styrene | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| o-Xylene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| n-Nonane | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| 1,1,2,2-Tetrachloroethane | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| Cumene | 1.03 | 206 | 20.6 | 4.12 | | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| alpha-Pinene | 1.01 | 202 | 20.2 | 4.04 | | 0.101 | 0.202 | 0.505 | 1.01 | 5.05 | 25.3 | 50.5 | 101 |
| n-Propylbenzene | 1.03 | 206 | 20.6 | 4.12 | | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| 3-Ethyltoluene | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| 4-Ethyltoluene | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| 1,3,5-Trimethylbenzene | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| alpha-Methylstyrene | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| 2-Ethyltoluene | 1.05 | 210 | 21.0 | 4.20 | | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| 1,2,4-Trimethylbenzene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| n-Decane | 1.08 | 216 | 21.6 | 4.32 | | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| Benzyl Chloride | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| 1,3-Dichlorobenzene | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| 1,4-Dichlorobenzene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| sec-Butylbenzene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| p-Isopropyltoluene | 1.03 | 206 | 20.6 | 4.12 | | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| 1,2,3-Trimethylbenzene | 1.07 | 214 | 21.4 | 4.28 | | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| 1,2-Dichlorobenzene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| d-Limonene | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| 1,2-Dibromo-3-chloropropane | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| n-Undecane | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| 1,2,4-Trichlorobenzene | 1.12 | 224 | 22.4 | 4.48 | | 0.112 | 0.224 | 0.560 | 1.12 | 5.60 | 28.0 | 56.0 | 112 |
| Naphthalene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| n-Dodecane | 0.99 | 198 | 19.8 | 3.96 | | 0.099 | 0.198 | 0.495 | 0.990 | 4.95 | 24.8 | 49.5 | 99.0 |
| Hexachloro-1,3-butadiene | 1.10 | 220 | 22.0 | 4.40 | | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| Methacrylonitrile | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| Cyclohexanone | 0.98 | 196 | 19.6 | 3.92 | | 0.098 | 0.196 | 0.490 | 0.980 | 4.90 | 24.5 | 49.0 | 98.0 |
| tert-Butylbenzene | 1.06 | 212 | 21.2 | 4.24 | | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| n-Butylbenzene | 1.09 | 218 | 21.8 | 4.36 | | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |

*Enter Information in the Solid Shaded Areas ONLY.



4/28/10

Calibration Status Report MS09

Method Path : J:\MS09\Methods\
Method File : R9042710.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 14:31:40 2010
Response Via : Initial Calibration

| # | ID | Conc | ISTD Conc | Path\File |
|---|---|---|---|---|
| 1 | 0.1 | 0 | 25 | J:\MS09\Data\2010_04\27\04271006.D |
| 2 | 0.2 | 0 | 25 | J:\MS09\Data\2010_04\27\04271007.D |
| 3 | 0.5 | 1 | 25 | J:\MS09\Data\2010_04\27\04271008.D |
| 4 | 1.0 | 1 | 25 | J:\MS09\Data\2010_04\27\04271009.D |
| 5 | 5.0 | 5 | 25 | J:\MS09\Data\2010_04\27\04271010.D |
| 6 | 25 | 27 | 25 | J:\MS09\Data\2010_04\27\04271011.D |
| 7 | 50 | 54 | 25 | J:\MS09\Data\2010_04\27\04271012.D |
| 8 | 100 | 107 | 25 | J:\MS09\Data\2010_04\27\04271013.D |

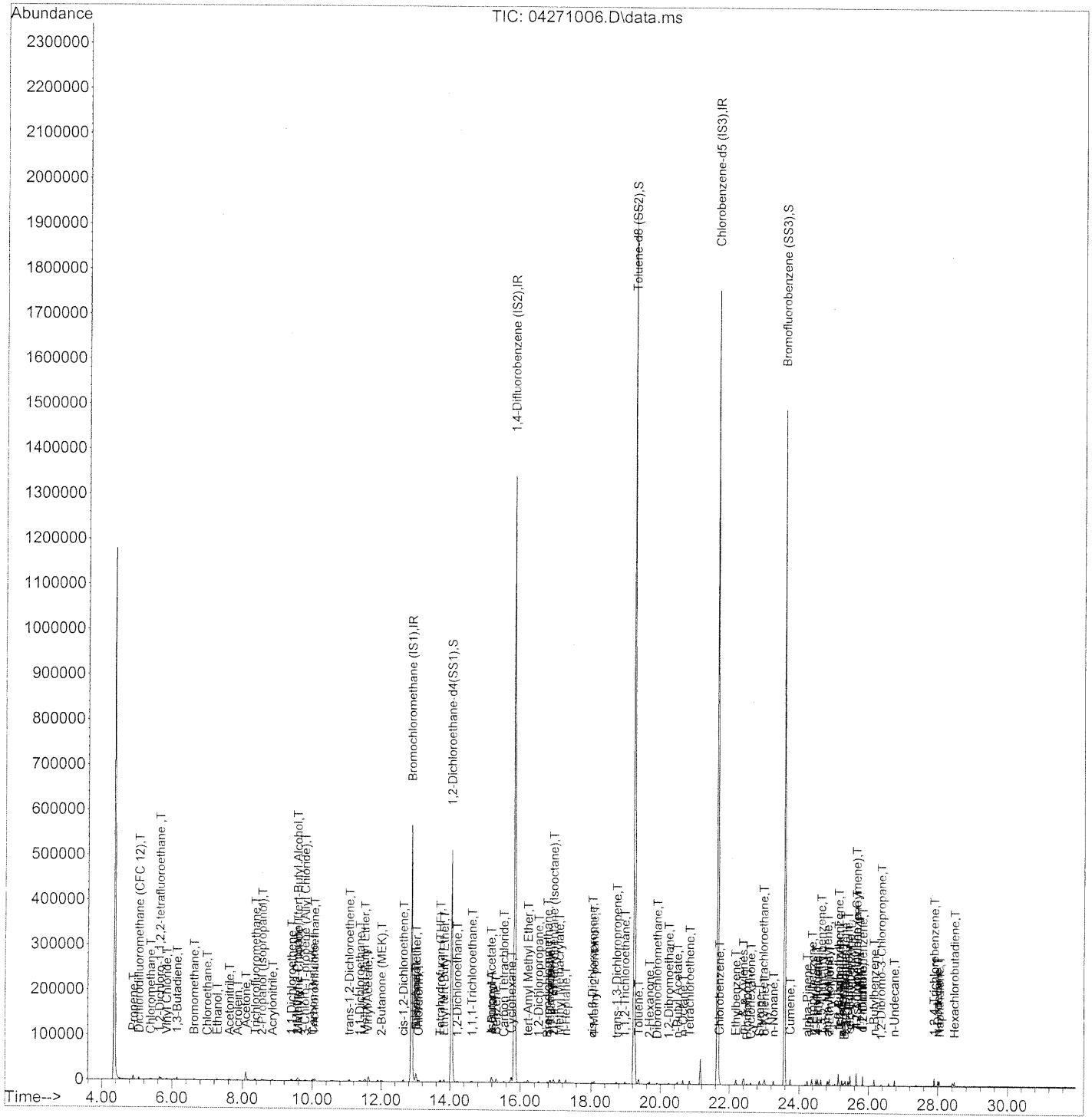
| # | ID | Update Time | Quant Time | Acquisition Time |
|---|---|---|---|---|
| 1 | 0.1 | Apr 28 14:31 2010 | Apr 28 14:30 2010 | 27 Apr 2010 18:22 |
| 2 | 0.2 | Apr 28 05:07 2010 | Apr 27 20:54 2010 | 27 Apr 2010 19:03 |
| 3 | 0.5 | Apr 28 05:07 2010 | Apr 27 21:01 2010 | 27 Apr 2010 19:45 |
| 4 | 1.0 | Apr 28 05:07 2010 | Apr 27 21:04 2010 | 27 Apr 2010 20:27 |
| 5 | 5.0 | Apr 28 05:08 2010 | Apr 28 05:03 2010 | 27 Apr 2010 21:09 |
| 6 | 25 | Apr 28 05:08 2010 | Apr 28 05:04 2010 | 27 Apr 2010 21:51 |
| 7 | 50 | Apr 28 05:08 2010 | Apr 28 05:04 2010 | 27 Apr 2010 22:33 |
| 8 | 100 | Apr 28 05:09 2010 | Apr 28 05:05 2010 | 27 Apr 2010 23:15 |

R9042710.M Wed Apr 28 14:48:25 2010

DM 4/28/10

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271006.D
Acq On : 27 Apr 2010 18:22
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 28 14:30:39 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271006.D
Acq On : 27 Apr 2010 18:22
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 28 14:30:39 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.88 | 130 | 341241 | 25.000 | ng | | -0.05 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1655132 | 25.000 | ng | | -0.03 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 685249 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 519893 | 24.604 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery | = | 98.40% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1740487 | 24.322 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery | = | 97.28% | | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 595195 | 22.725 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery | = | 90.88% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.90 | 42 | 2177 | 0.151 | ng | | 98 |
| 3) Dichlorodifluoromethan... | 5.06 | 85 | 5460 | 0.140 | ng | # | 94 |
| 4) Chloromethane | 5.39 | 50 | 3289 | 0.148 | ng | | 91 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.65 | 135 | 2995 | 0.123 | ng | | 90 |
| 6) Vinyl Chloride | 5.85 | 62 | 3299 | 0.125 | ng | | 93 |
| 7) 1,3-Butadiene | 6.15 | 54 | 2798 | 0.162 | ng | | 96 |
| 8) Bromomethane | 6.63 | 94 | 2345 | 0.137 | ng | | 99 |
| 9) Chloroethane | 7.00 | 64 | 1710 | 0.137 | ng | # | 43 |
| 10) Ethanol | 7.28 | 45 | 5643m | 0.567 | ng | | |
| 11) Acetonitrile | 7.63 | 41 | 3130 | 0.134 | ng | | 90 |
| 12) Acrolein | 7.86 | 56 | 1827 | 0.209 | ng | | 86 |
| 13) Acetone | 8.09 | 58 | 9572m | 0.767 | ng | | |
| 14) Trichlorofluoromethane | 8.36 | 101 | 4669 | 0.127 | ng | | 95 |
| 15) 2-Propanol (Isopropanol) | 8.56 | 45 | 10220 | 0.273 | ng | | 92 |
| 16) Acrylonitrile | 8.86 | 53 | 2317 | 0.125 | ng | | 95 |
| 17) 1,1-Dichloroethene | 9.40 | 96 | 2318 | 0.134 | ng | # | 71 |
| 18) 2-Methyl-2-Propanol (t... | 9.57 | 59 | 11506 | 0.264 | ng | # | 79 |
| 19) Methylene Chloride | 9.59 | 84 | 3018 | 0.162 | ng | # | 74 |
| 20) 3-Chloro-1-propene (Al... | 9.78 | 41 | 2338 | 0.138 | ng | | 99 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 2452 | 0.132 | ng | # | 73 |
| 22) Carbon Disulfide | 10.01 | 76 | 8700 | 0.143 | ng | | 87 |
| 23) trans-1,2-Dichloroethene | 11.07 | 61 | 2827 | 0.124 | ng | # | 70 |
| 24) 1,1-Dichloroethane | 11.37 | 63 | 4049 | 0.144 | ng | | 87 |
| 25) Methyl tert-Butyl Ether | 11.53 | 73 | 7468 | 0.137 | ng | | 84 |
| 26) Vinyl Acetate | 11.62 | 86 | 2247 | 0.807 | ng | # | 47 |
| 27) 2-Butanone (MEK) | 12.01 | 72 | 1468 | 0.124 | ng | | 94 |
| 28) cis-1,2-Dichloroethene | 12.65 | 61 | 2999 | 0.135 | ng | | 76 |
| 29) Diisopropyl Ether | 13.02 | 87 | 1930 | 0.121 | ng | # | 51 |
| 30) Ethyl Acetate | 13.01 | 61 | 1286 | 0.216 | ng | | 88 |
| 31) n-Hexane | 13.01 | 57 | 4155 | 0.150 | ng | # | 90 |



DA 4/28/10

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271006.D
Acq On : 27 Apr 2010 18:22
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 28 14:30:39 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.09 | 83 | 4245 | 0.136 ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.72 | 72 | 1462 | 0.131 ng | # | 85 |
| 35) Ethyl tert-Butyl Ether | 13.83 | 87 | 2951 | 0.124 ng | # | 74 |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 3217 | 0.132 ng | | 82 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 3805 | 0.126 ng | | 91 |
| 39) Isopropyl Acetate | 15.18 | 61 | 2436 | 0.241 ng | # | 83 |
| 40) 1-Butanol | 15.20 | 56 | 4387 | 0.246 ng | | 86 |
| 41) Benzene | 15.32 | 78 | 12191 | 0.170 ng | | 94 |
| 42) Carbon Tetrachloride | 15.54 | 117 | 3053 | 0.115 ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 8031 | 0.281 ng | # | 77 |
| 44) tert-Amyl Methyl Ether | 16.22 | 73 | 6654 | 0.125 ng | | 94 |
| 45) 1,2-Dichloropropane | 16.52 | 63 | 2311 | 0.143 ng | | 90 |
| 46) Bromodichloromethane | 16.78 | 83 | 3030 | 0.126 ng | | 99 |
| 47) Trichloroethene | 16.85 | 130 | 3038 | 0.129 ng | | 98 |
| 48) 1,4-Dioxane | 16.85 | 88 | 1978 | 0.128 ng | # | 69 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 9475 | 0.138 ng | | 97 |
| 50) Methyl Methacrylate | 17.11 | 100 | 1944 | 0.228 ng | # | 59 |
| 51) n-Heptane | 17.30 | 71 | 2332 | 0.129 ng | | 85 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 3279 | 0.117 ng | | 87 |
| 53) 4-Methyl-2-pentanone | 18.10 | 58 | 1744 | 0.120 ng | | 97 |
| 54) trans-1,3-Dichloropropene | 18.74 | 75 | 3017 | 0.117 ng | | 88 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 2223 | 0.124 ng | | 90 |
| 58) Toluene | 19.37 | 91 | 11826 | 0.141 ng | | 99 |
| 59) 2-Hexanone | 19.68 | 43 | 4494 | 0.123 ng | | 99 |
| 60) Dibromochloromethane | 19.91 | 129 | 2546 | 0.117 ng | | 98 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 2542 | 0.116 ng | | 100 |
| 62) n-Butyl Acetate | 20.49 | 43 | 4765 | 0.116 ng | | 99 |
| 63) n-Octane | 20.66 | 57 | 1693 | 0.116 ng | # | 67 |
| 64) Tetrachloroethene | 20.84 | 166 | 3492 | 0.128 ng | | 97 |
| 65) Chlorobenzene | 21.71 | 112 | 7958 | 0.139 ng | | 97 |
| 66) Ethylbenzene | 22.19 | 91 | 12098 | 0.130 ng | | 98 |
| 67) m- & p-Xylenes | 22.40 | 91 | 18399 | 0.246 ng | | 91 |
| 68) Bromoform | 22.51 | 173 | 1867 | 0.087 ng | | 81 |
| 69) Styrene | 22.87 | 104 | 7087 | 0.120 ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 9739 | 0.128 ng | | 96 |
| 71) n-Nonane | 23.27 | 43 | 4035 | 0.128 ng | | 91 |
| 72) 1,1,2,2-Tetrachloroethane | 22.98 | 83 | 3665 | 0.127 ng | | 99 |
| 74) Cumene | 23.75 | 105 | 13759 | 0.133 ng | | 100 |
| 75) alpha-Pinene | 24.24 | 93 | 5378 | 0.110 ng | | 94 |
| 76) n-Propylbenzene | 24.38 | 91 | 14763 | 0.124 ng | | 96 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 12090 | 0.126 ng | | 95 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 12338 | 0.128 ng | | 97 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 10177 | 0.127 ng | | 98 |

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271006.D
Acq On : 27 Apr 2010 18:22
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

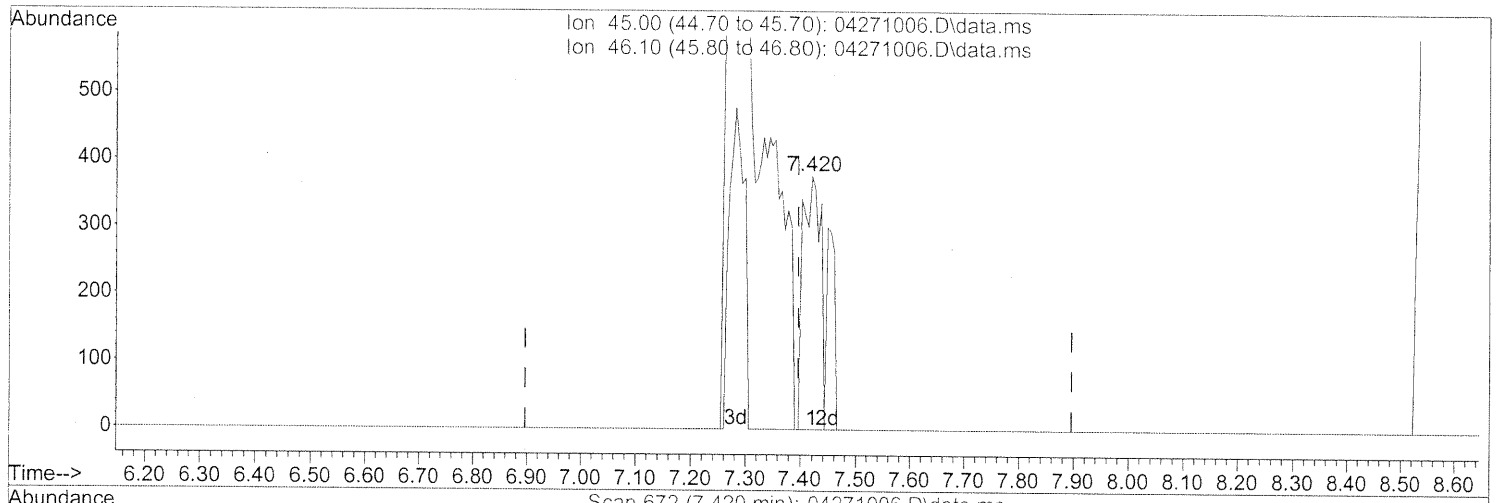
Quant Time: Apr 28 14:30:39 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

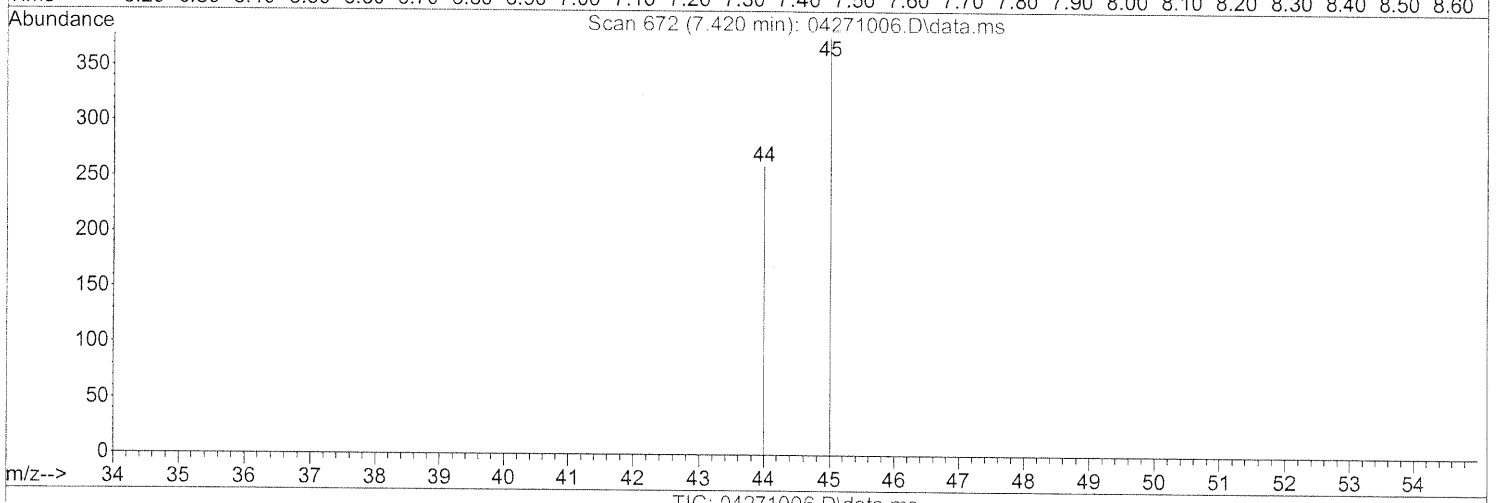
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 4592 | 0.101 ng | | 96 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 12009 | 0.120 ng | | 97 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 9599 | 0.115 ng | | 96 |
| 83) n-Decane | 25.25 | 57 | 4467 | 0.126 ng | | 91 |
| 84) Benzyl Chloride | 25.31 | 91 | 5749 | 0.096 ng | | 97 |
| 85) 1,3-Dichlorobenzene | 25.34 | 146 | 6184 | 0.120 ng | | 99 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 6316 | 0.118 ng | | 99 |
| 87) sec-Butylbenzene | 25.47 | 105 | 13255 | 0.119 ng | | 97 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 11870 | 0.108 ng | | 95 |
| 89) 1,2,3-Trimethylbenzene | 25.66 | 105 | 9598 | 0.113 ng | | 89 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 5367 | 0.108 ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 2906 | 0.103 ng | | 84 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 1447 | 0.092 ng | # | 68 |
| 93) n-Undecane | 26.75 | 57 | 4227 | 0.117 ng | | 91 |
| 94) 1,2,4-Trichlorobenzene | 27.89 | 180 | 3902 | 0.106 ng | | 98 |
| 95) Naphthalene | 28.05 | 128 | 12158 | 0.106 ng | | 94 |
| 96) n-Dodecane | 28.00 | 57 | 4169 | 0.108 ng | | 89 |
| 97) Hexachlorobutadiene | 28.47 | 225 | 2441 | 0.101 ng | | 93 |
| 98) Cyclohexanone | 22.62 | 55 | 2688 | 0.106 ng | # | 87 |
| 99) tert-Butylbenzene | 25.15 | 119 | 10357 | 0.120 ng | | 98 |
| 100) n-Butylbenzene | 26.16 | 91 | 10030 | 0.118 ng | | 96 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271006.D
Acq On : 27 Apr 2010 18:22
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:45:23 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271006.D\data.ms

(10) Ethanol (T)

7.420min (+0.023) 0.08ng

response 794

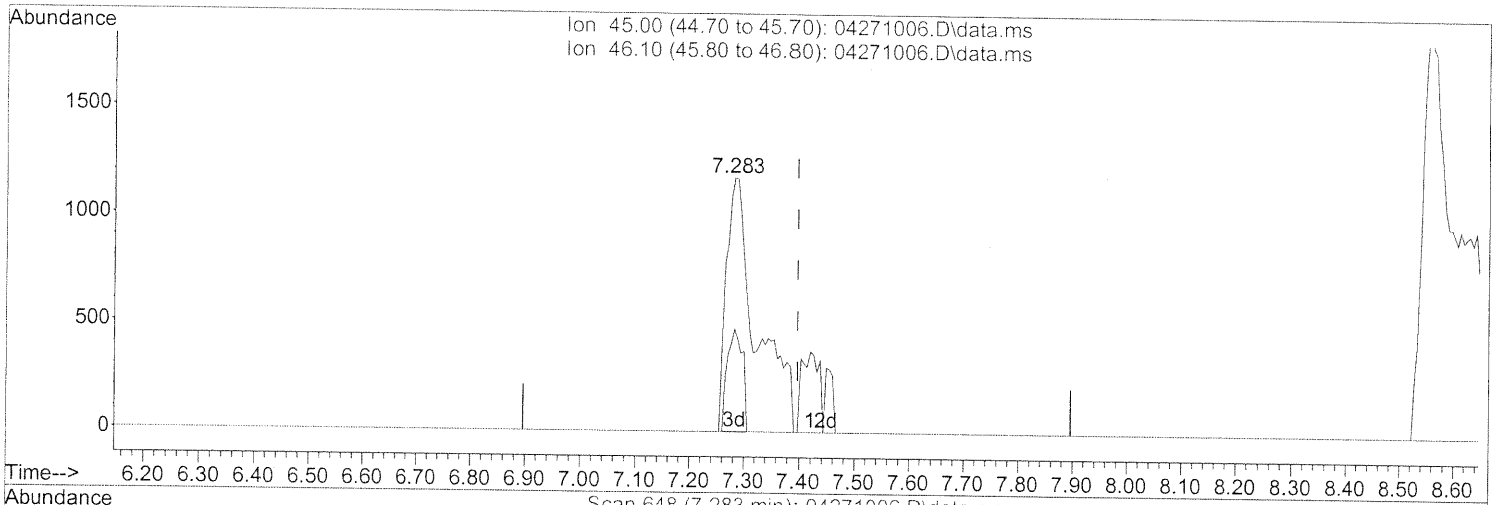
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

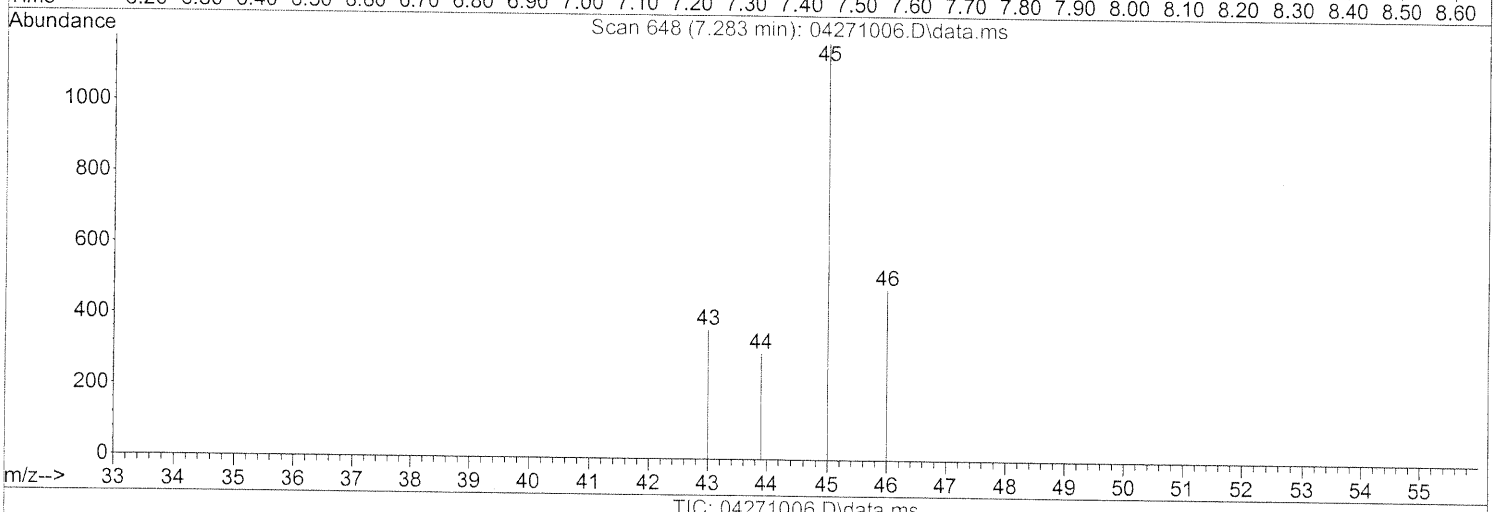
SP

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271006.D
Acq On : 27 Apr 2010 18:22
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:45:23 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271006.D\data.ms

(10) Ethanol (T)

7.283min (-0.114) 0.57ng m

response 5643

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → IC

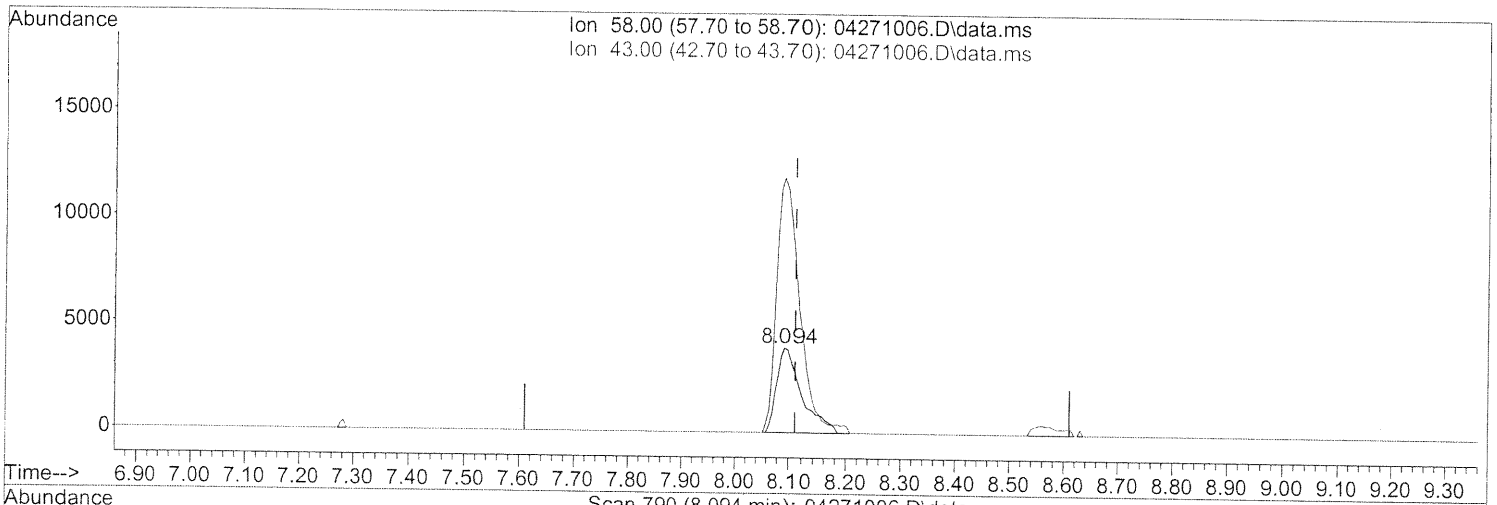
DA 4/28/10

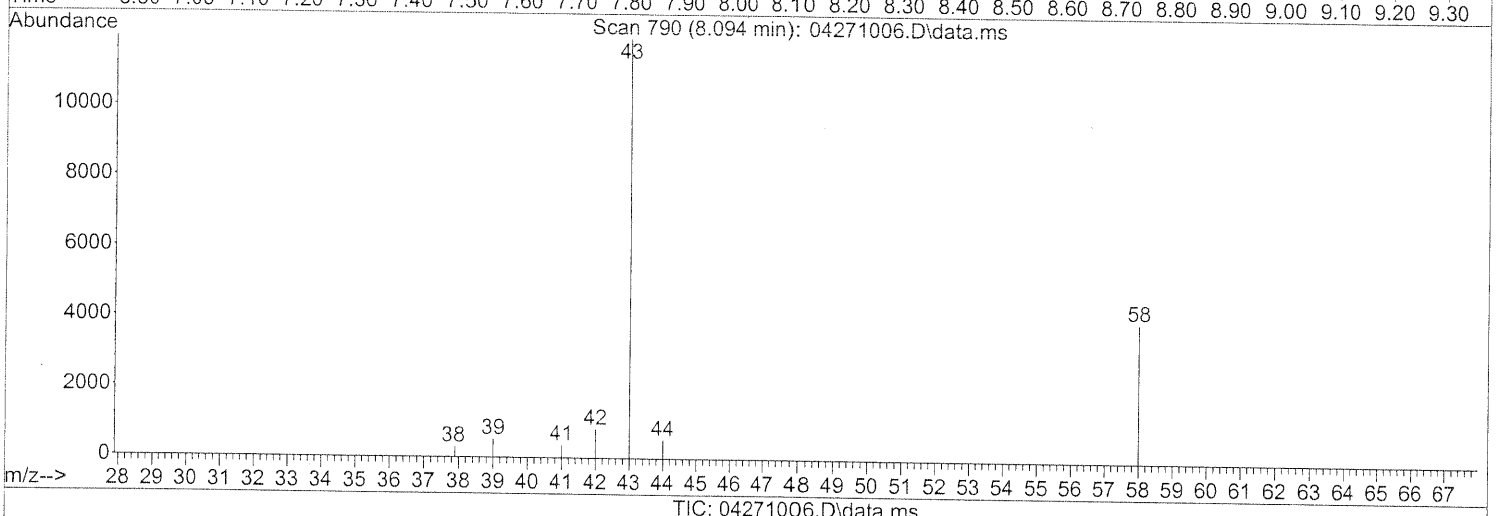
KR 4/30/10

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271006.D
Acq On : 27 Apr 2010 18:22
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:46:23 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271006.D\data.ms

(13) Acetone (T)

8.094min (-0.017) 0.94ng

response 11717

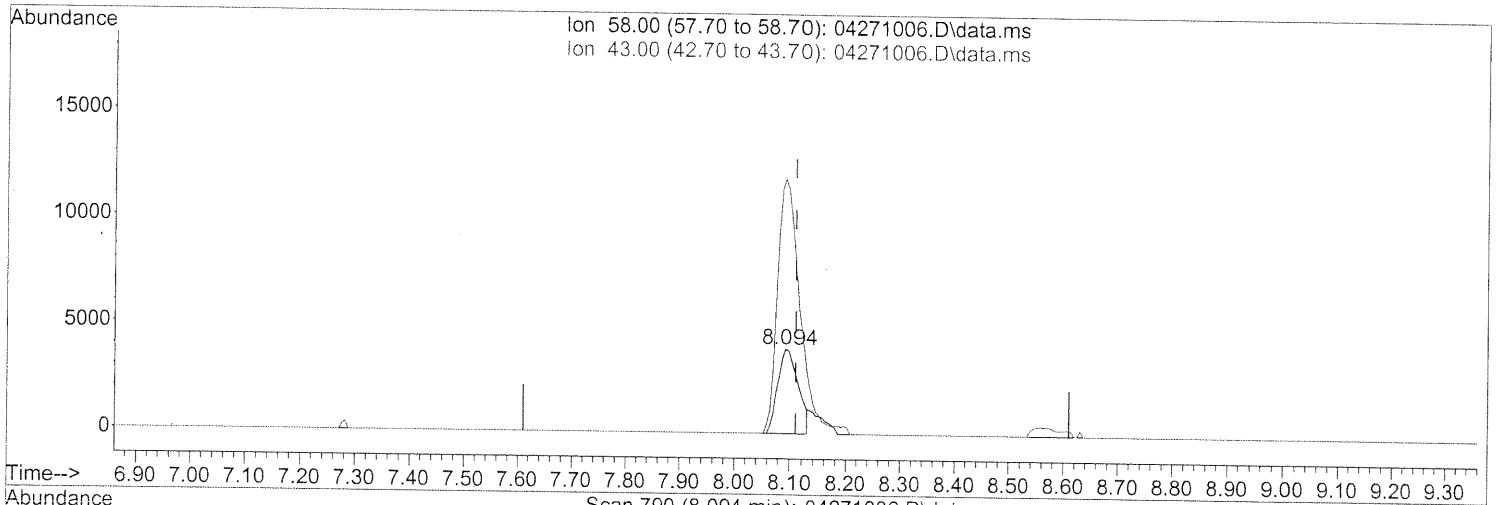
| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 276.43# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

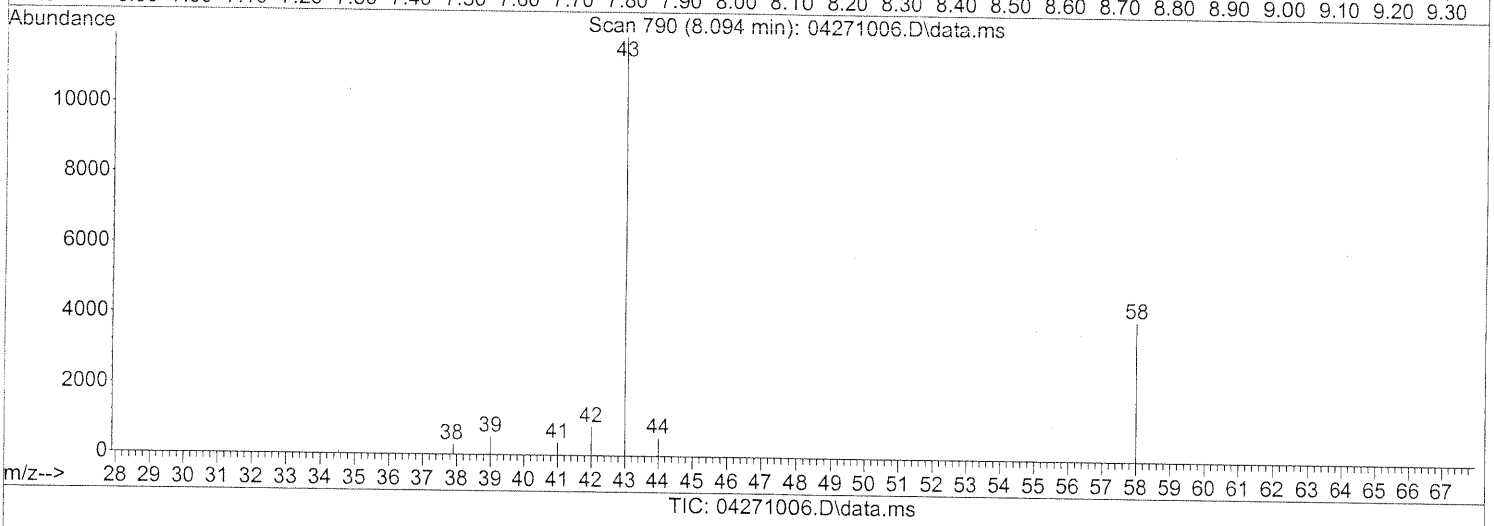
SH

# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271006.D
Acq On : 27 Apr 2010 18:22
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:46:23 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




(13) Acetone (T)

8.094min (-0.017) 0.77ng m

response 9572

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 338.37 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

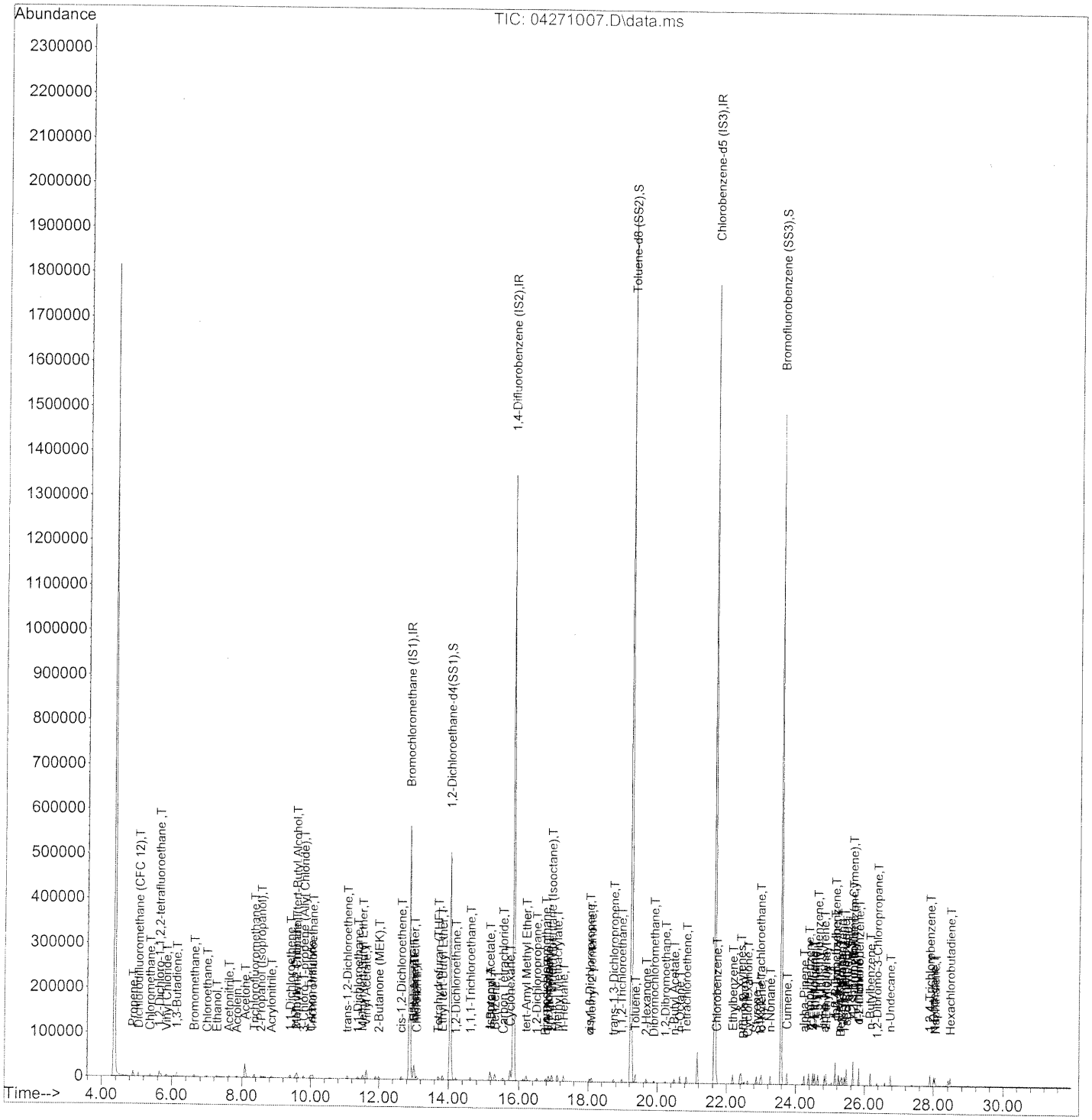
SH → IC

JSA 4/28/10

KF 4/30/10

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271007.D
Acq On : 27 Apr 2010 19:03
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:54:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271007.D
Acq On : 27 Apr 2010 19:03
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:54:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 337635 | 25.000 | ng | | -0.04 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1652324 | 25.000 | ng | | -0.03 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 689145 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 520502 | 24.896 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery | = | 99.60% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1740045 | 24.178 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery | = | 96.72% | | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 595676 | 22.615 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery | = | 90.44% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.89 | 42 | 3716 | 0.260 | ng | | 97 |
| 3) Dichlorodifluoromethan... | 5.05 | 85 | 10004 | 0.259 | ng | | 97 |
| 4) Chloromethane | 5.39 | 50 | 5884 | 0.268 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.64 | 135 | 5593 | 0.231 | ng | | 97 |
| 6) Vinyl Chloride | 5.85 | 62 | 6127 | 0.235 | ng | | 98 |
| 7) 1,3-Butadiene | 6.14 | 54 | 4789 | 0.280 | ng | | 96 |
| 8) Bromomethane | 6.64 | 94 | 4192 | 0.247 | ng | | 100 |
| 9) Chloroethane | 7.00 | 64 | 3020 | 0.244 | ng | | 88 |
| 10) Ethanol | 7.28 | 45 | 10509m | 1.067 | ng | | |
| 11) Acetonitrile | 7.62 | 41 | 5179 | 0.225 | ng | | 92 |
| 12) Acrolein | 7.85 | 56 | 2569 | 0.298 | ng | | 94 |
| 13) Acetone | 8.09 | 58 | 17074m | 1.382 | ng | | |
| 14) Trichlorofluoromethane | 8.36 | 101 | 8663 | 0.237 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.55 | 45 | 18331 | 0.495 | ng | | 78 |
| 16) Acrylonitrile | 8.85 | 53 | 4152 | 0.226 | ng | | 99 |
| 17) 1,1-Dichloroethene | 9.40 | 96 | 4388 | 0.256 | ng | # | 72 |
| 18) 2-Methyl-2-Propanol (t... | 9.58 | 59 | 20272 | 0.470 | ng | | 90 |
| 19) Methylene Chloride | 9.58 | 84 | 5109 | 0.277 | ng | # | 74 |
| 20) 3-Chloro-1-propene (Al... | 9.80 | 41 | 4275 | 0.254 | ng | | 88 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 4529 | 0.247 | ng | # | 75 |
| 22) Carbon Disulfide | 10.01 | 76 | 15211 | 0.253 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 11.06 | 61 | 5526 | 0.245 | ng | | 80 |
| 24) 1,1-Dichloroethane | 11.38 | 63 | 7403 | 0.267 | ng | | 97 |
| 25) Methyl tert-Butyl Ether | 11.52 | 73 | 13436 | 0.249 | ng | | 90 |
| 26) Vinyl Acetate | 11.63 | 86 | 4583 | 1.664 | ng | # | 29 |
| 27) 2-Butanone (MEK) | 12.00 | 72 | 2846 | 0.244 | ng | # | 84 |
| 28) cis-1,2-Dichloroethene | 12.65 | 61 | 5344 | 0.244 | ng | # | 74 |
| 29) Diisopropyl Ether | 13.02 | 87 | 3807 | 0.242 | ng | # | 38 |
| 30) Ethyl Acetate | 13.01 | 61 | 2767 | 0.470 | ng | | 96 |
| 31) n-Hexane | 13.02 | 57 | 7494 | 0.274 | ng | | 98 |



DM 4/28/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271007.D
Acq On : 27 Apr 2010 19:03
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:54:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.09 | 83 | 7849 | 0.254 | ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.71 | 72 | 2952 | 0.267 | ng | # | 76 |
| 35) Ethyl tert-Butyl Ether | 13.83 | 87 | 5322 | 0.225 | ng | # | 77 |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 5732 | 0.238 | ng | | 97 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 7117 | 0.236 | ng | | 93 |
| 39) Isopropyl Acetate | 15.18 | 61 | 4433 | 0.439 | ng | # | 92 |
| 40) 1-Butanol | 15.20 | 56 | 6627 | 0.373 | ng | # | 78 |
| 41) Benzene | 15.32 | 78 | 21577 | 0.301 | ng | | 96 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 5829 | 0.221 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 14291 | 0.501 | ng | # | 81 |
| 44) tert-Amyl Methyl Ether | 16.22 | 73 | 12481 | 0.236 | ng | | 92 |
| 45) 1,2-Dichloropropane | 16.52 | 63 | 4144 | 0.256 | ng | | 95 |
| 46) Bromodichloromethane | 16.78 | 83 | 5600 | 0.233 | ng | | 98 |
| 47) Trichloroethene | 16.86 | 130 | 5362 | 0.229 | ng | | 98 |
| 48) 1,4-Dioxane | 16.84 | 88 | 3448 | 0.224 | ng | # | 76 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 17614 | 0.257 | ng | | 99 |
| 50) Methyl Methacrylate | 17.12 | 100 | 3589 | 0.422 | ng | # | 65 |
| 51) n-Heptane | 17.30 | 71 | 4382 | 0.242 | ng | | 87 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 5820 | 0.207 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 18.10 | 58 | 3274 | 0.226 | ng | | 97 |
| 54) trans-1,3-Dichloropropene | 18.73 | 75 | 5693 | 0.220 | ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.97 | 97 | 4288 | 0.239 | ng | | 93 |
| 58) Toluene | 19.37 | 91 | 20984 | 0.250 | ng | | 100 |
| 59) 2-Hexanone | 19.68 | 43 | 7617 | 0.208 | ng | | 94 |
| 60) Dibromochloromethane | 19.91 | 129 | 4656 | 0.212 | ng | | 94 |
| 61) 1,2-Dibromoethane | 20.23 | 107 | 4816 | 0.218 | ng | | 100 |
| 62) n-Butyl Acetate | 20.48 | 43 | 8555 | 0.207 | ng | | 92 |
| 63) n-Octane | 20.65 | 57 | 3471 | 0.236 | ng | # | 81 |
| 64) Tetrachloroethene | 20.85 | 166 | 6071 | 0.222 | ng | | 97 |
| 65) Chlorobenzene | 21.71 | 112 | 13804 | 0.240 | ng | | 99 |
| 66) Ethylbenzene | 22.19 | 91 | 21479 | 0.229 | ng | | 97 |
| 67) m- & p-Xylenes | 22.42 | 91 | 32195 | 0.429 | ng | | 91 |
| 68) Bromoform | 22.50 | 173 | 3485 | 0.161 | ng | | 97 |
| 69) Styrene | 22.87 | 104 | 12509 | 0.210 | ng | | 89 |
| 70) o-Xylene | 23.01 | 91 | 16660 | 0.218 | ng | | 94 |
| 71) n-Nonane | 23.27 | 43 | 7344 | 0.232 | ng | | 90 |
| 72) 1,1,2,2-Tetrachloroethane | 22.98 | 83 | 6906 | 0.237 | ng | | 99 |
| 74) Cumene | 23.75 | 105 | 22821 | 0.220 | ng | | 97 |
| 75) alpha-Pinene | 24.24 | 93 | 10121 | 0.206 | ng | | 93 |
| 76) n-Propylbenzene | 24.38 | 91 | 25769 | 0.215 | ng | | 94 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 20739 | 0.215 | ng | | 95 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 21442 | 0.221 | ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 17064 | 0.211 | ng | | 94 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271007.D
Acq On : 27 Apr 2010 19:03
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:54:40 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

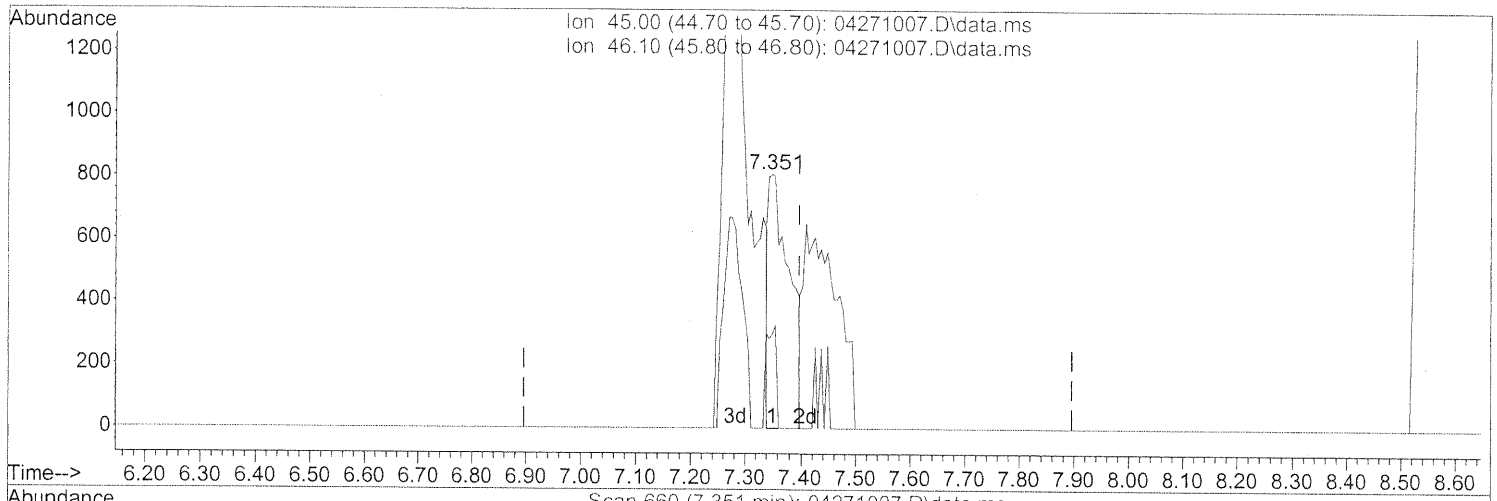
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 8332 | 0.182 ng | | 96 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 21313 | 0.212 ng | | 97 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 16987 | 0.202 ng | | 93 |
| 83) n-Decane | 25.25 | 57 | 7863 | 0.220 ng | | 90 |
| 84) Benzyl Chloride | 25.31 | 91 | 10269 | 0.171 ng | | 94 |
| 85) 1,3-Dichlorobenzene | 25.34 | 146 | 10877 | 0.210 ng | | 99 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 10749 | 0.200 ng | | 99 |
| 87) sec-Butylbenzene | 25.48 | 105 | 24274 | 0.217 ng | | 96 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 21750 | 0.197 ng | | 94 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 17065 | 0.200 ng | | 89 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 9909 | 0.198 ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 5680 | 0.201 ng | | 85 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 2758 | 0.174 ng | # | 64 |
| 93) n-Undecane | 26.75 | 57 | 7635 | 0.210 ng | | 90 |
| 94) 1,2,4-Trichlorobenzene | 27.89 | 180 | 6853 | 0.184 ng | | 98 |
| 95) Naphthalene | 28.05 | 128 | 19090 | 0.165 ng | | 97 |
| 96) n-Dodecane | 28.00 | 57 | 7025 | 0.182 ng | | 91 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 4457 | 0.184 ng | | 99 |
| 98) Cyclohexanone | 22.61 | 55 | 4655 | 0.182 ng | # | 89 |
| 99) tert-Butylbenzene | 25.15 | 119 | 18392 | 0.212 ng | | 95 |
| 100) n-Butylbenzene | 26.16 | 91 | 17882 | 0.209 ng | | 95 |

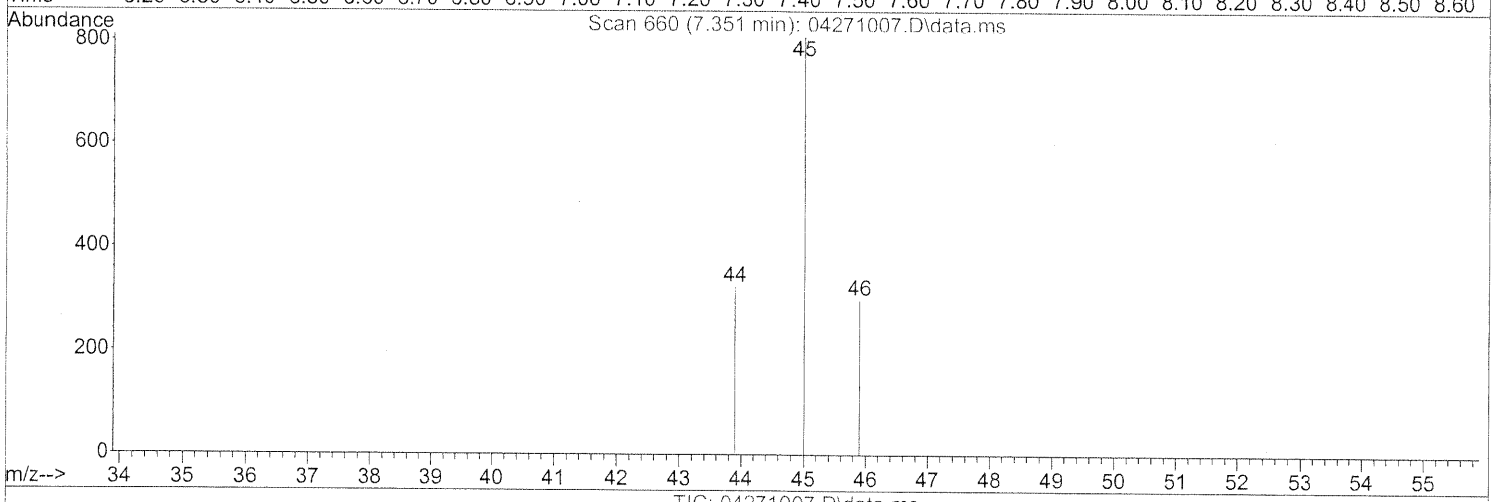
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271007.D
Acq On : 27 Apr 2010 19:03
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:51:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271007.D\data.ms

(10) Ethanol (T)

7.351min (-0.046) 0.21ng

response 2044

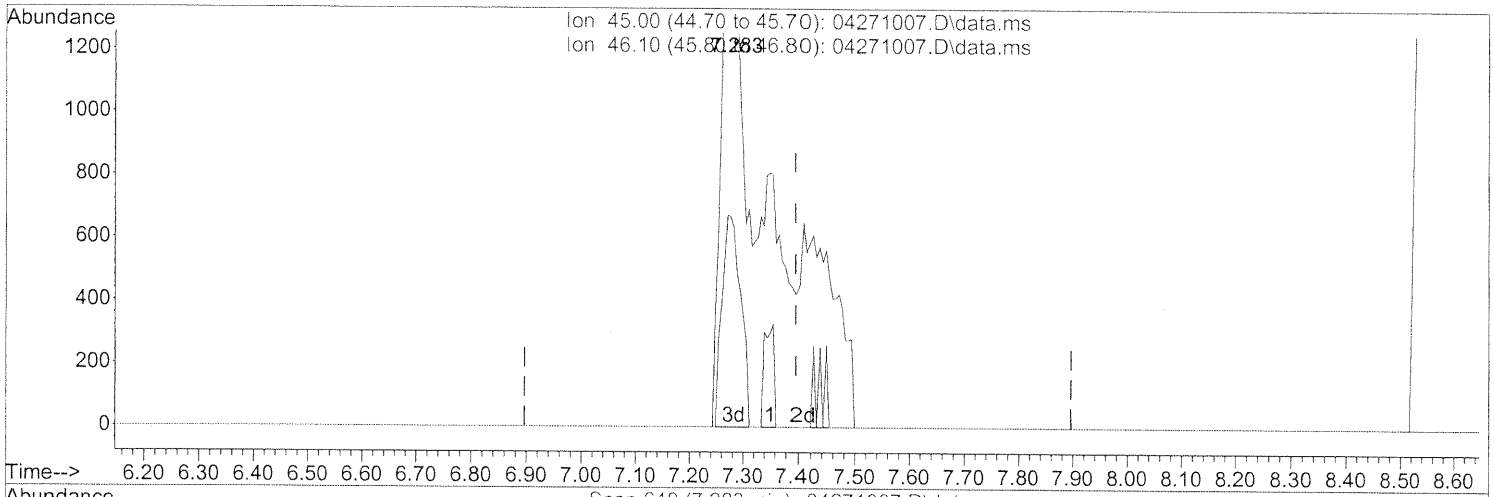
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 20.30 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

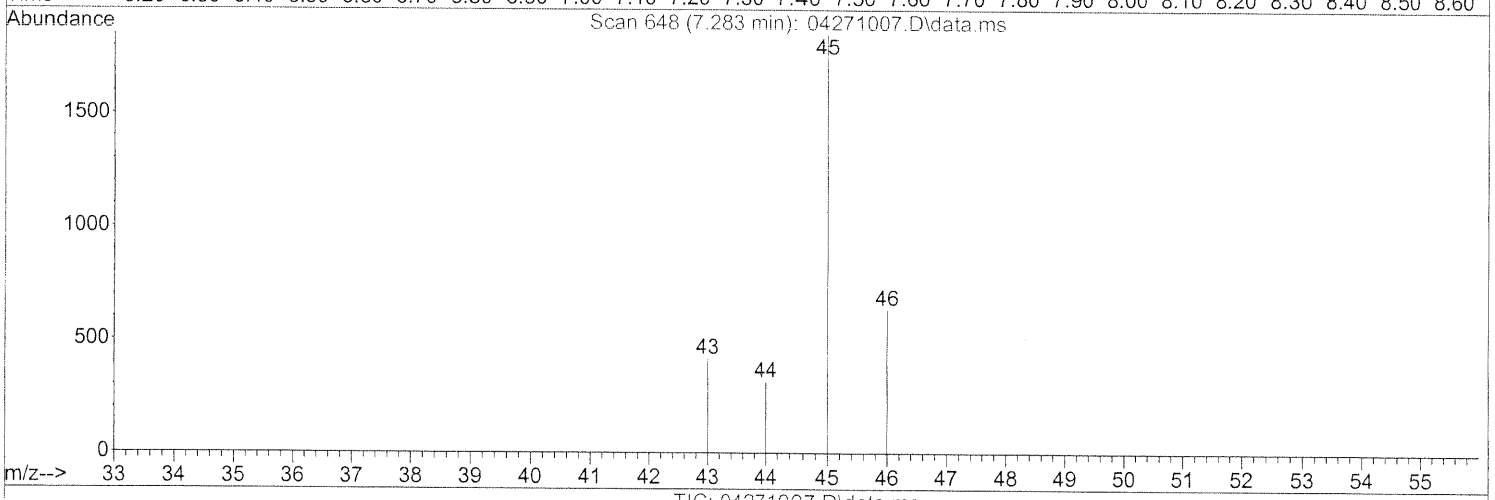
SP

# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271007.D
Acq On : 27 Apr 2010 19:03
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:51:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271007.D\data.ms

(10) Ethanol (T)

7.283min (-0.114) 1.07ng m

response 10509

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 3.95# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP-71C

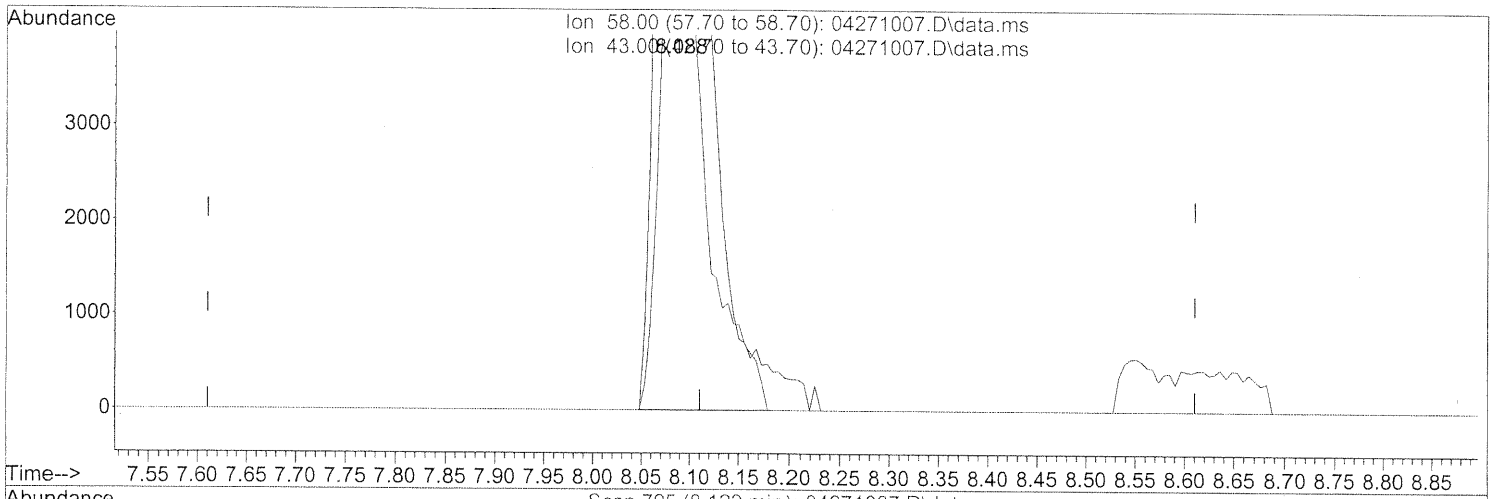
DA 4/28/10

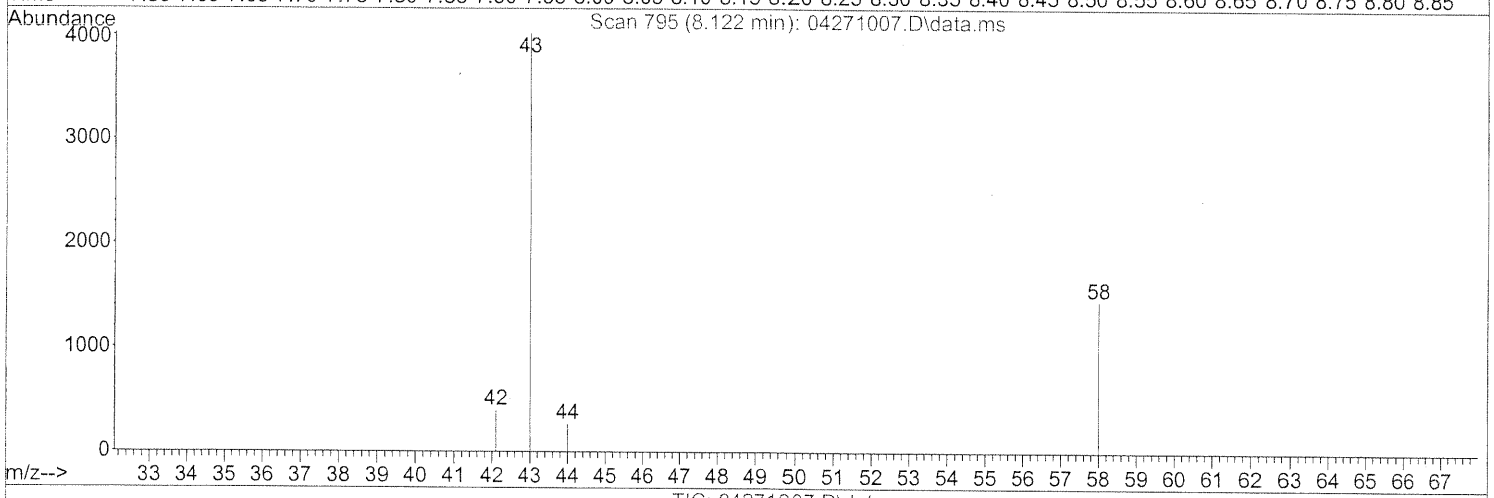
KR 4/30/10

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271007.D
Acq On : 27 Apr 2010 19:03
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:51:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271007.D\data.ms

(13) Acetone (T)

8.088min (-0.023) 1.52ng

response 18799

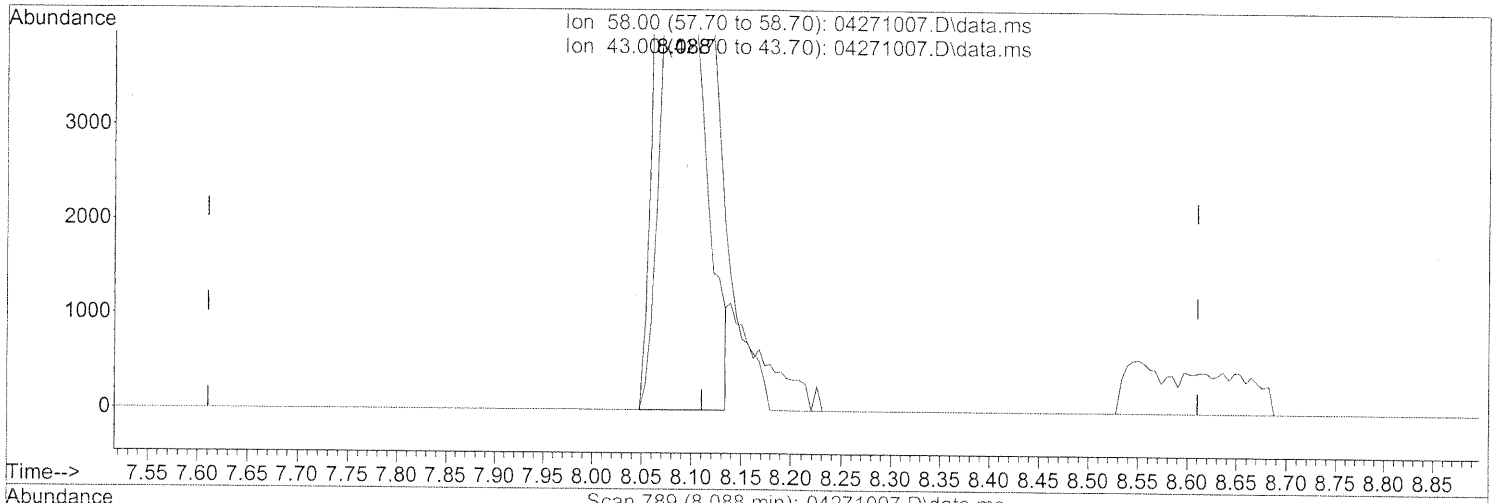
| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 285.77# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

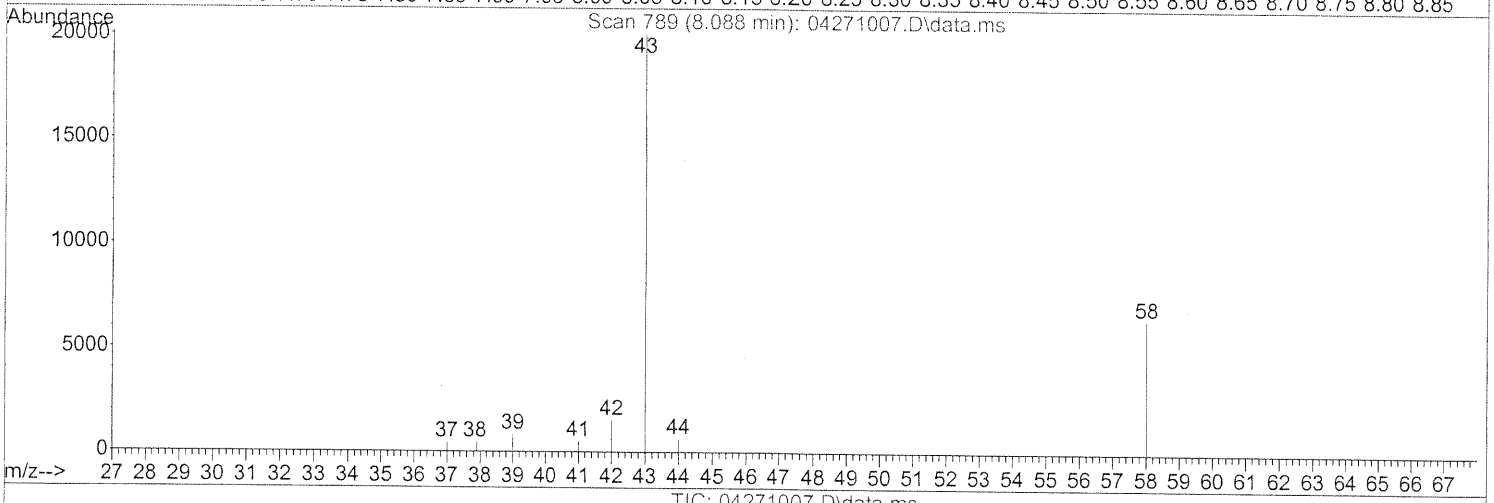
SA

# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271007.D
Acq On : 27 Apr 2010 19:03
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191001
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 27 20:51:55 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




(13) Acetone (T)

8.088min (-0.023) 1.38ng m

response 17074

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 325.00 | 314.64 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SA → IC

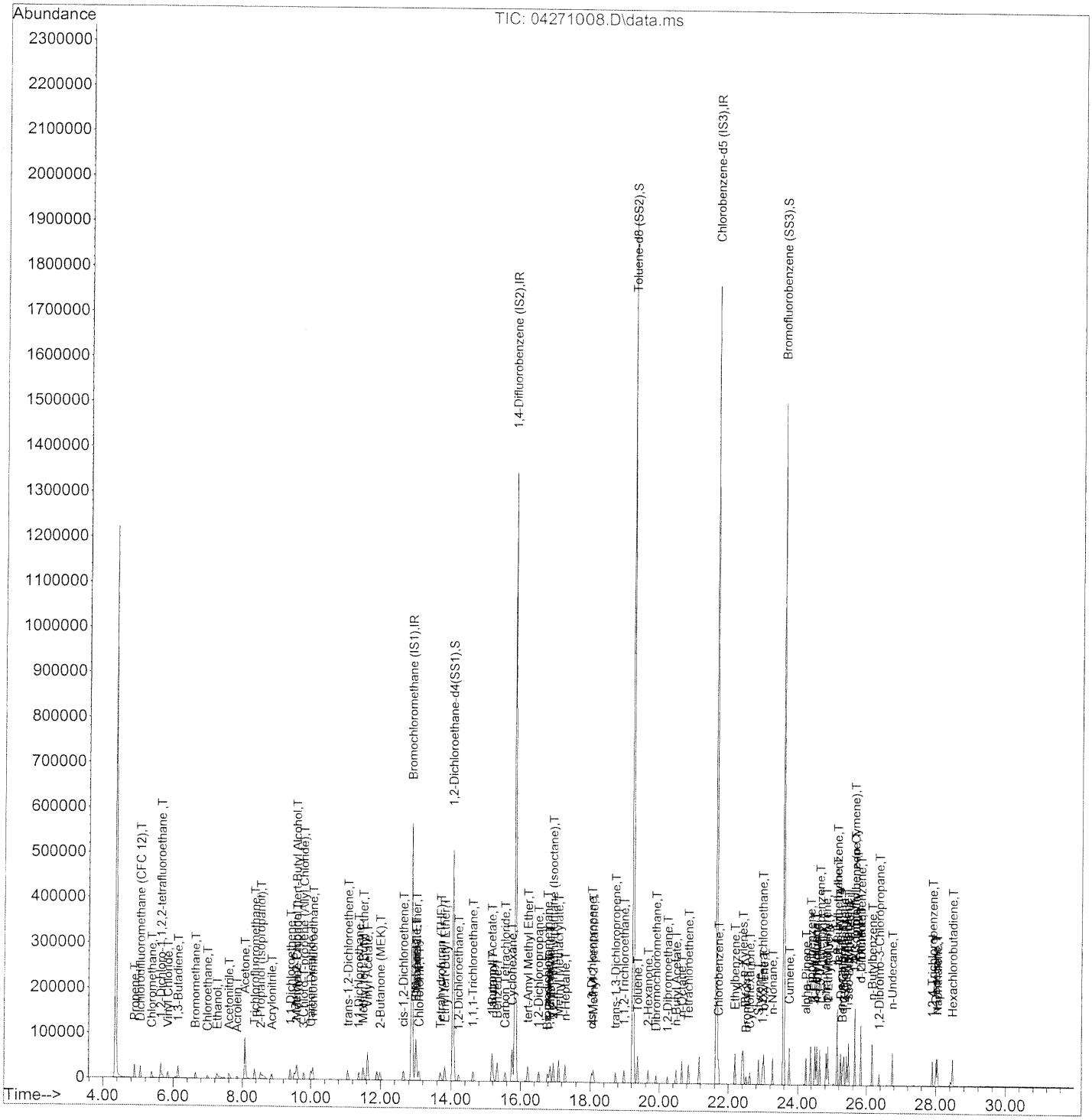
DA 4/28/10

KR 4/30/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271008.D
Acq On : 27 Apr 2010 19:45
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:01:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271008.D
Acq On : 27 Apr 2010 19:45
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:01:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 340216 | 25.000 | ng | | -0.04 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1652267 | 25.000 | ng | | -0.03 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 687159 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 519935 | 24.680 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery = | 98.72% | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1738318 | 24.224 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = | 96.88% | | | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 596217 | 22.701 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = | 90.80% | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.89 | 42 | 10007 | 0.695 | ng | | 98 |
| 3) Dichlorodifluoromethan... | 5.05 | 85 | 28211 | 0.725 | ng | | 99 |
| 4) Chloromethane | 5.38 | 50 | 16651 | 0.752 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.64 | 135 | 16667 | 0.684 | ng | | 100 |
| 6) Vinyl Chloride | 5.84 | 62 | 18379 | 0.699 | ng | | 99 |
| 7) 1,3-Butadiene | 6.13 | 54 | 15037 | 0.872 | ng | | 93 |
| 8) Bromomethane | 6.63 | 94 | 11811 | 0.691 | ng | | 99 |
| 9) Chloroethane | 6.99 | 64 | 9085 | 0.728 | ng | | 97 |
| 10) Ethanol | 7.27 | 45 | 33607m | 3.385 | ng | | |
| 11) Acetonitrile | 7.61 | 41 | 16617 | 0.716 | ng | | 99 |
| 12) Acrolein | 7.84 | 56 | 6840 | 0.786 | ng | | 97 |
| 13) Acetone | 8.07 | 58 | 48736 | 3.916 | ng | | 90 |
| 14) Trichlorofluoromethane | 8.36 | 101 | 25564 | 0.695 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.53 | 45 | 53004 | 1.421 | ng | | 92 |
| 16) Acrylonitrile | 8.85 | 53 | 13276 | 0.718 | ng | | 98 |
| 17) 1,1-Dichloroethene | 9.40 | 96 | 13177 | 0.762 | ng | # | 72 |
| 18) 2-Methyl-2-Propanol (t... | 9.57 | 59 | 60126 | 1.384 | ng | | 98 |
| 19) Methylene Chloride | 9.59 | 84 | 13784 | 0.741 | ng | # | 74 |
| 20) 3-Chloro-1-propene (Al... | 9.79 | 41 | 13240 | 0.782 | ng | | 81 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 13270 | 0.719 | ng | # | 76 |
| 22) Carbon Disulfide | 10.00 | 76 | 42889 | 0.709 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 11.07 | 61 | 16430 | 0.722 | ng | | 76 |
| 24) 1,1-Dichloroethane | 11.38 | 63 | 21737 | 0.777 | ng | | 99 |
| 25) Methyl tert-Butyl Ether | 11.50 | 73 | 39016 | 0.717 | ng | | 91 |
| 26) Vinyl Acetate | 11.63 | 86 | 13615 | 4.905 | ng | # | 31 |
| 27) 2-Butanone (MEK) | 11.99 | 72 | 8595 | 0.730 | ng | # | 73 |
| 28) cis-1,2-Dichloroethene | 12.65 | 61 | 16595 | 0.751 | ng | | 77 |
| 29) Diisopropyl Ether | 13.01 | 87 | 11717 | 0.739 | ng | # | 29 |
| 30) Ethyl Acetate | 12.99 | 61 | 8695 | 1.464 | ng | | 88 |
| 31) n-Hexane | 13.02 | 57 | 21226 | 0.770 | ng | # | 96 |



SM 4/28/10

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271008.D
Acq On : 27 Apr 2010 19:45
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:01:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.09 | 83 | 23084 | 0.740 | ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.70 | 72 | 8172 | 0.734 | ng | # | 79 |
| 35) Ethyl tert-Butyl Ether | 13.82 | 87 | 15991 | 0.672 | ng | # | 74 |
| 36) 1,2-Dichloroethane | 14.21 | 62 | 17043 | 0.703 | ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.62 | 97 | 20824 | 0.691 | ng | | 96 |
| 39) Isopropyl Acetate | 15.17 | 61 | 14285 | 1.414 | ng | | 93 |
| 40) 1-Butanol | 15.19 | 56 | 20796 | 1.169 | ng | # | 77 |
| 41) Benzene | 15.32 | 78 | 56224 | 0.785 | ng | | 97 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 17272 | 0.654 | ng | | 96 |
| 43) Cyclohexane | 15.75 | 84 | 42886 | 1.502 | ng | # | 77 |
| 44) tert-Amyl Methyl Ether | 16.21 | 73 | 36044 | 0.681 | ng | | 93 |
| 45) 1,2-Dichloropropane | 16.52 | 63 | 12255 | 0.758 | ng | | 97 |
| 46) Bromodichloromethane | 16.78 | 83 | 16637 | 0.691 | ng | | 98 |
| 47) Trichloroethene | 16.86 | 130 | 15846 | 0.676 | ng | | 100 |
| 48) 1,4-Dioxane | 16.83 | 88 | 10756 | 0.700 | ng | | 82 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 50383 | 0.734 | ng | | 98 |
| 50) Methyl Methacrylate | 17.11 | 100 | 11352 | 1.335 | ng | # | 61 |
| 51) n-Heptane | 17.30 | 71 | 13603 | 0.752 | ng | | 88 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 17512 | 0.624 | ng | | 98 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 10600 | 0.731 | ng | # | 89 |
| 54) trans-1,3-Dichloropropene | 18.73 | 75 | 17971 | 0.695 | ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 13139 | 0.733 | ng | | 93 |
| 58) Toluene | 19.37 | 91 | 60277 | 0.719 | ng | | 99 |
| 59) 2-Hexanone | 19.67 | 43 | 24463 | 0.669 | ng | | 91 |
| 60) Dibromochloromethane | 19.91 | 129 | 14388 | 0.658 | ng | | 100 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 14562 | 0.660 | ng | | 98 |
| 62) n-Butyl Acetate | 20.48 | 43 | 27417 | 0.666 | ng | | 94 |
| 63) n-Octane | 20.65 | 57 | 10347 | 0.706 | ng | # | 78 |
| 64) Tetrachloroethene | 20.84 | 166 | 17494 | 0.640 | ng | | 100 |
| 65) Chlorobenzene | 21.71 | 112 | 40381 | 0.706 | ng | | 99 |
| 66) Ethylbenzene | 22.19 | 91 | 63067 | 0.674 | ng | | 95 |
| 67) m- & p-Xylenes | 22.41 | 91 | 97470 | 1.302 | ng | | 92 |
| 68) Bromoform | 22.51 | 173 | 11634 | 0.538 | ng | | 96 |
| 69) Styrene | 22.87 | 104 | 37678 | 0.634 | ng | | 94 |
| 70) o-Xylene | 23.01 | 91 | 50189 | 0.660 | ng | | 92 |
| 71) n-Nonane | 23.27 | 43 | 21714 | 0.687 | ng | | 87 |
| 72) 1,1,2,2-Tetrachloroethane | 22.98 | 83 | 21357 | 0.736 | ng | | 97 |
| 74) Cumene | 23.75 | 105 | 67590 | 0.652 | ng | | 97 |
| 75) alpha-Pinene | 24.24 | 93 | 29284 | 0.599 | ng | | 94 |
| 76) n-Propylbenzene | 24.37 | 91 | 78907 | 0.660 | ng | | 94 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 64424 | 0.668 | ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 66213 | 0.685 | ng | | 95 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 51902 | 0.644 | ng | | 92 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271008.D
Acq On : 27 Apr 2010 19:45
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:01:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

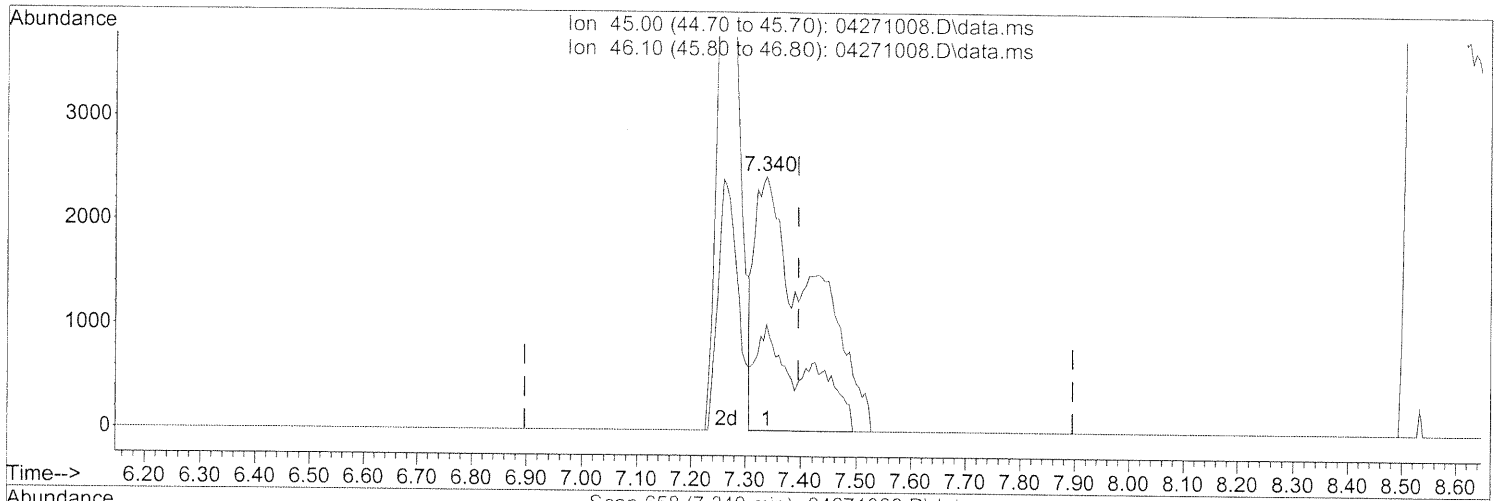
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 27289 | 0.597 ng | | 97 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 65077 | 0.648 ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 52917 | 0.632 ng | | 92 |
| 83) n-Decane | 25.25 | 57 | 23805 | 0.669 ng | | 87 |
| 84) Benzyl Chloride | 25.31 | 91 | 35549 | 0.592 ng | | 92 |
| 85) 1,3-Dichlorobenzene | 25.34 | 146 | 33418 | 0.648 ng | | 98 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 33748 | 0.629 ng | | 99 |
| 87) sec-Butylbenzene | 25.47 | 105 | 73382 | 0.657 ng | | 95 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 68007 | 0.618 ng | | 92 |
| 89) 1,2,3-Trimethylbenzene | 25.66 | 105 | 53786 | 0.633 ng | | 90 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 31535 | 0.633 ng | | 99 |
| 91) d-Limonene | 25.83 | 68 | 17852 | 0.633 ng | | 82 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 9110 | 0.577 ng | # | 70 |
| 93) n-Undecane | 26.75 | 57 | 22871 | 0.631 ng | | 90 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 21460 | 0.579 ng | | 99 |
| 95) Naphthalene | 28.05 | 128 | 58965 | 0.511 ng | | 99 |
| 96) n-Dodecane | 28.00 | 57 | 19352 | 0.502 ng | | 89 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 14156 | 0.586 ng | | 100 |
| 98) Cyclohexanone | 22.61 | 55 | 14314 | 0.563 ng | # | 87 |
| 99) tert-Butylbenzene | 25.15 | 119 | 55346 | 0.641 ng | | 95 |
| 100) n-Butylbenzene | 26.16 | 91 | 55804 | 0.653 ng | # | 96 |

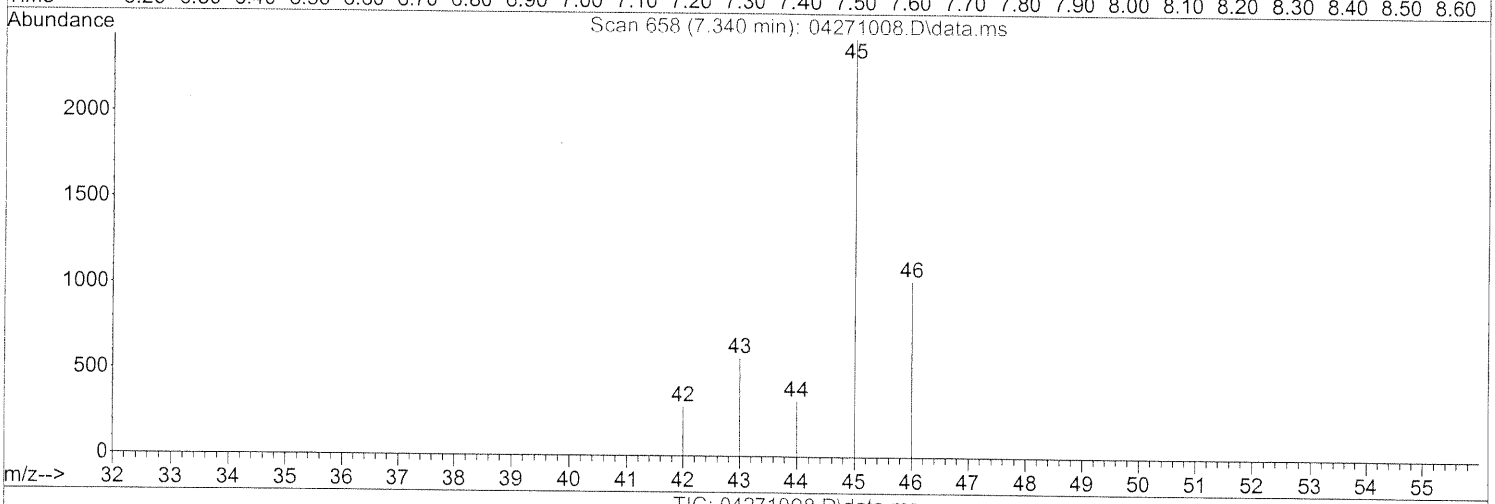
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271008.D
Acq On : 27 Apr 2010 19:45
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:01:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271008.D\data.ms

(10) Ethanol (T)

7.340min (-0.057) 1.79ng

response 17731

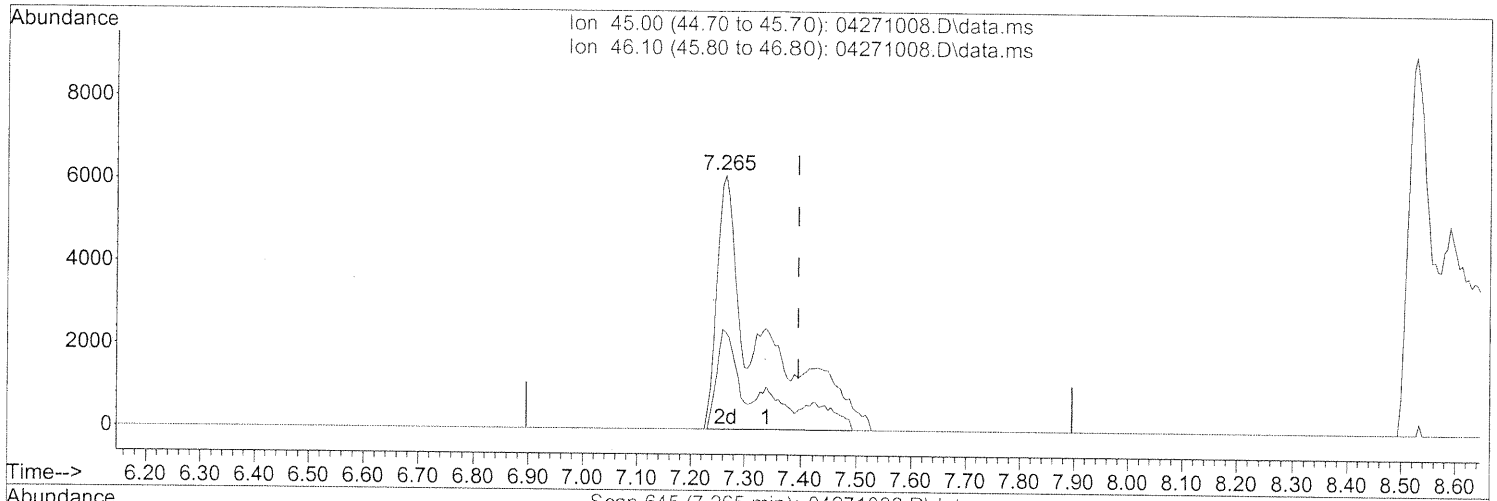
SP

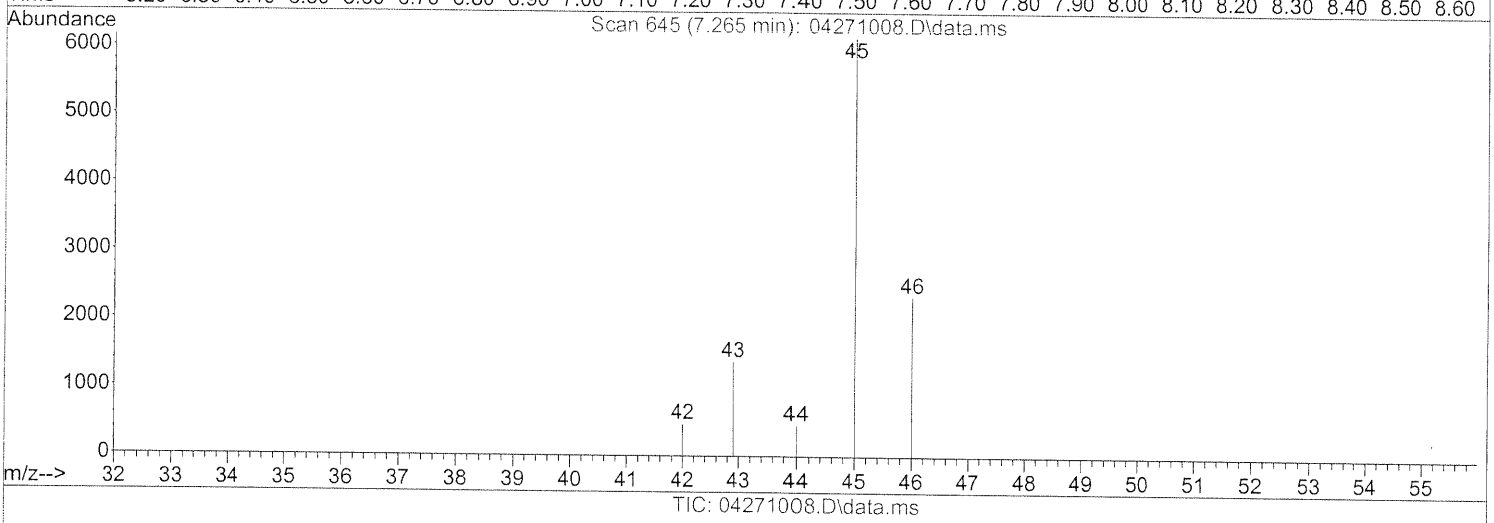
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 19.37 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271008.D
Acq On : 27 Apr 2010 19:45
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:01:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271008.D\data.ms

(10) Ethanol (T)

7.265min (-0.132) 3.39ng m

response 33607

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 10.22# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → IC

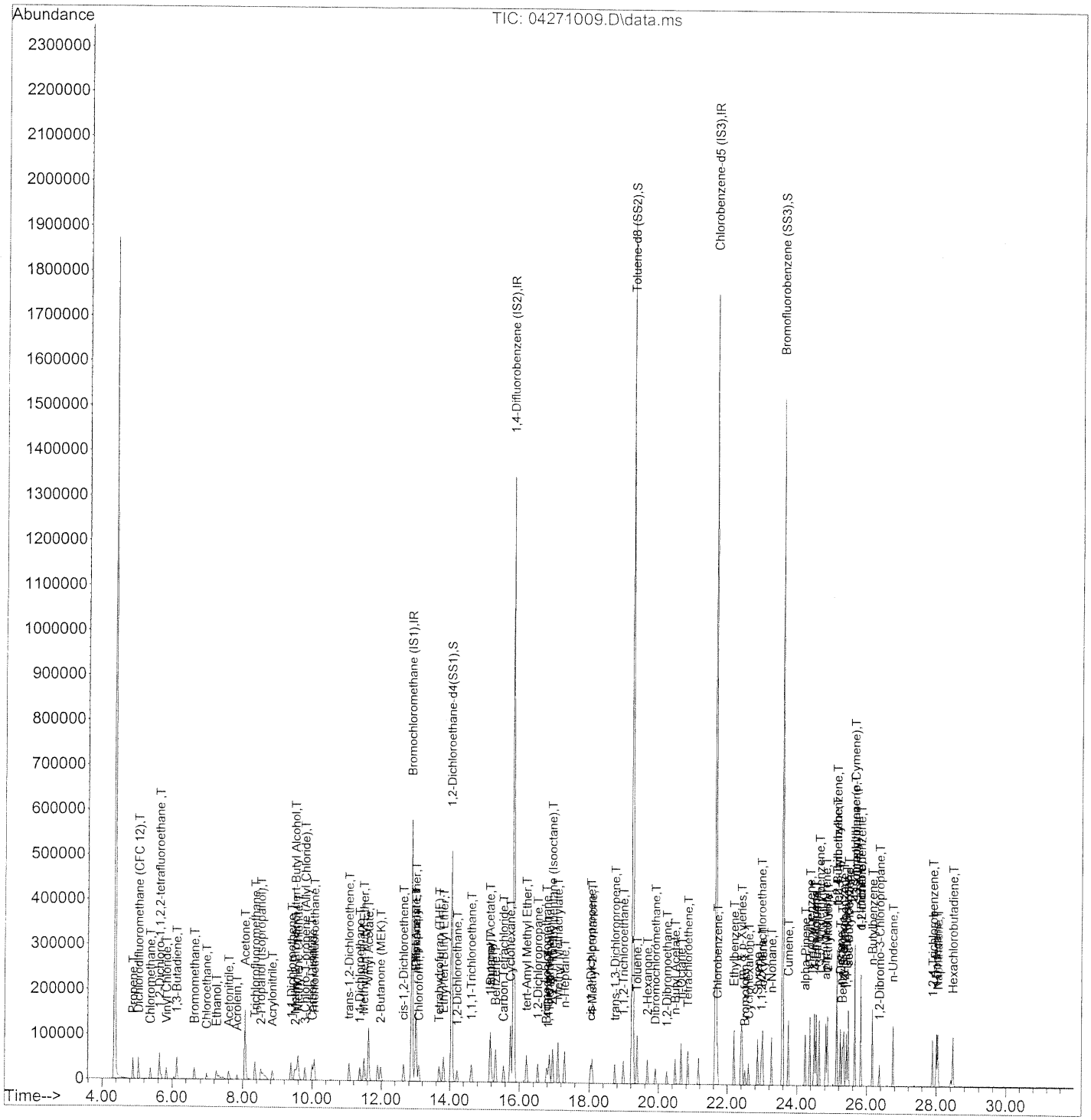
JOA 4/28/10

KL 4/30/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271009.D
Acq On : 27 Apr 2010 20:27
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:04:38 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271009.D
Acq On : 27 Apr 2010 20:27
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:04:38 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 341944 | 25.000 | ng | | -0.04 |
| 37) 1,4-Difluorobenzene (IS2) | 15.84 | 114 | 1655237 | 25.000 | ng | | -0.03 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 686435 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 521722 | 24.640 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery | = | 98.56% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1737091 | 24.232 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery | = | 96.92% | | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 598169 | 22.799 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery | = | 91.20% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.88 | 42 | 17718 | 1.224 | ng | | 98 |
| 3) Dichlorodifluoromethan... | 5.04 | 85 | 49258 | 1.259 | ng | | 99 |
| 4) Chloromethane | 5.37 | 50 | 29235 | 1.313 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.64 | 135 | 29058 | 1.187 | ng | | 99 |
| 6) Vinyl Chloride | 5.84 | 62 | 31857 | 1.206 | ng | | 99 |
| 7) 1,3-Butadiene | 6.13 | 54 | 26872 | 1.550 | ng | | 92 |
| 8) Bromomethane | 6.63 | 94 | 21512 | 1.251 | ng | | 100 |
| 9) Chloroethane | 6.98 | 64 | 16420 | 1.309 | ng | | 98 |
| 10) Ethanol | 7.26 | 45 | 59459m | 5.959 | ng | | |
| 11) Acetonitrile | 7.61 | 41 | 29965 | 1.284 | ng | | 95 |
| 12) Acrolein | 7.84 | 56 | 11507 | 1.316 | ng | | 99 |
| 13) Acetone | 8.06 | 58 | 84009 | 6.716 | ng | | 91 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 44540 | 1.205 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.52 | 45 | 95580 | 2.550 | ng | | 93 |
| 16) Acrylonitrile | 8.85 | 53 | 24480 | 1.317 | ng | | 98 |
| 17) 1,1-Dichloroethene | 9.40 | 96 | 23378 | 1.344 | ng | # | 70 |
| 18) 2-Methyl-2-Propanol (t... | 9.51 | 59 | 106891 | 2.447 | ng | # | 77 |
| 19) Methylene Chloride | 9.59 | 84 | 23873 | 1.277 | ng | # | 72 |
| 20) 3-Chloro-1-propene (Al... | 9.80 | 41 | 24250 | 1.425 | ng | | 82 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 23199 | 1.250 | ng | # | 75 |
| 22) Carbon Disulfide | 10.00 | 76 | 77277 | 1.271 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 11.06 | 61 | 29079 | 1.271 | ng | | 75 |
| 24) 1,1-Dichloroethane | 11.38 | 63 | 38481 | 1.369 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.50 | 73 | 69531 | 1.271 | ng | | 92 |
| 26) Vinyl Acetate | 11.62 | 86 | 26175 | 9.383 | ng | # | 26 |
| 27) 2-Butanone (MEK) | 11.98 | 72 | 15554 | 1.314 | ng | # | 69 |
| 28) cis-1,2-Dichloroethene | 12.65 | 61 | 29198 | 1.315 | ng | # | 75 |
| 29) Diisopropyl Ether | 13.01 | 87 | 20394 | 1.280 | ng | # | 35 |
| 30) Ethyl Acetate | 12.99 | 61 | 15731 | 2.636 | ng | | 91 |
| 31) n-Hexane | 13.01 | 57 | 38015 | 1.373 | ng | # | 96 |



4/28/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271009.D
Acq On : 27 Apr 2010 20:27
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:04:38 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.09 | 83 | 40955 | 1.307 ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.69 | 72 | 15116 | 1.351 ng | # | 77 |
| 35) Ethyl tert-Butyl Ether | 13.82 | 87 | 28801 | 1.204 ng | # | 74 |
| 36) 1,2-Dichloroethane | 14.22 | 62 | 30349 | 1.246 ng | | 98 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 36634 | 1.213 ng | | 95 |
| 39) Isopropyl Acetate | 15.17 | 61 | 26364 | 2.605 ng | # | 90 |
| 40) 1-Butanol | 15.18 | 56 | 37277 | 2.092 ng | | 79 |
| 41) Benzene | 15.32 | 78 | 98364 | 1.370 ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 31361 | 1.186 ng | | 100 |
| 43) Cyclohexane | 15.75 | 84 | 75898 | 2.654 ng | # | 78 |
| 44) tert-Amyl Methyl Ether | 16.21 | 73 | 65349 | 1.232 ng | | 93 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 21461 | 1.325 ng | | 98 |
| 46) Bromodichloromethane | 16.78 | 83 | 30327 | 1.257 ng | | 99 |
| 47) Trichloroethene | 16.86 | 130 | 28127 | 1.198 ng | | 99 |
| 48) 1,4-Dioxane | 16.82 | 88 | 19565 | 1.271 ng | | 81 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 90583 | 1.318 ng | | 98 |
| 50) Methyl Methacrylate | 17.11 | 100 | 21112 | 2.479 ng | # | 60 |
| 51) n-Heptane | 17.30 | 71 | 23720 | 1.308 ng | | 89 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 32345 | 1.151 ng | | 100 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 19593 | 1.349 ng | # | 88 |
| 54) trans-1,3-Dichloropropene | 18.74 | 75 | 31973 | 1.235 ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 23350 | 1.300 ng | | 91 |
| 58) Toluene | 19.37 | 91 | 106298 | 1.270 ng | | 99 |
| 59) 2-Hexanone | 19.67 | 43 | 44979 | 1.231 ng | | 91 |
| 60) Dibromochloromethane | 19.91 | 129 | 25678 | 1.175 ng | | 97 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 26475 | 1.202 ng | | 98 |
| 62) n-Butyl Acetate | 20.48 | 43 | 50177 | 1.221 ng | | 93 |
| 63) n-Octane | 20.65 | 57 | 19222 | 1.314 ng | # | 82 |
| 64) Tetrachloroethene | 20.85 | 166 | 30585 | 1.120 ng | | 99 |
| 65) Chlorobenzene | 21.71 | 112 | 69510 | 1.216 ng | | 99 |
| 66) Ethylbenzene | 22.19 | 91 | 113785 | 1.217 ng | | 96 |
| 67) m- & p-Xylenes | 22.40 | 91 | 176430 | 2.359 ng | | 93 |
| 68) Bromoform | 22.51 | 173 | 21016 | 0.974 ng | | 100 |
| 69) Styrene | 22.87 | 104 | 70042 | 1.179 ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 91418 | 1.203 ng | | 94 |
| 71) n-Nonane | 23.27 | 43 | 39553 | 1.252 ng | | 85 |
| 72) 1,1,2,2-Tetrachloroethane | 22.98 | 83 | 38812 | 1.338 ng | | 97 |
| 74) Cumene | 23.75 | 105 | 121198 | 1.171 ng | | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 54425 | 1.114 ng | | 95 |
| 76) n-Propylbenzene | 24.37 | 91 | 143084 | 1.199 ng | | 95 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 118692 | 1.233 ng | | 98 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 121369 | 1.256 ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 96313 | 1.196 ng | | 94 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271009.D
Acq On : 27 Apr 2010 20:27
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:04:38 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

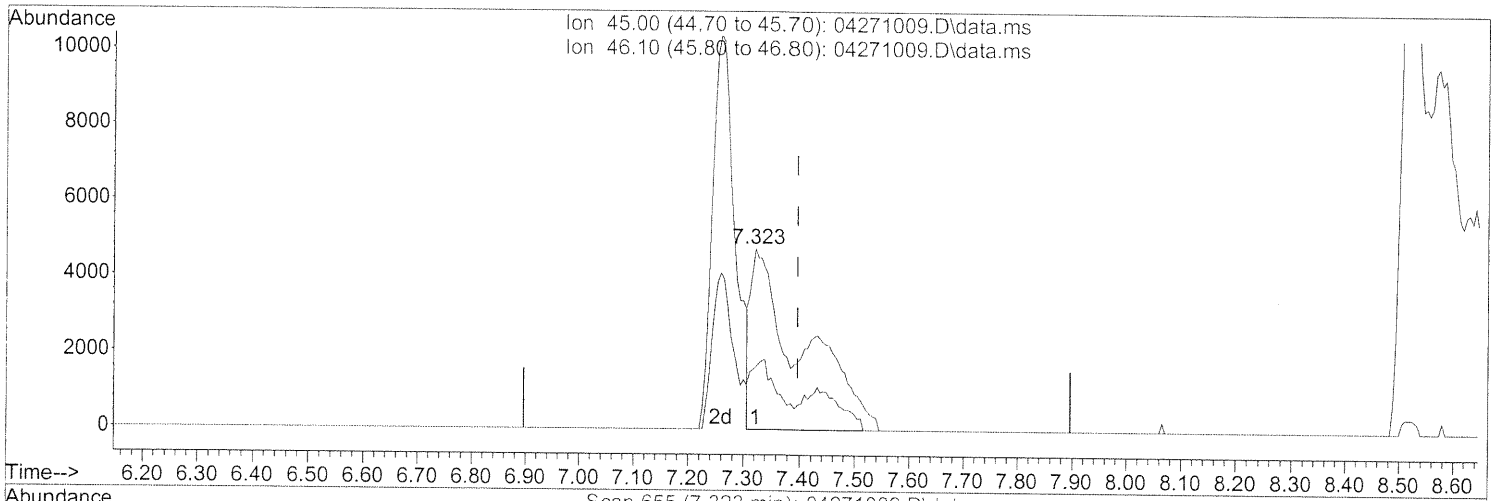
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 52189 | 1.143 ng | | 95 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 119022 | 1.187 ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 96735 | 1.157 ng | | 91 |
| 83) n-Decane | 25.24 | 57 | 44585 | 1.255 ng | | 88 |
| 84) Benzyl Chloride | 25.31 | 91 | 69445 | 1.158 ng | | 92 |
| 85) 1,3-Dichlorobenzene | 25.34 | 146 | 60363 | 1.172 ng | | 99 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 60782 | 1.135 ng | | 100 |
| 87) sec-Butylbenzene | 25.47 | 105 | 134038 | 1.202 ng | | 95 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 125254 | 1.140 ng | | 93 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 98266 | 1.157 ng | | 90 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 56516 | 1.135 ng | | 98 |
| 91) d-Limonene | 25.84 | 68 | 33192 | 1.178 ng | | 80 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 17539 | 1.111 ng | # | 65 |
| 93) n-Undecane | 26.75 | 57 | 42560 | 1.176 ng | | 88 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 38770 | 1.047 ng | | 99 |
| 95) Naphthalene | 28.05 | 128 | 111848 | 0.971 ng | | 99 |
| 96) n-Dodecane | 28.00 | 57 | 36323 | 0.943 ng | | 88 |
| 97) Hexachlorobutadiene | 28.47 | 225 | 25823 | 1.071 ng | | 100 |
| 98) Cyclohexanone | 22.61 | 55 | 26177 | 1.030 ng | # | 88 |
| 99) tert-Butylbenzene | 25.15 | 119 | 102870 | 1.192 ng | | 96 |
| 100) n-Butylbenzene | 26.16 | 91 | 103825 | 1.217 ng | # | 96 |

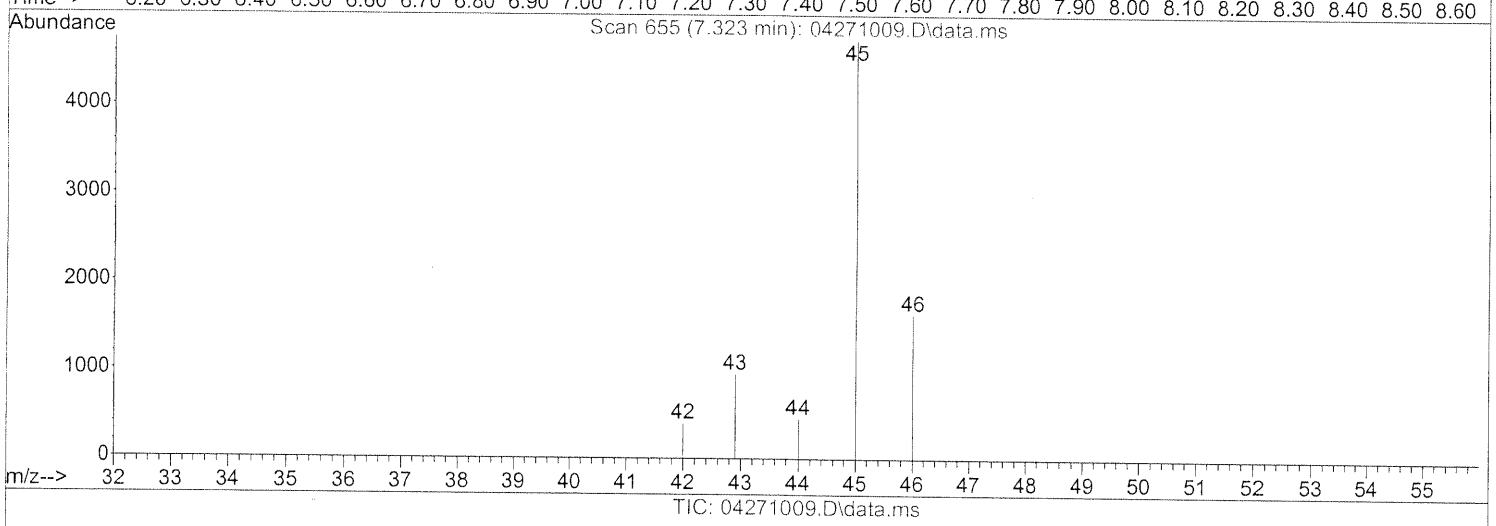
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271009.D
Acq On : 27 Apr 2010 20:27
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:03:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271009.D\data.ms

(10) Ethanol (T)

7.323min (-0.074) 3.04ng

response 30334

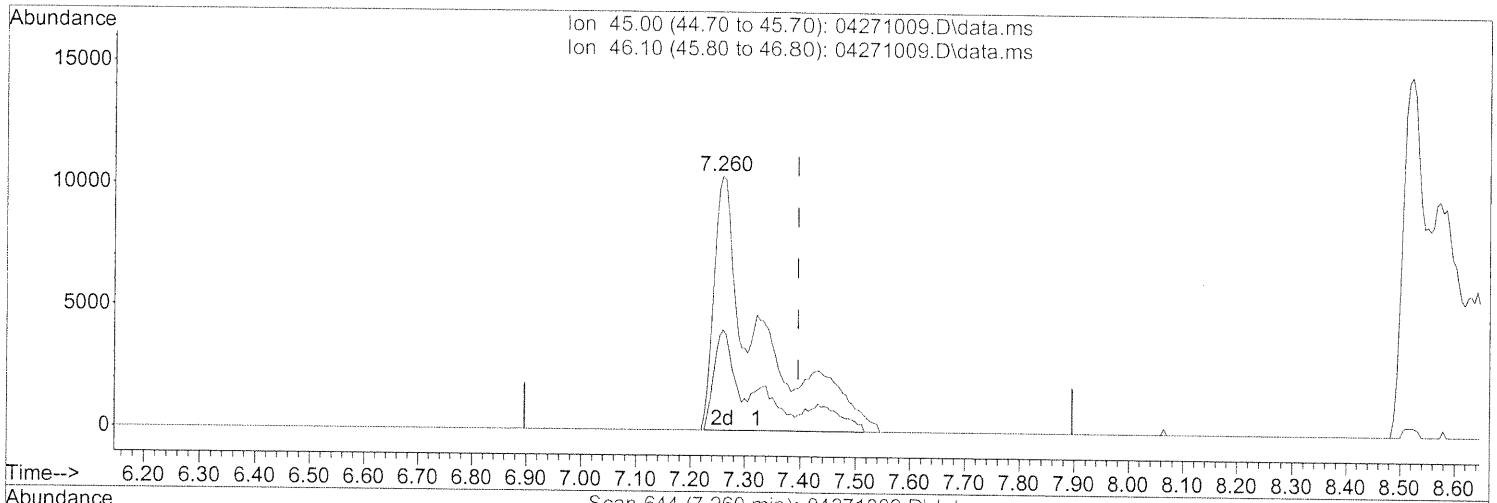
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 20.75 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

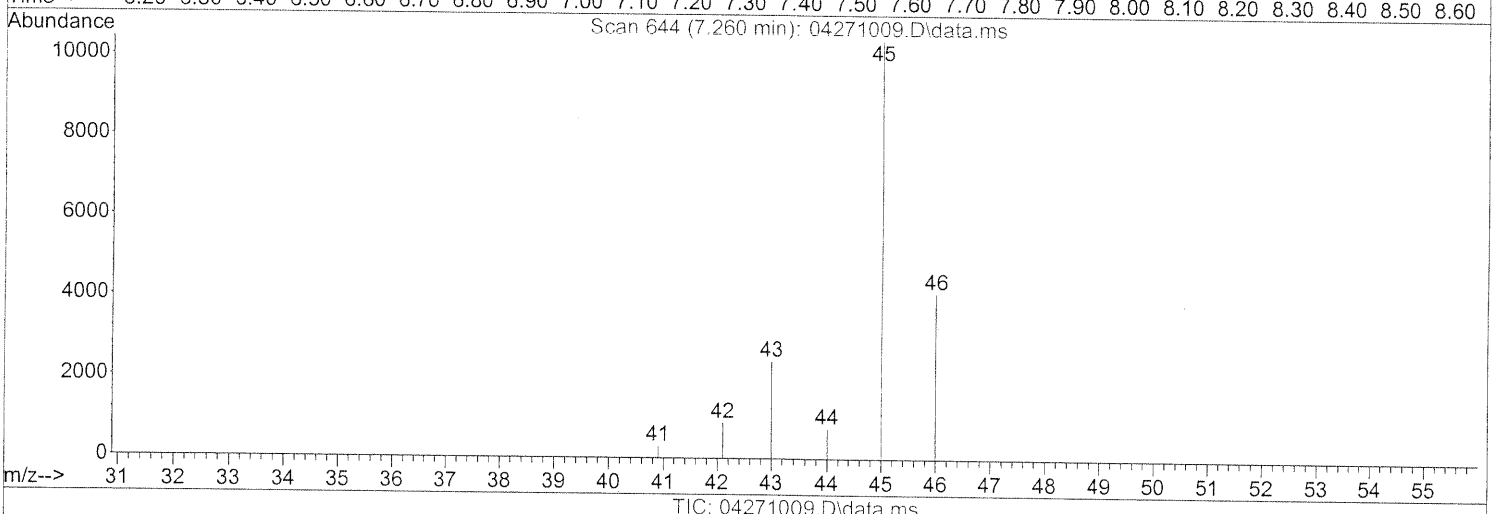
SP

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271009.D
Acq On : 27 Apr 2010 20:27
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 21:03:58 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




(10) Ethanol (T)

7.260min (-0.137) 5.96ng m

response 59459

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 10.59# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → IC

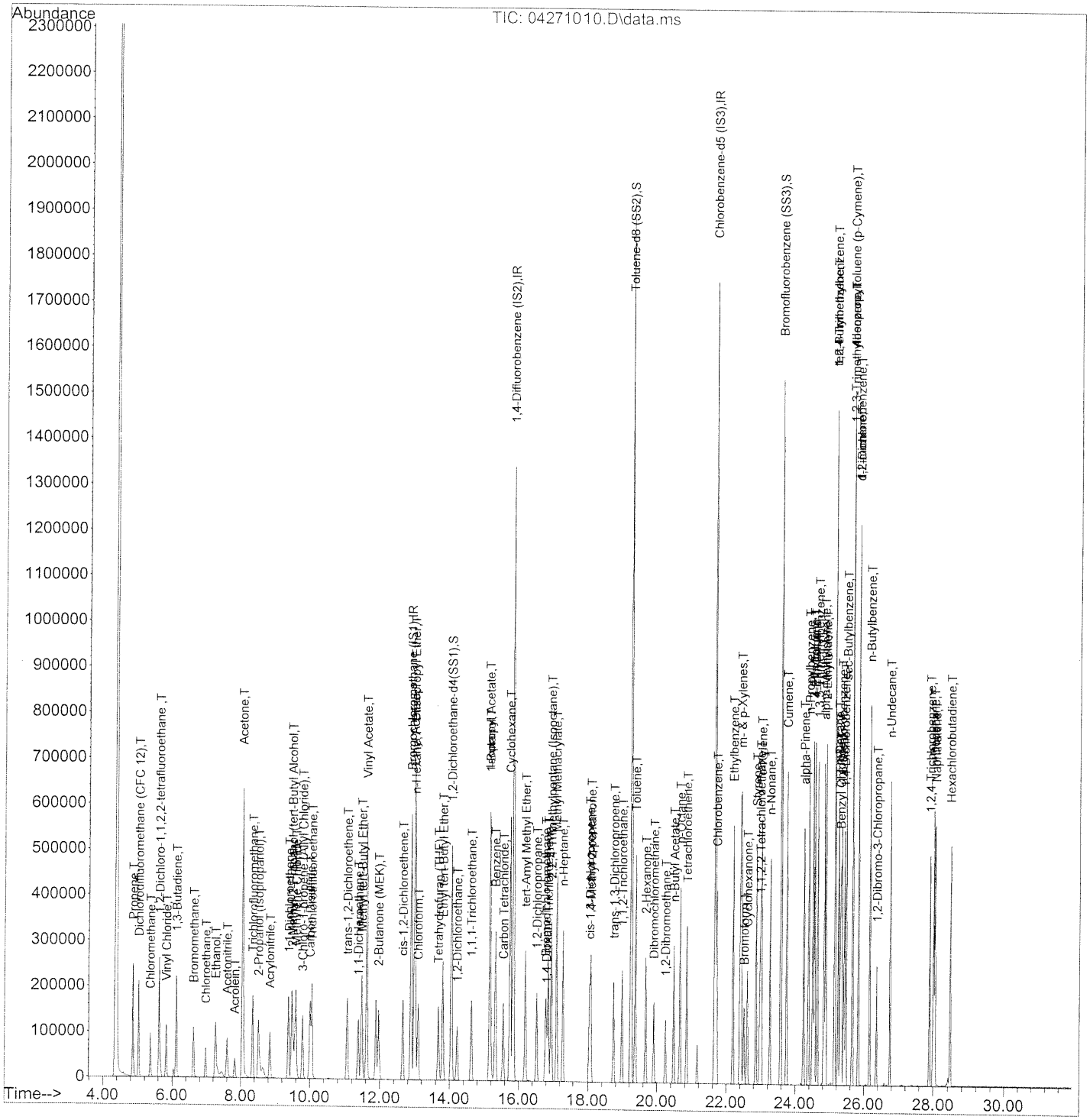
AOA 4/28/10

KR 4/30/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271010.D
Acq On : 27 Apr 2010 21:09
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:03:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271010.D
Acq On : 27 Apr 2010 21:09
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:03:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 340569 | 25.000 | ng | | -0.03 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1653155 | 25.000 | ng | | -0.02 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 690075 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 517691 | 24.548 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery | = | 98.20% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1734831 | 24.073 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery | = | 96.28% | | |
| 73) Bromofluorobenzene (SS3) | 23.58 | 174 | 608654 | 23.076 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery | = | 92.32% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.86 | 42 | 105090 | 7.291 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 223597 | 5.737 | ng | | 99 |
| 4) Chloromethane | 5.36 | 50 | 122084 | 5.506 | ng | | 100 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.63 | 135 | 131668 | 5.399 | ng | | 100 |
| 6) Vinyl Chloride | 5.83 | 62 | 148023 | 5.627 | ng | | 99 |
| 7) 1,3-Butadiene | 6.12 | 54 | 127471 | 7.385 | ng | | 92 |
| 8) Bromomethane | 6.62 | 94 | 96951 | 5.663 | ng | | 99 |
| 9) Chloroethane | 6.97 | 64 | 75213 | 6.019 | ng | | 99 |
| 10) Ethanol | 7.27 | 45 | 277405m | 27.914 | ng | | |
| 11) Acetonitrile | 7.60 | 41 | 139902 | 6.018 | ng | | 99 |
| 12) Acrolein | 7.83 | 56 | 52583 | 6.040 | ng | | 99 |
| 13) Acetone | 8.05 | 58 | 370824 | 29.766 | ng | | 89 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 202490 | 5.499 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.52 | 45 | 344507m | 9.228 | ng | | |
| 16) Acrylonitrile | 8.85 | 53 | 117564 | 6.348 | ng | | 99 |
| 17) 1,1-Dichloroethene | 9.39 | 96 | 106488 | 6.148 | ng | # | 73 |
| 18) 2-Methyl-2-Propanol (t... | 9.49 | 59 | 505214 | 11.613 | ng | | 97 |
| 19) Methylene Chloride | 9.60 | 84 | 107505 | 5.773 | ng | # | 73 |
| 20) 3-Chloro-1-propene (Al... | 9.79 | 41 | 119315 | 7.038 | ng | | 79 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 105487 | 5.706 | ng | # | 75 |
| 22) Carbon Disulfide | 10.00 | 76 | 371662 | 6.136 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 11.07 | 61 | 137577 | 6.040 | ng | | 76 |
| 24) 1,1-Dichloroethane | 11.38 | 63 | 176782 | 6.313 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.48 | 73 | 329483 | 6.045 | ng | | 92 |
| 26) Vinyl Acetate | 11.62 | 86 | 130636 | 47.016 | ng | # | 25 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 76094 | 6.456 | ng | # | 65 |
| 28) cis-1,2-Dichloroethene | 12.65 | 61 | 137024 | 6.197 | ng | | 75 |
| 29) Diisopropyl Ether | 13.00 | 87 | 96272 | 6.066 | ng | # | 35 |
| 30) Ethyl Acetate | 12.98 | 61 | 76940 | 12.943 | ng | | 90 |
| 31) n-Hexane | 13.01 | 57 | 176596 | 6.403 | ng | # | 98 |



DA 4/28/10

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271010.D
Acq On : 27 Apr 2010 21:09
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:03:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.10 | 83 | 185811 | 5.954 | ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.67 | 72 | 71198 | 6.389 | ng | # | 75 |
| 35) Ethyl tert-Butyl Ether | 13.81 | 87 | 136383 | 5.723 | ng | # | 75 |
| 36) 1,2-Dichloroethane | 14.22 | 62 | 138089 | 5.693 | ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.62 | 97 | 168830 | 5.599 | ng | | 95 |
| 39) Isopropyl Acetate | 15.16 | 61 | 130344 | 12.897 | ng | # | 89 |
| 40) 1-Butanol | 15.17 | 56 | 187014 | 10.509 | ng | | 84 |
| 41) Benzene | 15.32 | 78 | 446527 | 6.227 | ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 147245 | 5.576 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 356144 | 12.469 | ng | # | 78 |
| 44) tert-Amyl Methyl Ether | 16.20 | 73 | 314005 | 5.929 | ng | | 92 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 100345 | 6.202 | ng | | 98 |
| 46) Bromodichloromethane | 16.78 | 83 | 144509 | 5.998 | ng | | 99 |
| 47) Trichloroethene | 16.86 | 130 | 127267 | 5.430 | ng | | 99 |
| 48) 1,4-Dioxane | 16.81 | 88 | 93054 | 6.052 | ng | | 81 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 425143 | 6.194 | ng | | 95 |
| 50) Methyl Methacrylate | 17.11 | 100 | 104465 | 12.281 | ng | # | 62 |
| 51) n-Heptane | 17.30 | 71 | 112932 | 6.237 | ng | | 88 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 159554 | 5.684 | ng | | 100 |
| 53) 4-Methyl-2-pentanone | 18.07 | 58 | 97321 | 6.711 | ng | # | 86 |
| 54) trans-1,3-Dichloropropene | 18.74 | 75 | 162299 | 6.275 | ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 107914 | 6.016 | ng | | 93 |
| 58) Toluene | 19.37 | 91 | 492555 | 5.852 | ng | | 99 |
| 59) 2-Hexanone | 19.67 | 43 | 221509 | 6.032 | ng | | 91 |
| 60) Dibromochloromethane | 19.91 | 129 | 129023 | 5.873 | ng | | 99 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 125096 | 5.649 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 253244 | 6.128 | ng | | 93 |
| 63) n-Octane | 20.65 | 57 | 89851 | 6.108 | ng | # | 78 |
| 64) Tetrachloroethene | 20.85 | 166 | 142343 | 5.187 | ng | | 99 |
| 65) Chlorobenzene | 21.71 | 112 | 323187 | 5.623 | ng | | 99 |
| 66) Ethylbenzene | 22.19 | 91 | 538548 | 5.729 | ng | | 95 |
| 67) m- & p-Xylenes | 22.42 | 91 | 837523 | 11.141 | ng | | 92 |
| 68) Bromoform | 22.51 | 173 | 108704 | 5.010 | ng | | 100 |
| 69) Styrene | 22.87 | 104 | 345330 | 5.784 | ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 430186 | 5.633 | ng | | 92 |
| 71) n-Nonane | 23.27 | 43 | 189789 | 5.977 | ng | | 85 |
| 72) 1,1,2,2-Tetrachloroethane | 22.98 | 83 | 187595 | 6.433 | ng | | 98 |
| 74) Cumene | 23.75 | 105 | 572369 | 5.501 | ng | | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 270414 | 5.504 | ng | | 93 |
| 76) n-Propylbenzene | 24.37 | 91 | 682216 | 5.686 | ng | | 94 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 565246 | 5.841 | ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 577024 | 5.942 | ng | | 95 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 463943 | 5.729 | ng | | 92 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271010.D
Acq On : 27 Apr 2010 21:09
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:03:03 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

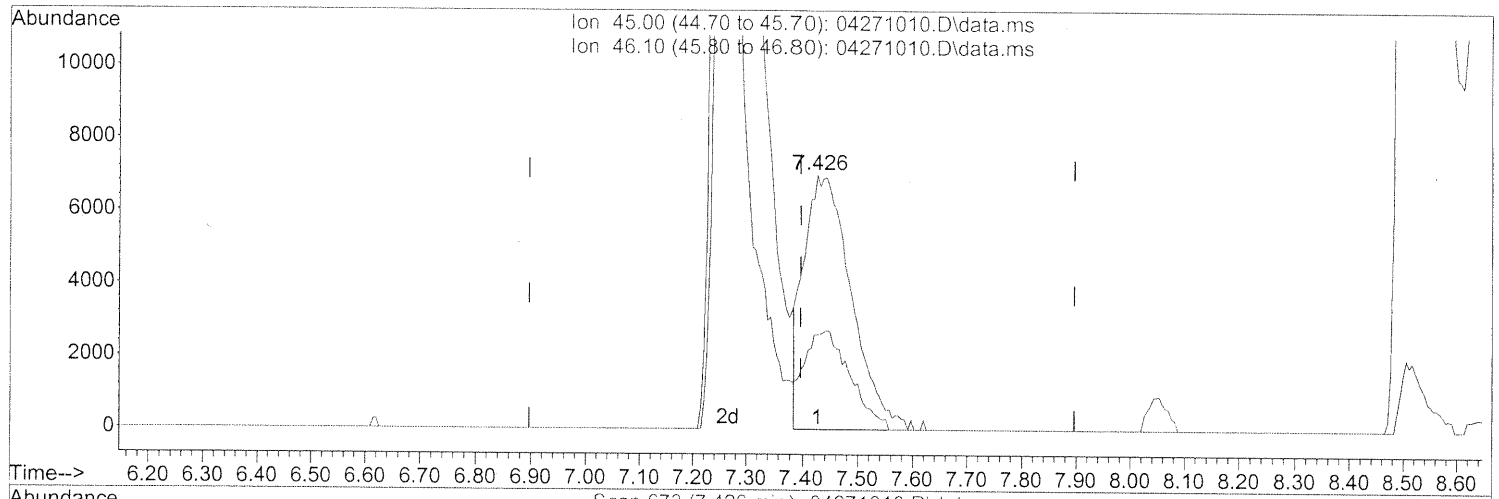
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 265369 | 5.781 ng | | 96 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 565608 | 5.611 ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 470849 | 5.600 ng | | 91 |
| 83) n-Decane | 25.24 | 57 | 215422 | 6.030 ng | | 89 |
| 84) Benzyl Chloride | 25.31 | 91 | 381582 | 6.328 ng | | 91 |
| 85) 1,3-Dichlorobenzene | 25.34 | 146 | 287740 | 5.558 ng | | 99 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 290111 | 5.387 ng | | 100 |
| 87) sec-Butylbenzene | 25.48 | 105 | 642300 | 5.727 ng | | 94 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 608944 | 5.514 ng | | 93 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 479871 | 5.619 ng | | 90 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 271657 | 5.428 ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 172524 | 6.089 ng | | 81 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 91309 | 5.756 ng | # | 62 |
| 93) n-Undecane | 26.75 | 57 | 215640 | 5.928 ng | | 88 |
| 94) 1,2,4-Trichlorobenzene | 27.89 | 180 | 193868 | 5.208 ng | | 99 |
| 95) Naphthalene | 28.05 | 128 | 555692 | 4.799 ng | | 99 |
| 96) n-Dodecane | 28.00 | 57 | 190681 | 4.927 ng | | 88 |
| 97) Hexachlorobutadiene | 28.47 | 225 | 124198 | 5.124 ng | | 99 |
| 98) Cyclohexanone | 22.60 | 55 | 132236 | 5.176 ng | # | 87 |
| 99) tert-Butylbenzene | 25.15 | 119 | 489176 | 5.639 ng | | 95 |
| 100) n-Butylbenzene | 26.16 | 91 | 503826 | 5.873 ng | # | 96 |

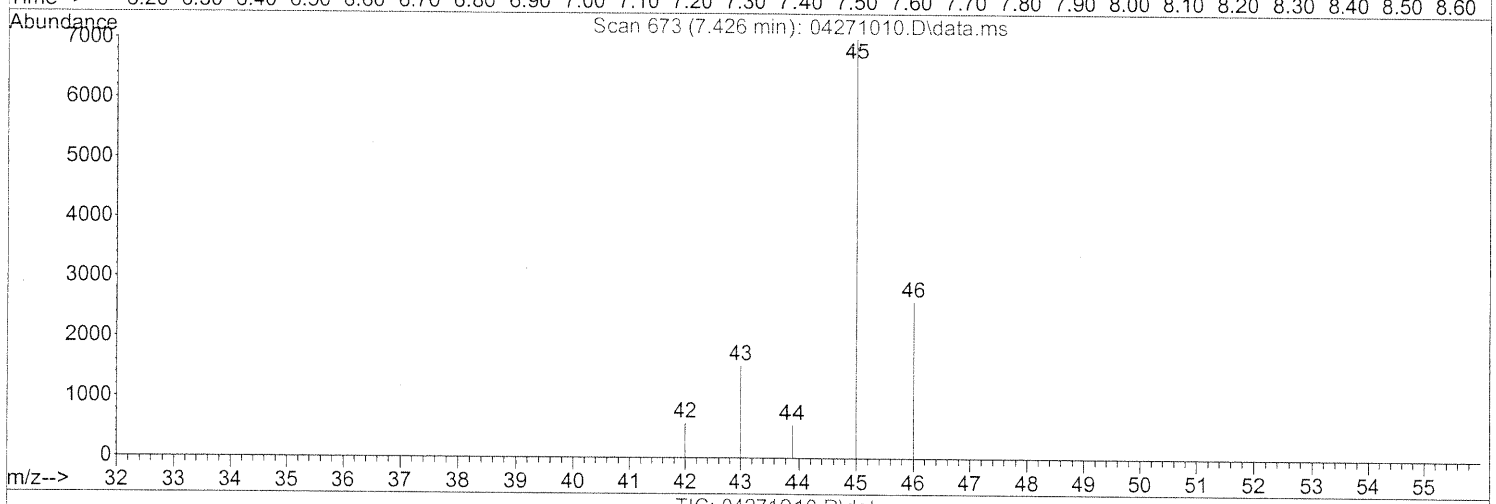
(#) = qualifier out of range (m) = manual integration (+) = signals summed

# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271010.D
Acq On : 27 Apr 2010 21:09
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:02:12 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271010.D\data.ms

(10) Ethanol (T)

7.426min (+0.029) 4.19ng

response 41637

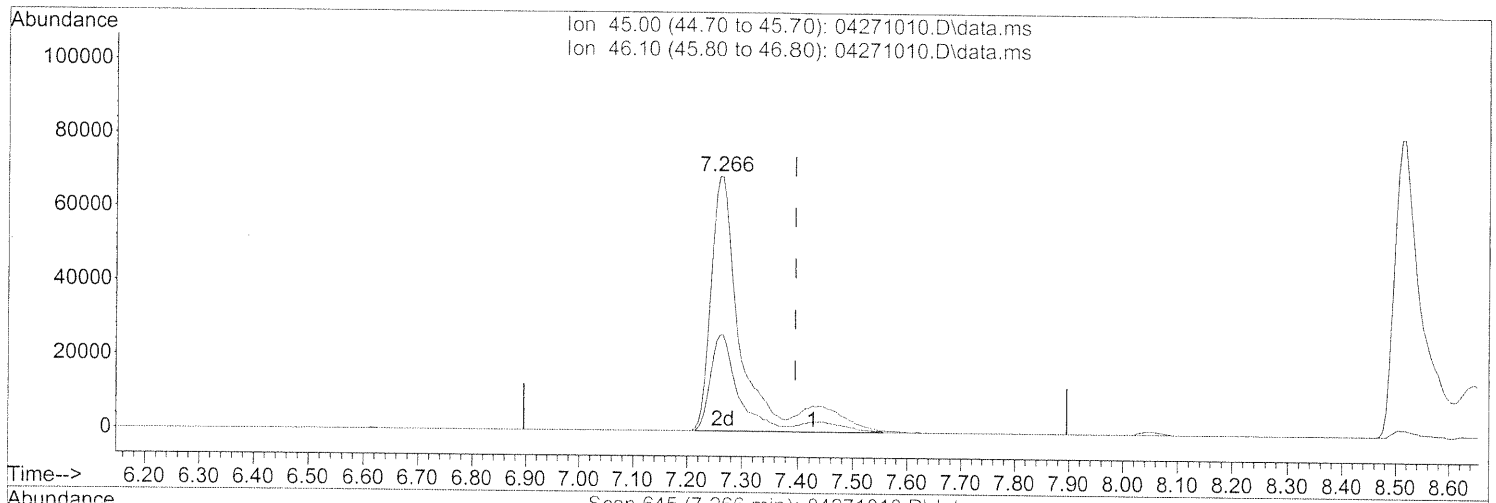
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 36.44 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

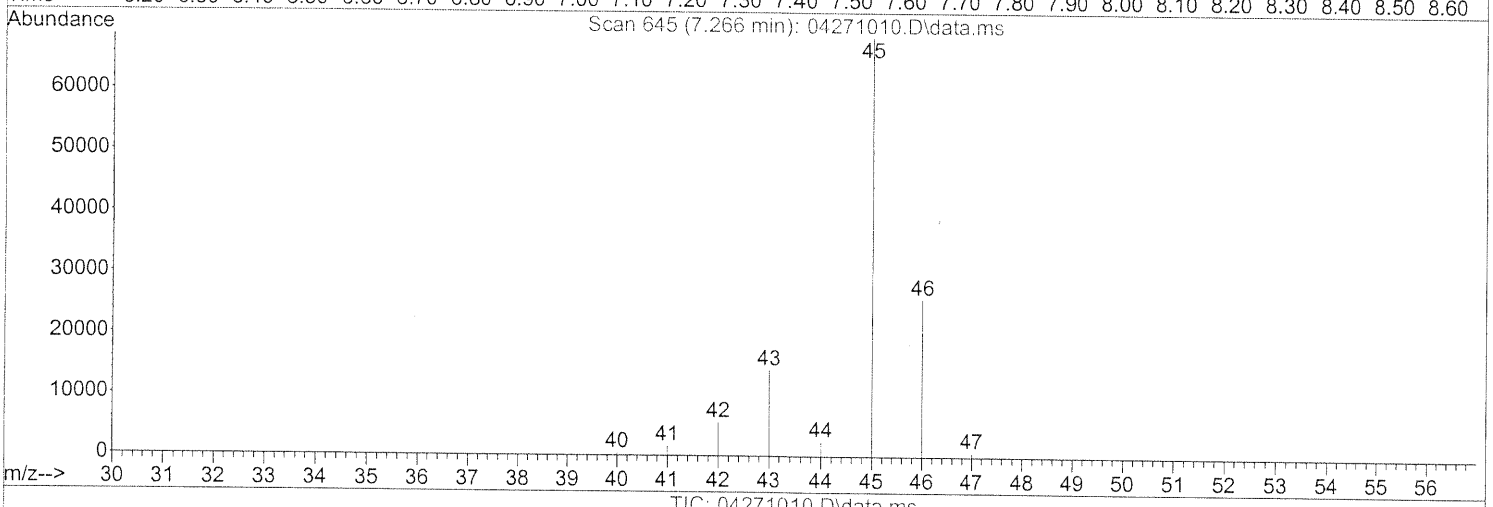
SP

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271010.D
Acq On : 27 Apr 2010 21:09
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:02:12 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271010.D\data.ms

(10) Ethanol (T)

7.266min (-0.131) 27.91ng m

response 277405

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 5.47# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → IC

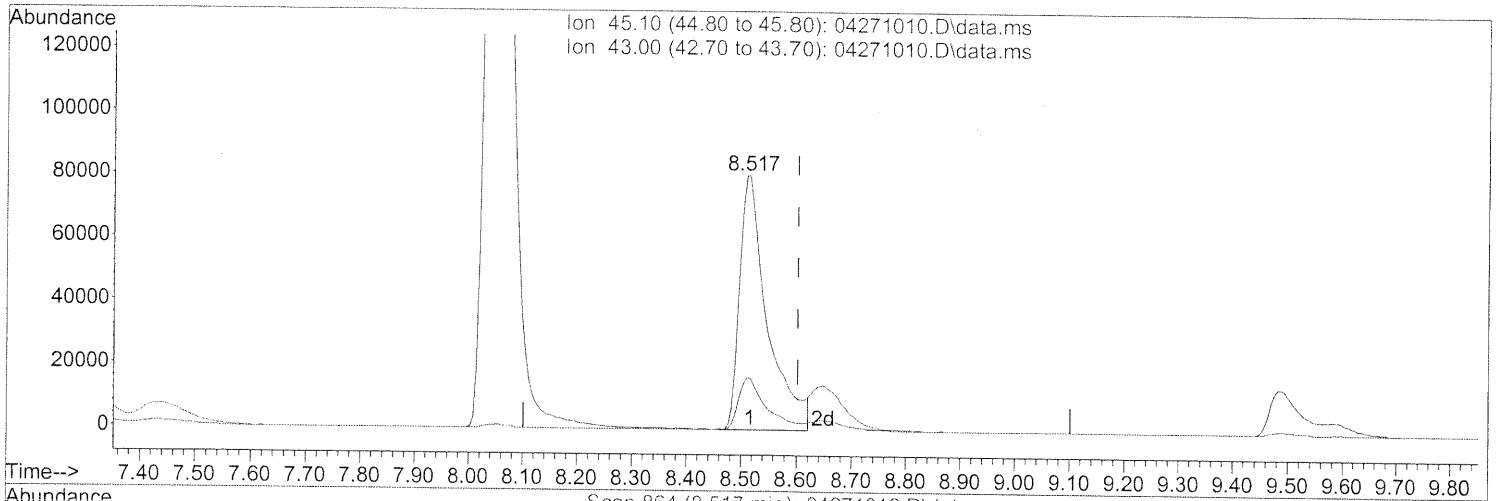
DA 4/28/10

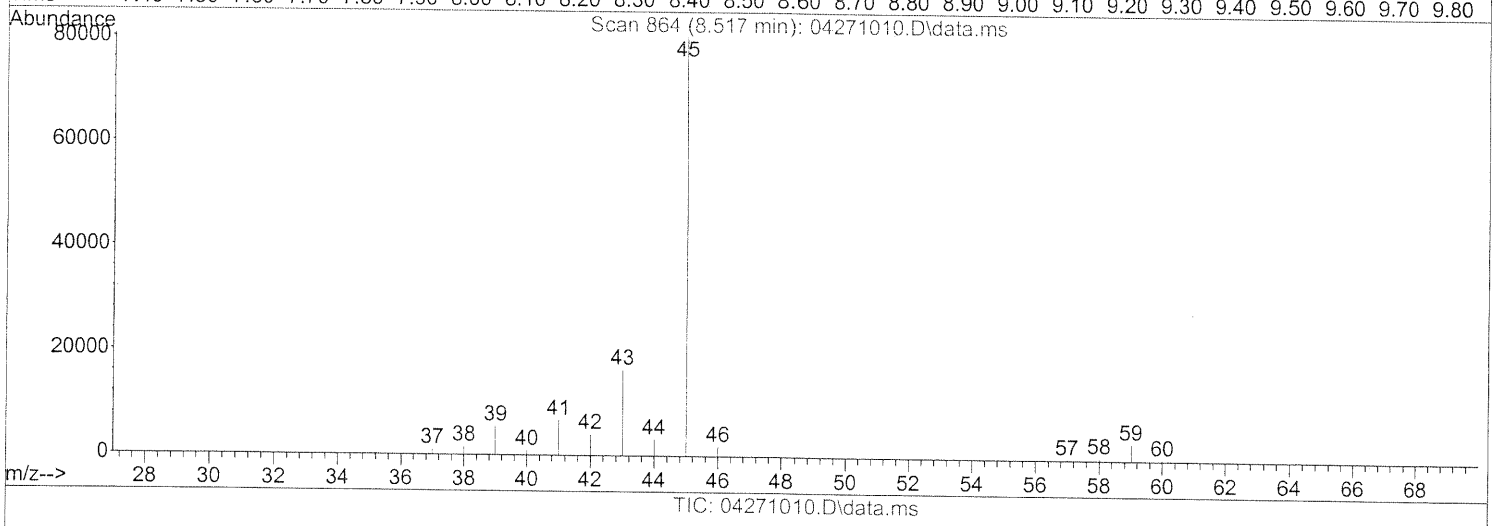
KR 4/30/10

# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271010.D
Acq On : 27 Apr 2010 21:09
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:02:12 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271010.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.517min (-0.085) 7.61ng

response 284204

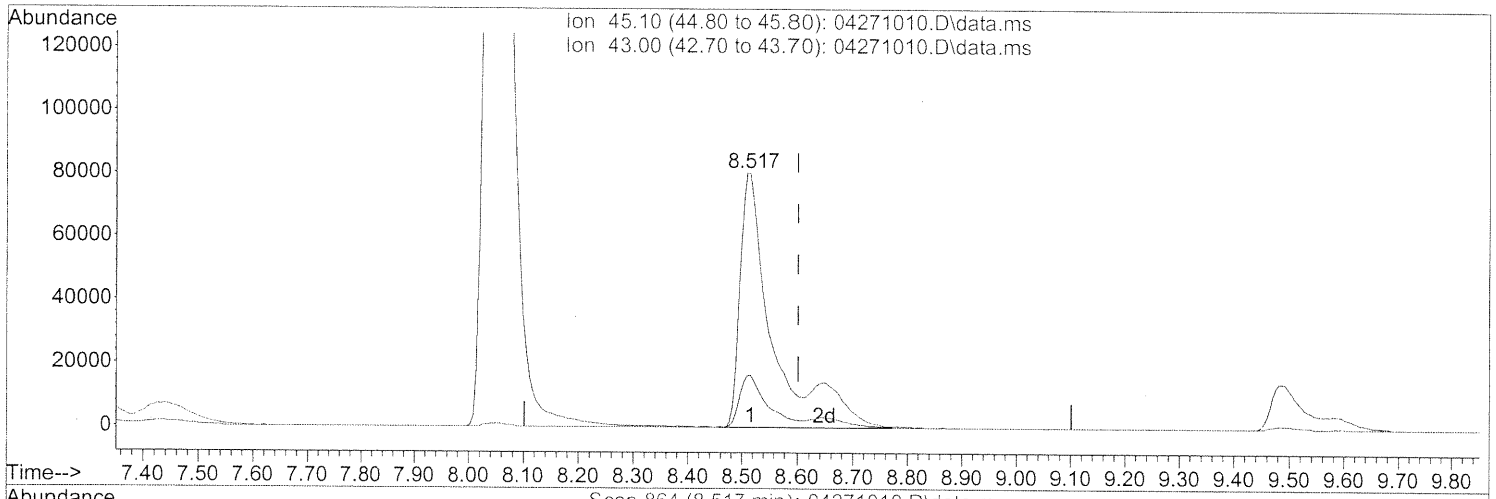
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 26.05 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

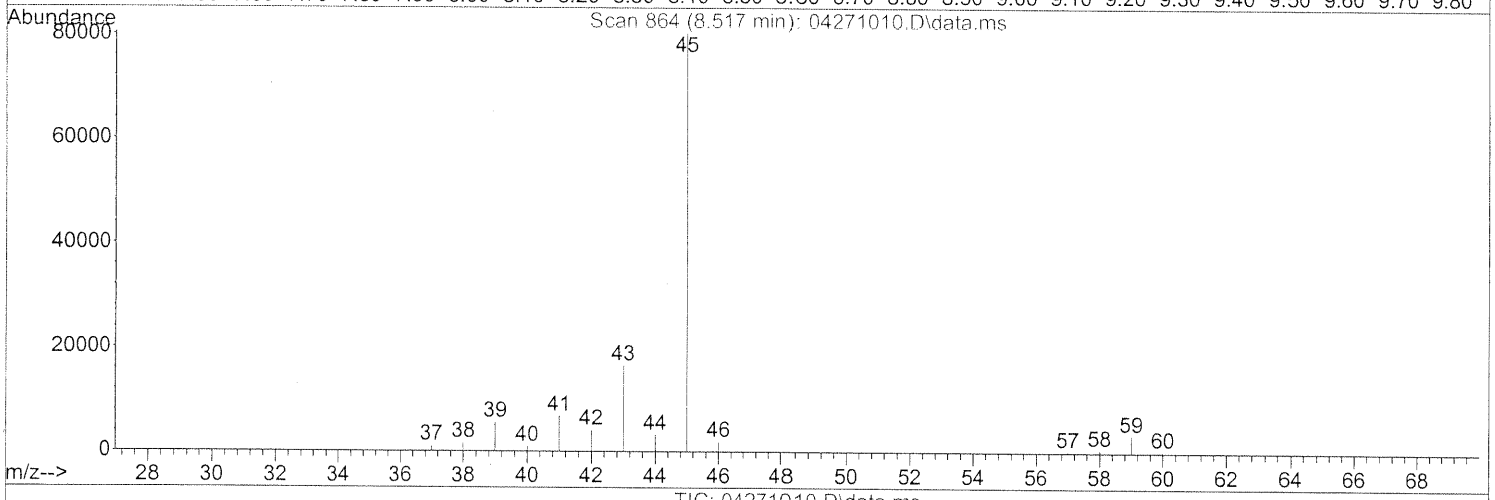
SP

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271010.D
Acq On : 27 Apr 2010 21:09
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-04261002/S20-04261003
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:02:12 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271010.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.517min (-0.085) 9.23ng m

response 344507

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 21.49 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP→IC

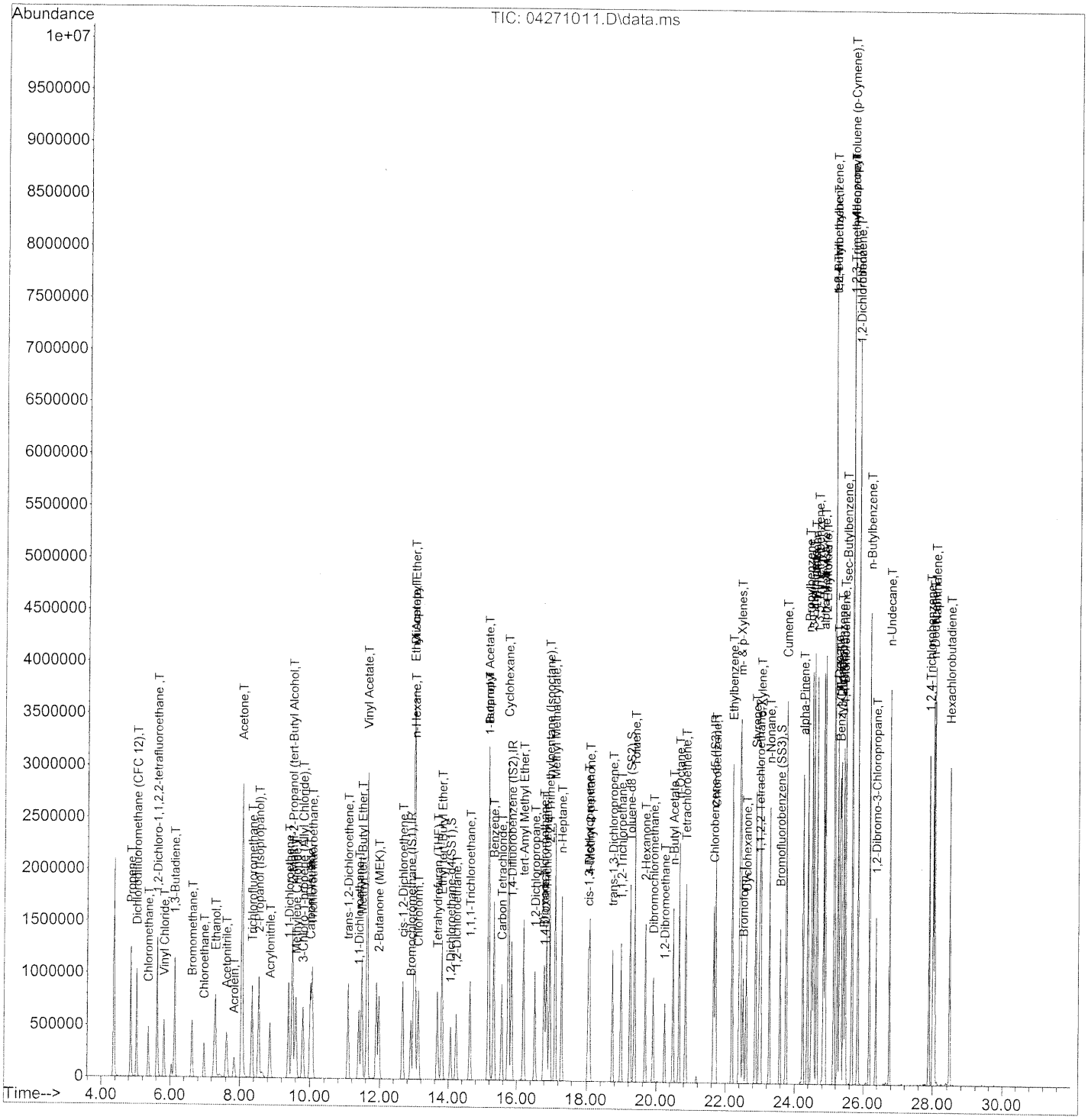
IDA 4/28/10

KR 4/30/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271011.D
Acq On : 27 Apr 2010 21:51
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:04:04 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271011.D
Acq On : 27 Apr 2010 21:51
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:04:04 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.90 | 130 | 342838 | 25.000 | ng | | -0.02 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1635526 | 25.000 | ng | | -0.02 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 676507 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.06 | 65 | 511052 | 24.073 | ng | | -0.02 |
| Spiked Amount 25.000 | | | Recovery | = | 96.28% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1697857 | 24.033 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 96.12% | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 600398 | 23.220 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 92.88% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.86 | 42 | 562972 | 38.802 | ng | | 98 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 1151705 | 29.354 | ng | | 99 |
| 4) Chloromethane | 5.36 | 50 | 678930 | 30.417 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.63 | 135 | 679597 | 27.684 | ng | | 100 |
| 6) Vinyl Chloride | 5.83 | 62 | 772224 | 29.160 | ng | | 99 |
| 7) 1,3-Butadiene | 6.12 | 54 | 706900 | 40.681 | ng | | 92 |
| 8) Bromomethane | 6.63 | 94 | 521589 | 30.263 | ng | | 99 |
| 9) Chloroethane | 6.97 | 64 | 398847 | 31.706 | ng | | 99 |
| 10) Ethanol | 7.31 | 45 | 1737013m | 173.631 | ng | | |
| 11) Acetonitrile | 7.62 | 41 | 805479 | 34.418 | ng | | 99 |
| 12) Acrolein | 7.84 | 56 | 292996 | 33.431 | ng | | 99 |
| 13) Acetone | 8.07 | 58 | 1971959 | 157.242 | ng | | 87 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 1067297 | 28.790 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.54 | 45 | 1975150 | 52.556 | ng | | 98 |
| 16) Acrylonitrile | 8.86 | 53 | 667518 | 35.807 | ng | | 99 |
| 17) 1,1-Dichloroethene | 9.40 | 96 | 585269 | 33.566 | ng | # | 72 |
| 18) 2-Methyl-2-Propanol (t... | 9.51 | 59 | 2711551 | 61.918 | ng | | 96 |
| 19) Methylene Chloride | 9.61 | 84 | 576279 | 30.743 | ng | # | 73 |
| 20) 3-Chloro-1-propene (Al... | 9.80 | 41 | 682152 | 39.973 | ng | | 78 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 570587 | 30.661 | ng | # | 74 |
| 22) Carbon Disulfide | 10.01 | 76 | 2009264 | 32.953 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 11.08 | 61 | 761627 | 33.215 | ng | | 76 |
| 24) 1,1-Dichloroethane | 11.40 | 63 | 948858 | 33.660 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.48 | 73 | 1767712 | 32.217 | ng | | 93 |
| 26) Vinyl Acetate | 11.64 | 86 | 742326 | 265.398 | ng | # | 20 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 408257 | 34.410 | ng | # | 64 |
| 28) cis-1,2-Dichloroethene | 12.66 | 61 | 751282 | 33.750 | ng | | 75 |
| 29) Diisopropyl Ether | 13.00 | 87 | 529198 | 33.123 | ng | # | 34 |
| 30) Ethyl Acetate | 12.99 | 61 | 435082 | 72.707 | ng | | 89 |
| 31) n-Hexane | 13.02 | 57 | 960805 | 34.604 | ng | # | 97 |



4/28/10

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271011.D
Acq On : 27 Apr 2010 21:51
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:04:04 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.11 | 83 | 995789 | 31.697 | ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.67 | 72 | 387477 | 34.539 | ng | # | 74 |
| 35) Ethyl tert-Butyl Ether | 13.81 | 87 | 744646 | 31.043 | ng | # | 75 |
| 36) 1,2-Dichloroethane | 14.23 | 62 | 739083 | 30.271 | ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 917594 | 30.759 | ng | | 95 |
| 39) Isopropyl Acetate | 15.17 | 61 | 730412 | 73.049 | ng | # | 88 |
| 40) 1-Butanol | 15.18 | 56 | 1183785 | 67.240 | ng | | 92 |
| 41) Benzene | 15.33 | 78 | 2349594 | 33.121 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.56 | 117 | 807524 | 30.910 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 1897074 | 67.133 | ng | # | 79 |
| 44) tert-Amyl Methyl Ether | 16.20 | 73 | 1709634 | 32.630 | ng | | 92 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 543434 | 33.948 | ng | | 98 |
| 46) Bromodichloromethane | 16.79 | 83 | 804391 | 33.749 | ng | | 98 |
| 47) Trichloroethene | 16.87 | 130 | 691763 | 29.830 | ng | | 99 |
| 48) 1,4-Dioxane | 16.81 | 88 | 522317 | 34.338 | ng | | 81 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 2272343 | 33.461 | ng | | 96 |
| 50) Methyl Methacrylate | 17.11 | 100 | 580549 | 68.983 | ng | # | 62 |
| 51) n-Heptane | 17.31 | 71 | 613481 | 34.247 | ng | | 87 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 899646 | 32.397 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 539631 | 37.612 | ng | # | 84 |
| 54) trans-1,3-Dichloropropene | 18.74 | 75 | 928790 | 36.296 | ng | | 100 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 586000 | 33.021 | ng | | 93 |
| 58) Toluene | 19.38 | 91 | 2588915 | 31.374 | ng | | 98 |
| 59) 2-Hexanone | 19.67 | 43 | 1220199 | 33.897 | ng | | 90 |
| 60) Dibromochloromethane | 19.91 | 129 | 732514 | 34.012 | ng | | 100 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 690937 | 31.828 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 1424906 | 35.173 | ng | | 92 |
| 63) n-Octane | 20.66 | 57 | 493057 | 34.192 | ng | # | 79 |
| 64) Tetrachloroethene | 20.85 | 166 | 770817 | 28.652 | ng | | 100 |
| 65) Chlorobenzene | 21.72 | 112 | 1712304 | 30.390 | ng | | 99 |
| 66) Ethylbenzene | 22.19 | 91 | 2892835 | 31.391 | ng | | 95 |
| 67) m- & p-Xylenes | 22.43 | 91 | 4506256 | 61.148 | ng | | 92 |
| 68) Bromoform | 22.52 | 173 | 655295 | 30.805 | ng | | 99 |
| 69) Styrene | 22.87 | 104 | 1904161 | 32.531 | ng | | 94 |
| 70) o-Xylene | 23.02 | 91 | 2334187 | 31.179 | ng | | 93 |
| 71) n-Nonane | 23.28 | 43 | 1017811 | 32.695 | ng | | 84 |
| 72) 1,1,2,2-Tetrachloroethane | 22.99 | 83 | 1031454 | 36.082 | ng | | 98 |
| 74) Cumene | 23.76 | 105 | 3052111 | 29.920 | ng | | 95 |
| 75) alpha-Pinene | 24.25 | 93 | 1451272 | 30.129 | ng | | 94 |
| 76) n-Propylbenzene | 24.38 | 91 | 3631239 | 30.870 | ng | | 93 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 3068845 | 32.345 | ng | | 95 |
| 78) 4-Ethyltoluene | 24.56 | 105 | 3074612 | 32.294 | ng | | 94 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 2527676 | 31.838 | ng | | 92 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271011.D
Acq On : 27 Apr 2010 21:51
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:04:04 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

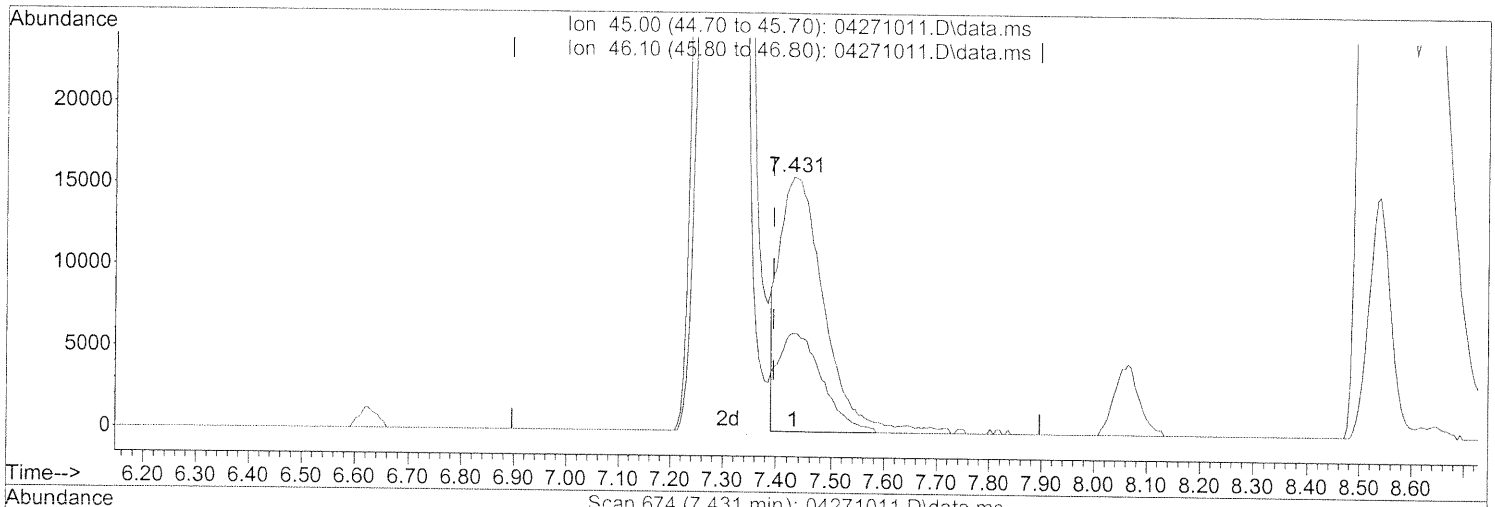
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 1483768 | 32.972 | ng | | 96 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 3064811 | 31.016 | ng | | 94 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 2654059 | 32.201 | ng | | 92 |
| 83) n-Decane | 25.25 | 57 | 1190747 | 34.000 | ng | | 88 |
| 84) Benzyl Chloride | 25.31 | 91 | 2340111 | 39.584 | ng | | 90 |
| 85) 1,3-Dichlorobenzene | 25.35 | 146 | 1602615 | 31.579 | ng | | 100 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 1619299 | 30.671 | ng | | 100 |
| 87) sec-Butylbenzene | 25.48 | 105 | 3469325 | 31.555 | ng | | 94 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 3350141 | 30.944 | ng | | 94 |
| 89) 1,2,3-Trimethylbenzene | 25.66 | 105 | 2732068 | 32.634 | ng | | 91 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 1535941 | 31.305 | ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 995130 | 35.825 | ng | | 81 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 571382 | 36.740 | ng | # | 60 |
| 93) n-Undecane | 26.76 | 57 | 1245336 | 34.922 | ng | | 88 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 1211353 | 33.197 | ng | | 100 |
| 95) Naphthalene | 28.05 | 128 | 3743446 | 32.980 | ng | | 100 |
| 96) n-Dodecane | 28.00 | 57 | 1231459 | 32.457 | ng | | 88 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 734788 | 30.921 | ng | | 99 |
| 98) Cyclohexanone | 22.61 | 55 | 746213 | 29.792 | ng | # | 86 |
| 99) tert-Butylbenzene | 25.15 | 119 | 2670654 | 31.403 | ng | | 95 |
| 100) n-Butylbenzene | 26.17 | 91 | 2783567 | 33.101 | ng | # | 95 |

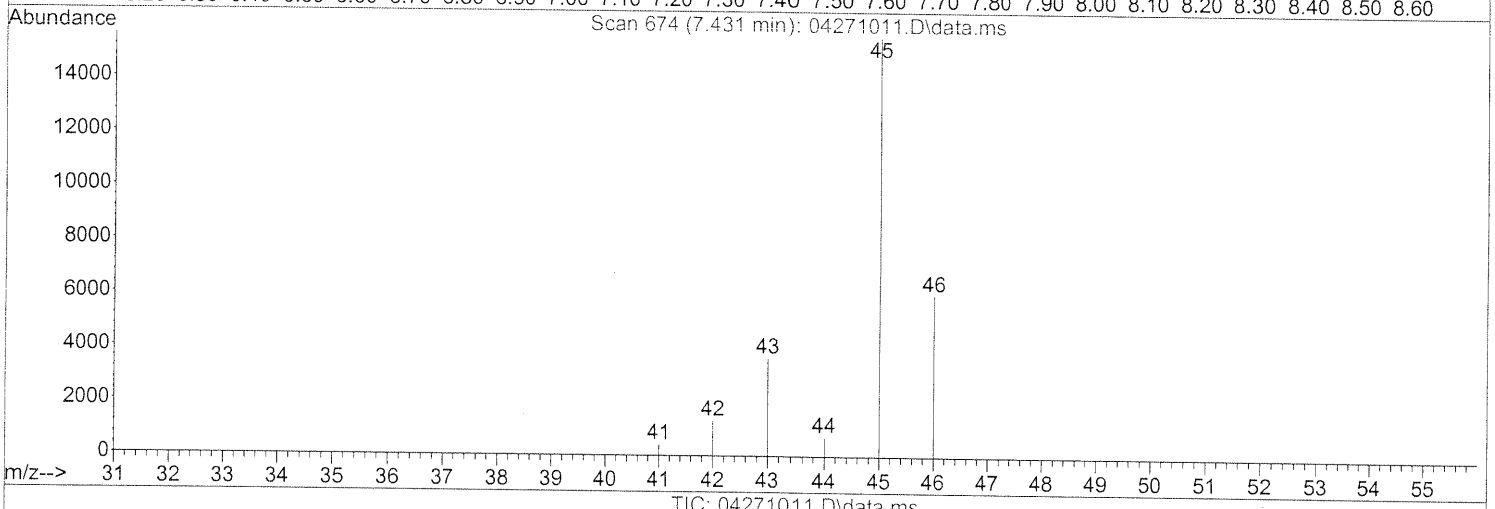
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271011.D
Acq On : 27 Apr 2010 21:51
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:03:41 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271011.D\data.ms

(10) Ethanol (T)

7.431min (+0.034) 8.81ng

response 88108

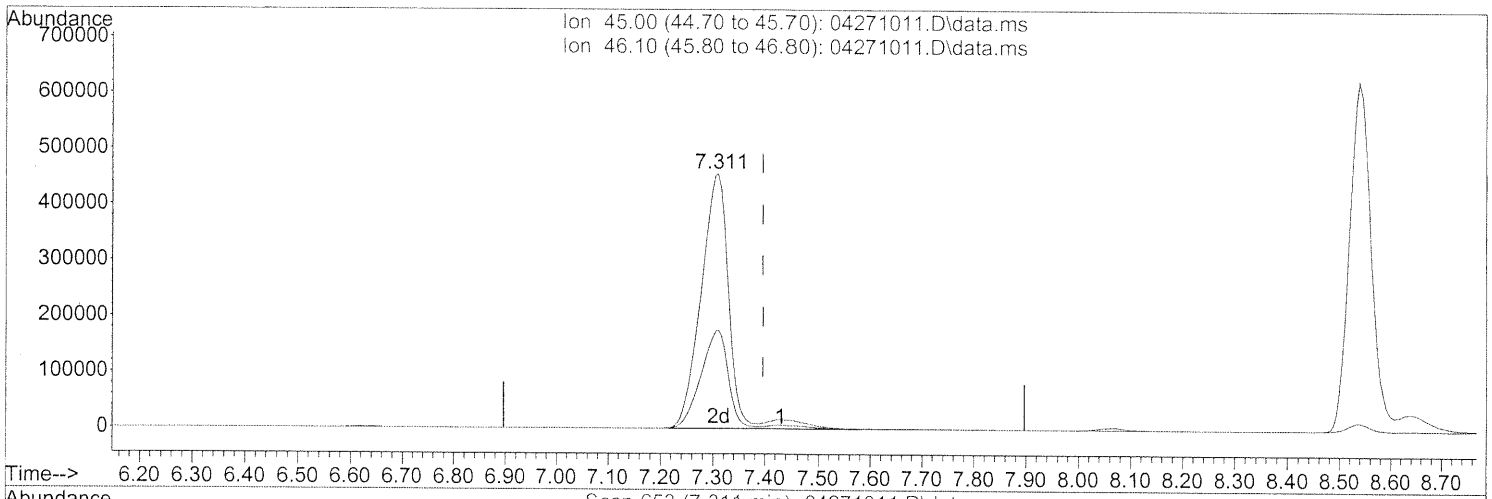
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 39.12 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

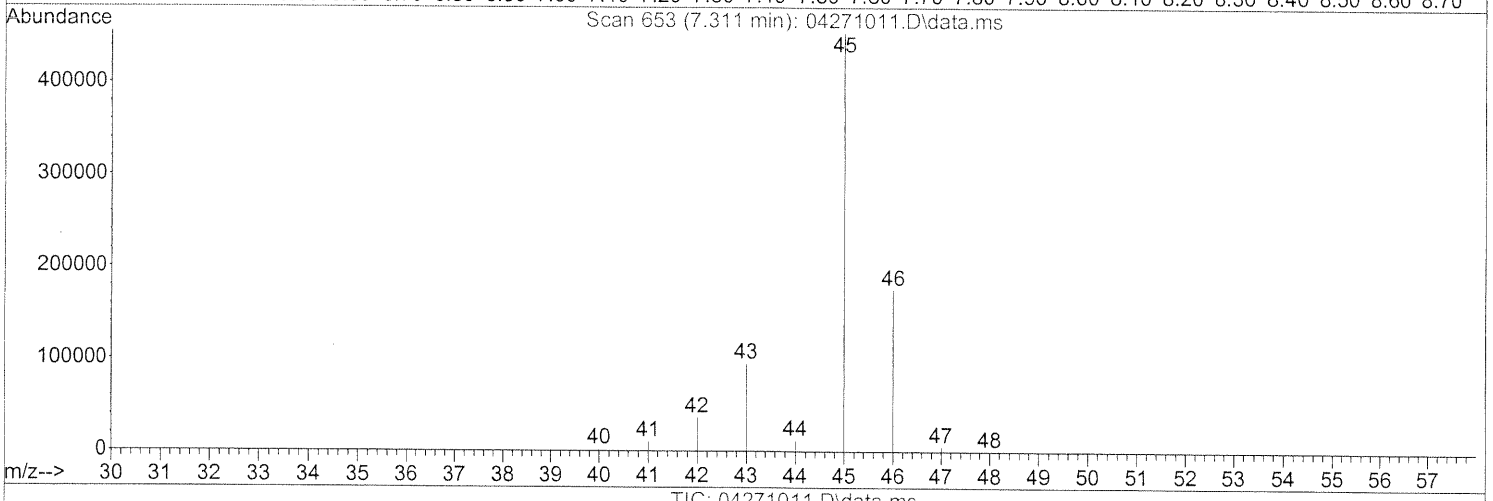
SP

# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271011.D
Acq On : 27 Apr 2010 21:51
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:03:41 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration




TIC: 04271011.D\data.ms

(10) Ethanol (T)

7.311min (-0.086) 173.63ng m

response 1737013

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 1.98# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP—7 IC

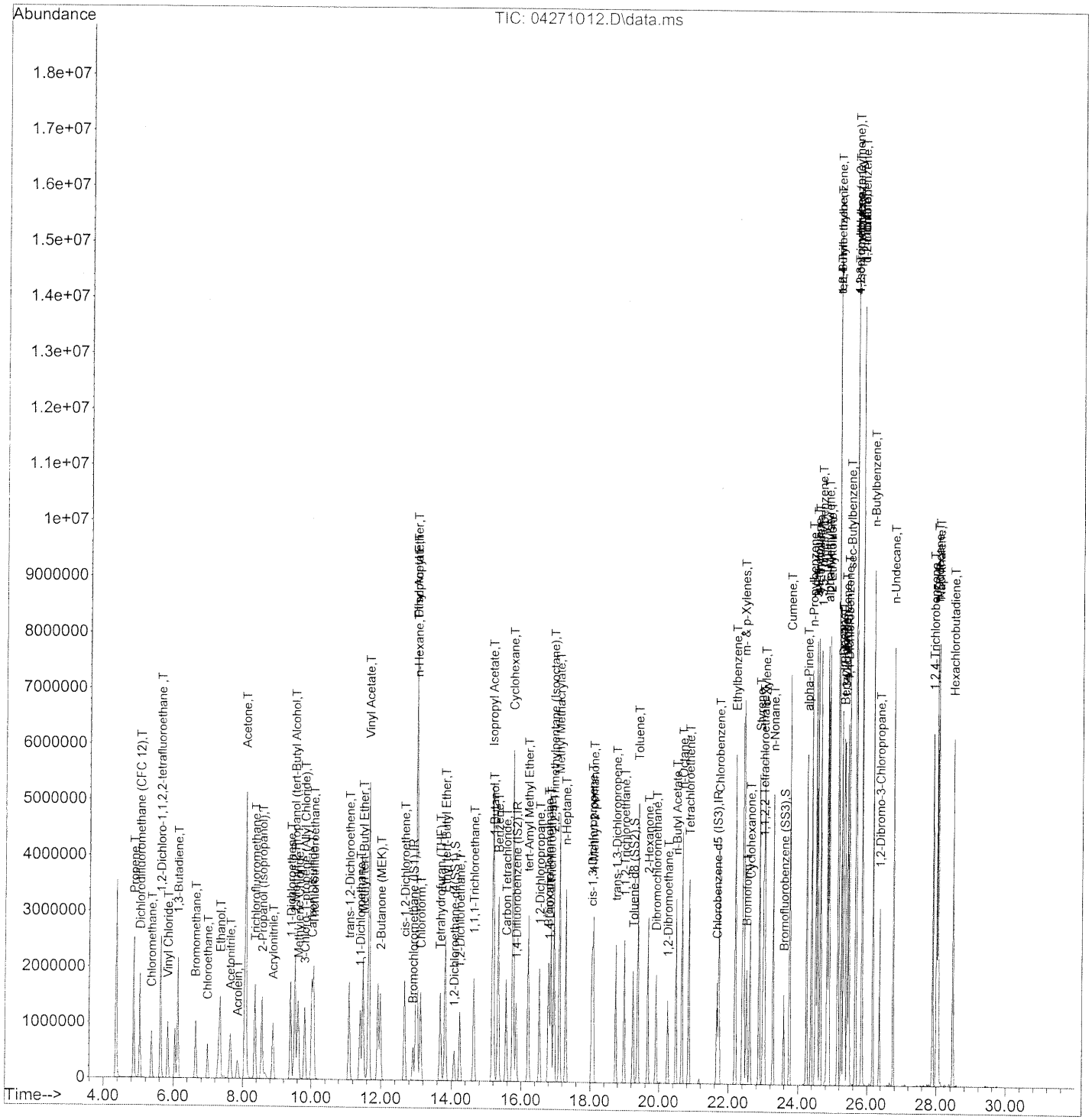
IDA 4/28/10

KR 4/30/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271012.D
Acq On : 27 Apr 2010 22:33
Operator : WA
Sample : 50ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:04:51 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271012.D
Acq On : 27 Apr 2010 22:33
Operator : WA
Sample : 50ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:04:51 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.92 | 130 | 367033 | 25.000 | ng | | -0.01 |
| 37) 1,4-Difluorobenzene (IS2) | 15.86 | 114 | 1741510 | 25.000 | ng | | -0.01 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 715986 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.07 | 65 | 542266 | 23.859 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 95.44% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1795778 | 24.017 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 96.08% | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 648773 | 23.707 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.84% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 1209133 | 77.843 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 5.04 | 85 | 2202106 | 52.426 | ng | | 99 |
| 4) Chloromethane | 5.37 | 50 | 1274406 | 53.332 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.63 | 135 | 1344721 | 51.167 | ng | | 100 |
| 6) Vinyl Chloride | 5.84 | 62 | 1523218 | 53.727 | ng | | 99 |
| 7) 1,3-Butadiene | 6.13 | 54 | 1413645 | 75.989 | ng | | 92 |
| 8) Bromomethane | 6.63 | 94 | 1019682 | 55.263 | ng | | 99 |
| 9) Chloroethane | 6.99 | 64 | 793420 | 58.914 | ng | | 99 |
| 10) Ethanol | 7.35 | 45 | 3446137 | 321.766 | ng | | 100 |
| 11) Acetonitrile | 7.64 | 41 | 1583821 | 63.215 | ng | | 99 |
| 12) Acrolein | 7.85 | 56 | 576772 | 61.471 | ng | | 99 |
| 13) Acetone | 8.08 | 58 | 3878802 | 288.904 | ng | # | 84 |
| 14) Trichlorofluoromethane | 8.36 | 101 | 2100940 | 52.937 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.56 | 45 | 3175165 | 78.918 | ng | | 100 |
| 16) Acrylonitrile | 8.88 | 53 | 1311637 | 65.721 | ng | | 99 |
| 17) 1,1-Dichloroethene | 9.40 | 96 | 1153197 | 61.778 | ng | # | 72 |
| 18) 2-Methyl-2-Propanol (t... | 9.53 | 59 | 4174991 | 89.051 | ng | | 96 |
| 19) Methylene Chloride | 9.62 | 84 | 1123308 | 55.976 | ng | # | 73 |
| 20) 3-Chloro-1-propene (Al... | 9.81 | 41 | 1352758 | 74.044 | ng | | 78 |
| 21) Trichlorotrifluoroethane | 10.07 | 151 | 1115578 | 55.995 | ng | # | 75 |
| 22) Carbon Disulfide | 10.01 | 76 | 3910462 | 59.906 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 11.09 | 61 | 1501351 | 61.159 | ng | | 76 |
| 24) 1,1-Dichloroethane | 11.40 | 63 | 1860629 | 61.653 | ng | | 99 |
| 25) Methyl tert-Butyl Ether | 11.49 | 73 | 3472831 | 59.121 | ng | | 93 |
| 26) Vinyl Acetate | 11.66 | 86 | 1480282 | 494.347 | ng | # | 16 |
| 27) 2-Butanone (MEK) | 11.99 | 72 | 801422 | 63.095 | ng | # | 62 |
| 28) cis-1,2-Dichloroethene | 12.68 | 61 | 1468787 | 61.634 | ng | | 75 |
| 29) Diisopropyl Ether | 13.01 | 87 | 1049511 | 61.360 | ng | # | 33 |
| 30) Ethyl Acetate | 13.01 | 61 | 870404 | 135.866 | ng | | 88 |
| 31) n-Hexane | 13.02 | 57 | 1908011 | 64.189 | ng | # | 97 |



BA 4/28/10

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271012.D
Acq On : 27 Apr 2010 22:33
Operator : WA
Sample : 50ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:04:51 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.13 | 83 | 1935781 | 57.555 | ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.68 | 72 | 733950 | 61.110 | ng | # | 74 |
| 35) Ethyl tert-Butyl Ether | 13.82 | 87 | 1467742 | 57.153 | ng | # | 74 |
| 36) 1,2-Dichloroethane | 14.23 | 62 | 1445111 | 55.286 | ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.64 | 97 | 1802084 | 56.733 | ng | | 95 |
| 39) Isopropyl Acetate | 15.18 | 61 | 1444343 | 135.658 | ng | # | 86 |
| 40) 1-Butanol | 15.21 | 56 | 2330694 | 124.329 | ng | | 93 |
| 41) Benzene | 15.34 | 78 | 4531404 | 59.989 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.57 | 117 | 1608411 | 57.819 | ng | | 99 |
| 43) Cyclohexane | 15.77 | 84 | 3703895 | 123.095 | ng | # | 80 |
| 44) tert-Amyl Methyl Ether | 16.21 | 73 | 3362379 | 60.270 | ng | | 91 |
| 45) 1,2-Dichloropropane | 16.54 | 63 | 1057658 | 62.051 | ng | | 99 |
| 46) Bromodichloromethane | 16.79 | 83 | 1587953 | 62.569 | ng | | 98 |
| 47) Trichloroethene | 16.87 | 130 | 1365143 | 55.285 | ng | | 99 |
| 48) 1,4-Dioxane | 16.82 | 88 | 1027690 | 63.450 | ng | | 82 |
| 49) 2,2,4-Trimethylpentane... | 16.96 | 57 | 4412283 | 61.018 | ng | | 96 |
| 50) Methyl Methacrylate | 17.13 | 100 | 1152332 | 128.591 | ng | # | 61 |
| 51) n-Heptane | 17.31 | 71 | 1195236 | 62.663 | ng | | 87 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 1768467 | 59.808 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 1060137 | 69.394 | ng | # | 84 |
| 54) trans-1,3-Dichloropropene | 18.74 | 75 | 1825787 | 67.007 | ng | | 100 |
| 55) 1,1,2-Trichloroethane | 18.99 | 97 | 1137788 | 60.212 | ng | | 93 |
| 58) Toluene | 19.38 | 91 | 4981631 | 57.042 | ng | | 98 |
| 59) 2-Hexanone | 19.68 | 43 | 2393939 | 62.836 | ng | | 90 |
| 60) Dibromochloromethane | 19.91 | 129 | 1444599 | 63.377 | ng | | 100 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 1343552 | 58.478 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 2836114 | 66.148 | ng | | 92 |
| 63) n-Octane | 20.66 | 57 | 965475 | 63.260 | ng | # | 79 |
| 64) Tetrachloroethene | 20.86 | 166 | 1510188 | 53.041 | ng | | 100 |
| 65) Chlorobenzene | 21.72 | 112 | 3308382 | 55.479 | ng | | 99 |
| 66) Ethylbenzene | 22.19 | 91 | 5597153 | 57.387 | ng | | 94 |
| 67) m- & p-Xylenes | 22.43 | 91 | 8853378 | 113.512 | ng | | 92 |
| 68) Bromoform | 22.52 | 173 | 1324041 | 58.810 | ng | | 99 |
| 69) Styrene | 22.88 | 104 | 3741894 | 60.402 | ng | | 95 |
| 70) o-Xylene | 23.03 | 91 | 4591140 | 57.944 | ng | | 93 |
| 71) n-Nonane | 23.28 | 43 | 2021206 | 61.346 | ng | | 84 |
| 72) 1,1,2,2-Tetrachloroethane | 22.99 | 83 | 2021992 | 66.833 | ng | | 98 |
| 74) Cumene | 23.76 | 105 | 5913286 | 54.771 | ng | | 94 |
| 75) alpha-Pinene | 24.25 | 93 | 2880800 | 56.510 | ng | | 95 |
| 76) n-Propylbenzene | 24.38 | 91 | 7037689 | 56.530 | ng | | 93 |
| 77) 3-Ethyltoluene | 24.51 | 105 | 6080941 | 60.559 | ng | | 95 |
| 78) 4-Ethyltoluene | 24.56 | 105 | 5913658 | 58.690 | ng | | 94 |
| 79) 1,3,5-Trimethylbenzene | 24.65 | 105 | 4989124 | 59.377 | ng | | 92 |

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271012.D
Acq On : 27 Apr 2010 22:33
Operator : WA
Sample : 50ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:04:51 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

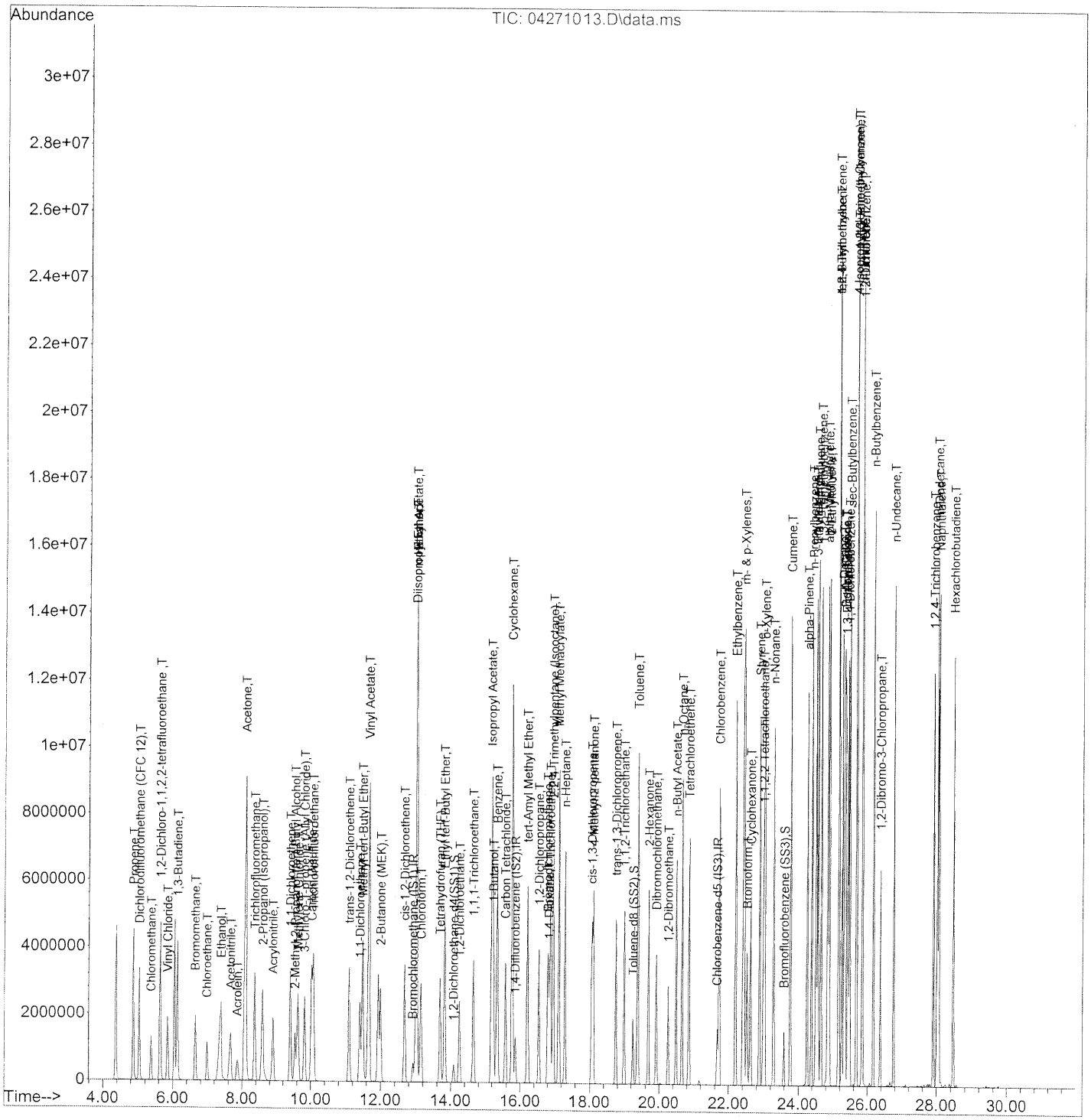
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.84 | 118 | 2938058 | 61.688 | ng | | 97 |
| 81) 2-Ethyltoluene | 24.89 | 105 | 5971157 | 57.096 | ng | | 93 |
| 82) 1,2,4-Trimethylbenzene | 25.16 | 105 | 5193210 | 59.534 | ng | | 93 |
| 83) n-Decane | 25.25 | 57 | 2386501 | 64.385 | ng | | 88 |
| 84) Benzyl Chloride | 25.32 | 91 | 4749408 | 75.908 | ng | | 89 |
| 85) 1,3-Dichlorobenzene | 25.35 | 146 | 3157575 | 58.788 | ng | | 99 |
| 86) 1,4-Dichlorobenzene | 25.43 | 146 | 3202932 | 57.322 | ng | | 99 |
| 87) sec-Butylbenzene | 25.48 | 105 | 6709645 | 57.662 | ng | | 94 |
| 88) 4-Isopropyltoluene (p-... | 25.67 | 119 | 6363361 | 55.535 | ng | | 95 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 5343285 | 60.305 | ng | | 93 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 3022438 | 58.206 | ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 2012828 | 68.467 | ng | | 82 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.37 | 157 | 1150531 | 69.900 | ng | # | 60 |
| 93) n-Undecane | 26.76 | 57 | 2509312 | 66.486 | ng | | 87 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 2435331 | 63.059 | ng | | 100 |
| 95) Naphthalene | 28.05 | 128 | 7386713 | 61.488 | ng | | 99 |
| 96) n-Dodecane | 28.01 | 57 | 2530214 | 63.010 | ng | | 87 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 1490326 | 59.257 | ng | | 99 |
| 98) Cyclohexanone | 22.61 | 55 | 1484865 | 56.013 | ng | # | 86 |
| 99) tert-Butylbenzene | 25.16 | 119 | 5133083 | 57.030 | ng | | 94 |
| 100) n-Butylbenzene | 26.17 | 91 | 5423222 | 60.934 | ng | # | 94 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271013.D
Acq On : 27 Apr 2010 23:15
Operator : WA
Sample : 100ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:05:35 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271013.D
Acq On : 27 Apr 2010 23:15
Operator : WA
Sample : 100ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:05:35 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.92 | 130 | 360915 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.86 | 114 | 1700346 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 696767 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.08 | 65 | 528201 | 23.634 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 94.52% | | |
| 57) Toluene-d8 (SS2) | 19.25 | 98 | 1752242 | 24.081 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 96.32% | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 639716 | 24.021 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 96.08% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 2249068 | 147.248 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 5.04 | 85 | 4173863 | 101.052 | ng | | 98 |
| 4) Chloromethane | 5.37 | 50 | 2122960 | 90.349 | ng | | 98 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.64 | 135 | 2630324 | 101.782 | ng | | 100 |
| 6) Vinyl Chloride | 5.84 | 62 | 2975979 | 106.749 | ng | | 99 |
| 7) 1,3-Butadiene | 6.13 | 54 | 2837818 | 155.131 | ng | | 93 |
| 8) Bromomethane | 6.64 | 94 | 2035628 | 112.194 | ng | | 99 |
| 9) Chloroethane | 6.99 | 64 | 1544720 | 116.645 | ng | | 98 |
| 10) Ethanol | 7.39 | 45 | 6846635 | 650.107 | ng | | 100 |
| 11) Acetonitrile | 7.67 | 41 | 3116625 | 126.502 | ng | | 99 |
| 12) Acrolein | 7.86 | 56 | 1158215 | 125.532 | ng | | 99 |
| 13) Acetone | 8.11 | 58 | 7805655 | 591.242 | ng | # | 80 |
| 14) Trichlorofluoromethane | 8.36 | 101 | 4155205 | 106.472 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.60 | 45 | 6313001 | 159.568 | ng | | 100 |
| 16) Acrylonitrile | 8.90 | 53 | 2614210 | 133.209 | ng | | 100 |
| 17) 1,1-Dichloroethene | 9.41 | 96 | 2274129 | 123.893 | ng | # | 72 |
| 18) 2-Methyl-2-Propanol (t... | 9.55 | 59 | 2660238 | 57.704 | ng | | 97 |
| 19) Methylene Chloride | 9.63 | 84 | 2212939 | 112.142 | ng | # | 72 |
| 20) 3-Chloro-1-propene (Al... | 9.82 | 41 | 2700790 | 150.335 | ng | | 78 |
| 21) Trichlorotrifluoroethane | 10.08 | 151 | 2191234 | 111.850 | ng | # | 74 |
| 22) Carbon Disulfide | 10.02 | 76 | 7589952 | 118.244 | ng | | 97 |
| 23) trans-1,2-Dichloroethene | 11.10 | 61 | 2968781 | 122.985 | ng | | 76 |
| 24) 1,1-Dichloroethane | 11.41 | 63 | 3638722 | 122.615 | ng | | 99 |
| 25) Methyl tert-Butyl Ether | 11.49 | 73 | 6823569 | 118.133 | ng | | 94 |
| 26) Vinyl Acetate | 11.68 | 86 | 2970643 | 1008.876 | ng | # | 8 |
| 27) 2-Butanone (MEK) | 12.01 | 72 | 1415952 | 113.365 | ng | # | 61 |
| 28) cis-1,2-Dichloroethene | 12.68 | 61 | 2906812 | 124.044 | ng | | 75 |
| 29) Diisopropyl Ether | 13.01 | 87 | 2092303 | 124.400 | ng | # | 30 |
| 30) Ethyl Acetate | 13.02 | 61 | 1735800 | 275.543 | ng | | 85 |
| 31) n-Hexane | 13.03 | 57 | 3815962 | 130.552 | ng | # | 96 |



4/28/10

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271013.D
Acq On : 27 Apr 2010 23:15
Operator : WA
Sample : 100ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 28 05:05:35 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.15 | 83 | 3827154 | 115.719 | ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.69 | 72 | 1458347 | 123.482 | ng | # | 74 |
| 35) Ethyl tert-Butyl Ether | 13.82 | 87 | 2959039 | 117.177 | ng | # | 73 |
| 36) 1,2-Dichloroethane | 14.25 | 62 | 2861339 | 111.324 | ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.65 | 97 | 3572924 | 115.205 | ng | | 95 |
| 39) Isopropyl Acetate | 15.19 | 61 | 2905069 | 279.461 | ng | # | 82 |
| 40) 1-Butanol | 15.24 | 56 | 4677126 | 255.538 | ng | # | 4 |
| 41) Benzene | 15.34 | 78 | 8978510 | 121.740 | ng | | 100 |
| 42) Carbon Tetrachloride | 15.57 | 117 | 3257038 | 119.918 | ng | | 100 |
| 43) Cyclohexane | 15.77 | 84 | 7430460 | 252.923 | ng | # | 81 |
| 44) tert-Amyl Methyl Ether | 16.21 | 73 | 6746900 | 123.864 | ng | | 91 |
| 45) 1,2-Dichloropropane | 16.55 | 63 | 2082784 | 125.152 | ng | | 99 |
| 46) Bromodichloromethane | 16.81 | 83 | 3158415 | 127.462 | ng | | 98 |
| 47) Trichloroethene | 16.88 | 130 | 2716444 | 112.674 | ng | | 100 |
| 48) 1,4-Dioxane | 16.83 | 88 | 2034478 | 128.651 | ng | | 83 |
| 49) 2,2,4-Trimethylpentane... | 16.97 | 57 | 8696481 | 123.176 | ng | | 97 |
| 50) Methyl Methacrylate | 17.14 | 100 | 2348262 | 268.391 | ng | # | 60 |
| 51) n-Heptane | 17.32 | 71 | 2432821 | 130.634 | ng | | 88 |
| 52) cis-1,3-Dichloropropene | 18.05 | 75 | 3530571 | 122.291 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 18.10 | 58 | 2143767 | 143.724 | ng | # | 82 |
| 54) trans-1,3-Dichloropropene | 18.75 | 75 | 3676600 | 138.198 | ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.99 | 97 | 2260061 | 122.498 | ng | | 93 |
| 58) Toluene | 19.39 | 91 | 9677930 | 113.874 | ng | | 96 |
| 59) 2-Hexanone | 19.69 | 43 | 4821401 | 130.043 | ng | | 90 |
| 60) Dibromochloromethane | 19.92 | 129 | 2899562 | 130.718 | ng | | 99 |
| 61) 1,2-Dibromoethane | 20.26 | 107 | 2673955 | 119.595 | ng | | 99 |
| 62) n-Butyl Acetate | 20.50 | 43 | 5816871 | 139.411 | ng | | 91 |
| 63) n-Octane | 20.67 | 57 | 1977087 | 133.117 | ng | # | 79 |
| 64) Tetrachloroethene | 20.86 | 166 | 3010453 | 108.649 | ng | | 99 |
| 65) Chlorobenzene | 21.72 | 112 | 6566365 | 113.150 | ng | | 99 |
| 66) Ethylbenzene | 22.20 | 91 | 10929927 | 115.155 | ng | | 93 |
| 67) m- & p-Xylenes | 22.44 | 91 | 17458032 | 230.009 | ng | | 92 |
| 68) Bromoform | 22.52 | 173 | 2716675 | 123.996 | ng | | 99 |
| 69) Styrene | 22.88 | 104 | 7439957 | 123.410 | ng | | 96 |
| 70) o-Xylene | 23.03 | 91 | 9184634 | 119.116 | ng | | 92 |
| 71) n-Nonane | 23.28 | 43 | 4177662 | 130.294 | ng | | 84 |
| 72) 1,1,2,2-Tetrachloroethane | 23.00 | 83 | 4091877 | 138.979 | ng | | 98 |
| 74) Cumene | 23.76 | 105 | 11380254 | 108.316 | ng | | 92 |
| 75) alpha-Pinene | 24.25 | 93 | 5749038 | 115.883 | ng | | 96 |
| 76) n-Propylbenzene | 24.39 | 91 | 13330079 | 110.028 | ng | | 92 |
| 77) 3-Ethyltoluene | 24.51 | 105 | 11734542 | 120.085 | ng | | 93 |
| 78) 4-Ethyltoluene | 24.57 | 105 | 11283148 | 115.067 | ng | | 91 |
| 79) 1,3,5-Trimethylbenzene | 24.65 | 105 | 9771660 | 119.503 | ng | | 91 |

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271013.D
Acq On : 27 Apr 2010 23:15
Operator : WA
Sample : 100ng TO-15 ICAL STD
Misc : S20-04261002/S20-04191004
ALS Vial : 1 Sample Multiplier: 1

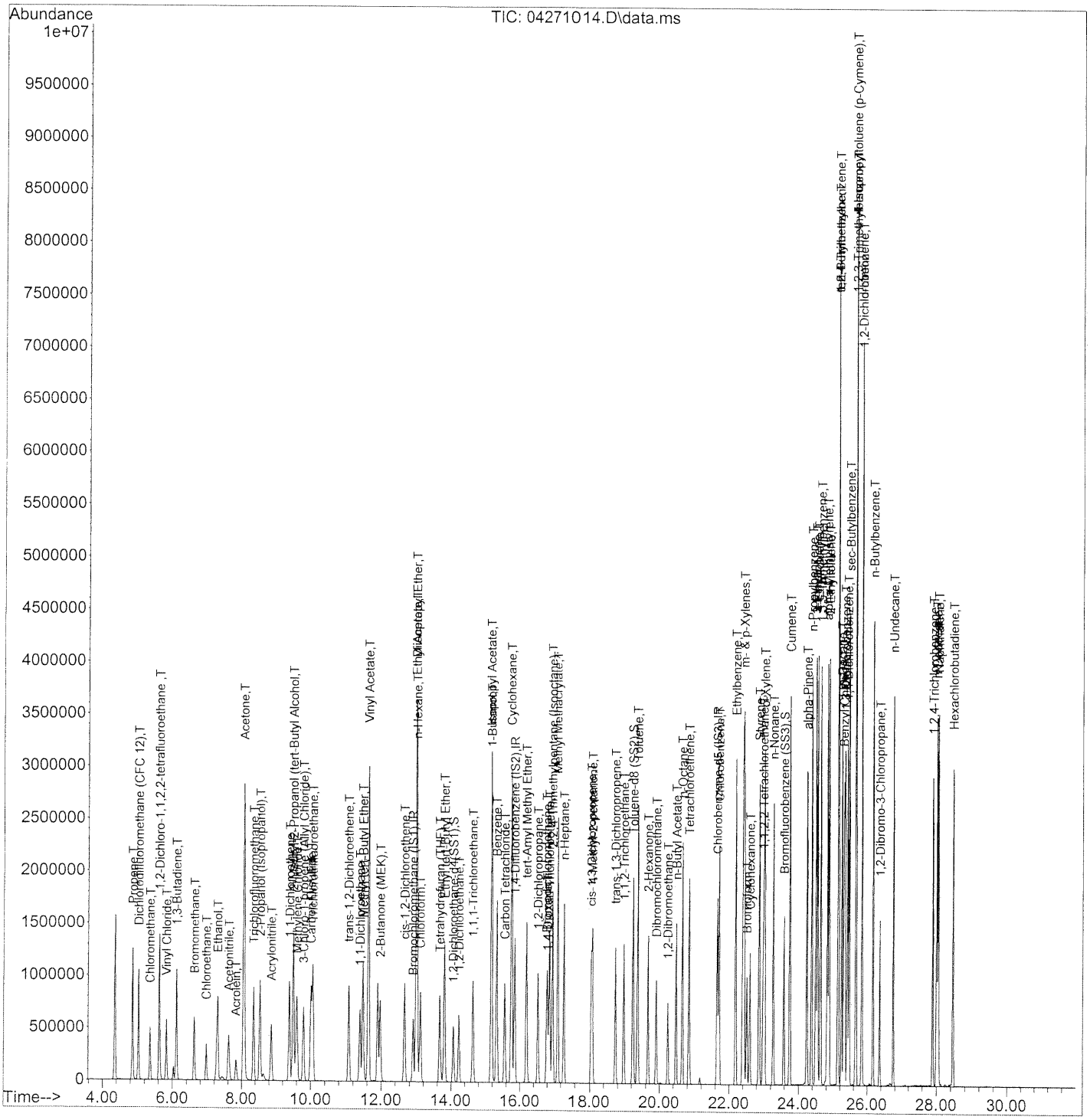
Quant Time: Apr 28 05:05:35 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Mar 25 17:36:17 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.84 | 118 | 5819383 | 125.555 | ng | | 99 |
| 81) 2-Ethyltoluene | 24.89 | 105 | 11543187 | 113.419 | ng | | 91 |
| 82) 1,2,4-Trimethylbenzene | 25.16 | 105 | 9510244 | 112.030 | ng | | 93 |
| 83) n-Decane | 25.26 | 57 | 4892301 | 135.629 | ng | | 88 |
| 84) Benzyl Chloride | 25.33 | 91 | 9598530 | 157.641 | ng | | 87 |
| 85) 1,3-Dichlorobenzene | 25.36 | 146 | 6274013 | 120.031 | ng | | 99 |
| 86) 1,4-Dichlorobenzene | 25.44 | 146 | 6291631 | 115.705 | ng | | 99 |
| 87) sec-Butylbenzene | 25.49 | 105 | 12618376 | 111.433 | ng | | 93 |
| 88) 4-Isopropyltoluene (p-... | 25.67 | 119 | 11055939 | 99.151 | ng | | 97 |
| 89) 1,2,3-Trimethylbenzene | 25.68 | 105 | 9730781 | 112.853 | ng | | 94 |
| 90) 1,2-Dichlorobenzene | 25.85 | 146 | 5557858 | 109.984 | ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 3885080 | 135.797 | ng | | 82 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.37 | 157 | 2376026 | 148.336 | ng | # | 60 |
| 93) n-Undecane | 26.76 | 57 | 5164544 | 140.614 | ng | | 88 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 4902547 | 130.446 | ng | | 99 |
| 95) Naphthalene | 28.06 | 128 | 13931534 | 119.167 | ng | | 97 |
| 96) n-Dodecane | 28.01 | 57 | 5265464 | 134.744 | ng | | 87 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 3042512 | 124.310 | ng | | 99 |
| 98) Cyclohexanone | 22.63 | 55 | 3009443 | 116.655 | ng | # | 86 |
| 99) tert-Butylbenzene | 25.16 | 119 | 9293320 | 106.099 | ng | | 93 |
| 100) n-Butylbenzene | 26.17 | 91 | 10356286 | 119.571 | ng | # | 92 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:41:26 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:41:26 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.90 | 130 | 362266 | 25.000 | ng | | 0.02 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1711720 | 25.000 | ng | | 0.01 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 714768 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.06 | 65 | 533772 | 24.413 | ng | | 0.02 |
| Spiked Amount 25.000 | | | Recovery | = | 97.64% | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1775300 | 24.626 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 98.52% | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 651238 | 25.790 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery | = | 103.16% | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.86 | 42 | 571057 | 27.825 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 1170544 | 24.253 | ng | | 99 |
| 4) Chloromethane | 5.36 | 50 | 704494 | 24.080 | ng | | 98 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.63 | 135 | 713965 | 25.464 | ng | | 100 |
| 6) Vinyl Chloride | 5.83 | 62 | 806143 | 24.599 | ng | | 99 |
| 7) 1,3-Butadiene | 6.12 | 54 | 648930 | 27.171 | ng | | 93 |
| 8) Bromomethane | 6.63 | 94 | 562606 | 25.710 | ng | | 99 |
| 9) Chloroethane | 6.98 | 64 | 414666 | 24.802 | ng | | 99 |
| 10) Ethanol | 7.31 | 45 | 1706057m | 136.476 | ng | | |
| 11) Acetonitrile | 7.63 | 41 | 788463 | 26.030 | ng | | 99 |
| 12) Acrolein | 7.84 | 56 | 292760 | 23.747 | ng | | 99 |
| 13) Acetone | 8.07 | 58 | 1934975 | 121.132 | ng | | 88 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 1066370 | 24.278 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.54 | 45 | 1960729m | 42.129 | ng | | |
| 16) Acrylonitrile | 8.86 | 53 | 664781 | 27.308 | ng | | 99 |
| 17) 1,1-Dichloroethene | 9.40 | 96 | 601229 | 27.278 | ng | # | 72 |
| 18) 2-Methyl-2-Propanol (t... | 9.50 | 59 | 2643685 | 48.129 | ng | | 95 |
| 19) Methylene Chloride | 9.61 | 84 | 586540 | 24.413 | ng | # | 72 |
| 20) 3-Chloro-1-propene (Al... | 9.80 | 41 | 692113 | 28.520 | ng | | 79 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 591854 | 26.883 | ng | # | 74 |
| 22) Carbon Disulfide | 10.01 | 76 | 1976178 | 25.461 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 11.08 | 61 | 751093 | 25.855 | ng | | 75 |
| 24) 1,1-Dichloroethane | 11.40 | 63 | 959184 | 25.361 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.48 | 73 | 1755418 | 25.952 | ng | | 93 |
| 26) Vinyl Acetate | 11.64 | 86 | 758411 | 136.430 | ng | # | 19 |
| 27) 2-Butanone (MEK) | 11.98 | 72 | 400311 | 27.284 | ng | # | 62 |
| 28) cis-1,2-Dichloroethene | 12.66 | 61 | 751934 | 26.676 | ng | # | 74 |
| 29) Diisopropyl Ether | 13.00 | 87 | 527204 | 26.238 | ng | # | 30 |
| 30) Ethyl Acetate | 12.99 | 61 | 414078 | 53.139 | ng | | 87 |
| 31) n-Hexane | 13.02 | 57 | 932553 | 25.109 | ng | # | 97 |



SH 4/28/10

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:41:26 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.11 | 83 | 1006896 | 25.508 | ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.67 | 72 | 376226m | 26.396 | ng | | |
| 35) Ethyl tert-Butyl Ether | 13.81 | 87 | 752049 | 25.444 | ng | # | 73 |
| 36) 1,2-Dichloroethane | 14.23 | 62 | 752003 | 25.385 | ng | | 99 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 941819 | 26.201 | ng | | 95 |
| 39) Isopropyl Acetate | 15.17 | 61 | 720320 | 54.797 | ng | # | 86 |
| 40) 1-Butanol | 15.18 | 56 | 1058593 | 51.279 | ng | | 88 |
| 41) Benzene | 15.33 | 78 | 2364699 | 24.267 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.56 | 117 | 830617 | 27.742 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 1852407 | 51.056 | ng | # | 79 |
| 44) tert-Amyl Methyl Ether | 16.20 | 73 | 1709255 | 26.030 | ng | | 91 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 538106 | 25.366 | ng | | 98 |
| 46) Bromodichloromethane | 16.79 | 83 | 787440 | 26.914 | ng | | 98 |
| 47) Trichloroethene | 16.87 | 130 | 705443 | 25.941 | ng | | 99 |
| 48) 1,4-Dioxane | 16.81 | 88 | 494832 | 26.048 | ng | | 81 |
| 49) 2,2,4-Trimethylpentane... | 16.96 | 57 | 2224828 | 24.855 | ng | | 96 |
| 50) Methyl Methacrylate | 17.11 | 100 | 589940 | 57.137 | ng | # | 60 |
| 51) n-Heptane | 17.31 | 71 | 594892 | 25.662 | ng | | 87 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 906367 | 26.130 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 504237 | 27.326 | ng | # | 84 |
| 54) trans-1,3-Dichloropropene | 18.74 | 75 | 943745 | 30.049 | ng | | 100 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 590787 | 26.324 | ng | | 92 |
| 58) Toluene | 19.38 | 91 | 2628852 | 25.856 | ng | | 98 |
| 59) 2-Hexanone | 19.67 | 43 | 1129619 | 26.241 | ng | | 91 |
| 60) Dibromochloromethane | 19.91 | 129 | 734552 | 30.224 | ng | | 100 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 702842 | 27.250 | ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 1330160 | 27.075 | ng | | 92 |
| 63) n-Octane | 20.66 | 57 | 484065 | 26.532 | ng | # | 77 |
| 64) Tetrachloroethene | 20.85 | 166 | 792087 | 24.932 | ng | | 100 |
| 65) Chlorobenzene | 21.72 | 112 | 1740853 | 25.768 | ng | | 99 |
| 66) Ethylbenzene | 22.19 | 91 | 2934363 | 26.333 | ng | | 94 |
| 67) m- & p-Xylenes | 22.43 | 91 | 4620066 | 52.471 | ng | | 92 |
| 68) Bromoform | 22.51 | 173 | 657477 | 28.802 | ng | | 100 |
| 69) Styrene | 22.87 | 104 | 1935996 | 27.946 | ng | | 94 |
| 70) o-Xylene | 23.02 | 91 | 2370198 | 26.404 | ng | | 93 |
| 71) n-Nonane | 23.28 | 43 | 1015378 | 25.929 | ng | | 84 |
| 72) 1,1,2,2-Tetrachloroethane | 22.99 | 83 | 1029651 | 27.236 | ng | | 98 |
| 74) Cumene | 23.76 | 105 | 3093088 | 25.215 | ng | | 95 |
| 75) alpha-Pinene | 24.25 | 93 | 1451756 | 25.506 | ng | | 94 |
| 76) n-Propylbenzene | 24.38 | 91 | 3652858 | 25.671 | ng | | 93 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 3110521 | 27.688 | ng | | 95 |
| 78) 4-Ethyltoluene | 24.56 | 105 | 3047817 | 26.925 | ng | | 95 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 2584481 | 27.978 | ng | | 92 |

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:41:26 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

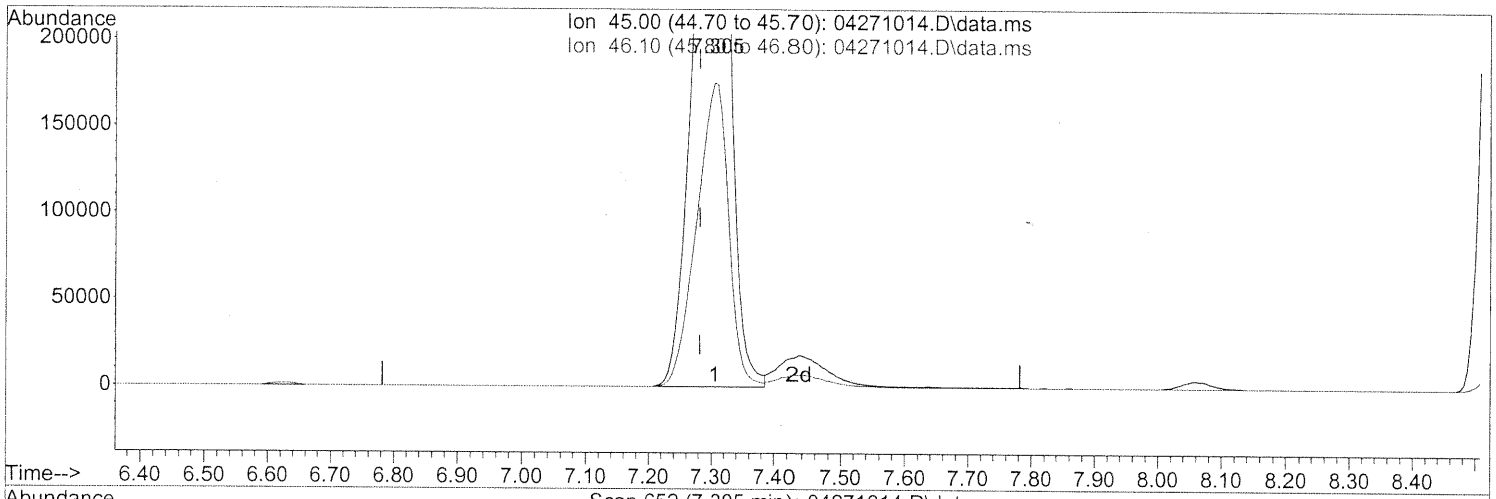
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 1481270 | 28.940 | ng | | 97 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 3088583 | 26.495 | ng | | 94 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 2695636 | 28.222 | ng | | 92 |
| 83) n-Decane | 25.25 | 57 | 1190545 | 27.350 | ng | | 88 |
| 84) Benzyl Chloride | 25.31 | 91 | 2286062 | 31.896 | ng | | 89 |
| 85) 1,3-Dichlorobenzene | 25.35 | 146 | 1630643 | 27.996 | ng | | 99 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 1648402 | 27.294 | ng | | 100 |
| 87) sec-Butylbenzene | 25.48 | 105 | 3469923 | 26.763 | ng | | 94 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 3358069 | 27.223 | ng | | 94 |
| 89) 1,2,3-Trimethylbenzene | 25.66 | 105 | 2716206 | 28.217 | ng | | 91 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 1551238 | 27.966 | ng | | 99 |
| 91) d-Limonene | 25.84 | 68 | 985181 | 29.702 | ng | | 81 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 558308 | 31.290 | ng | # | 60 |
| 93) n-Undecane | 26.76 | 57 | 1211208 | 28.100 | ng | | 88 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 1140300 | 29.065 | ng | | 100 |
| 95) Naphthalene | 28.05 | 128 | 3302071 | 27.221 | ng | | 100 |
| 96) n-Dodecane | 28.00 | 57 | 1128131 | 25.242 | ng | | 87 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 726228 | 28.702 | ng | | 99 |
| 98) Cyclohexanone | 22.61 | 55 | 657321 | 22.537 | ng | # | 86 |
| 99) tert-Butylbenzene | 25.15 | 119 | 2682801 | 27.158 | ng | | 94 |
| 100) n-Butylbenzene | 26.17 | 91 | 2756812 | 28.022 | ng | # | 95 |

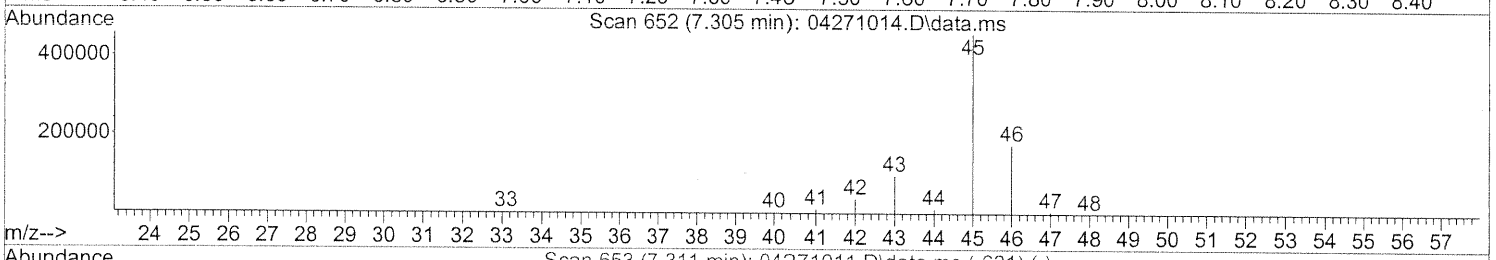
(#) = qualifier out of range (m) = manual integration (+) = signals summed

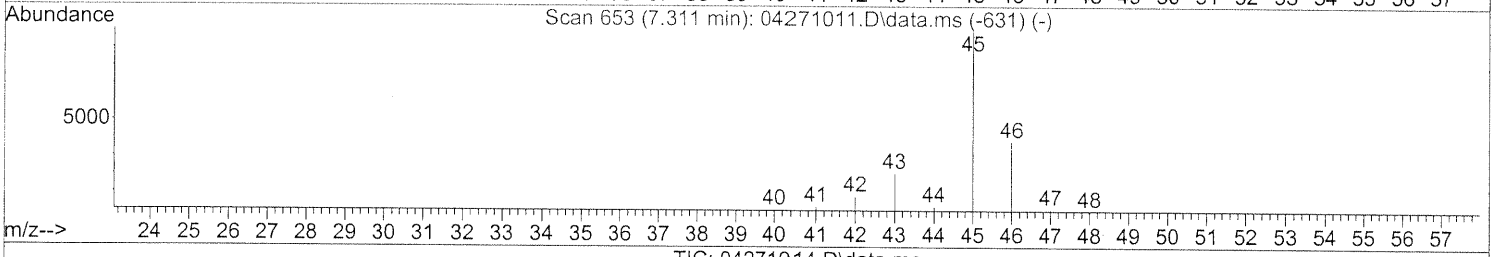
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:34:27 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 04271014.D\data.ms

(10) Ethanol (T)

7.305min (+0.023) 129.07ng

response 1613423

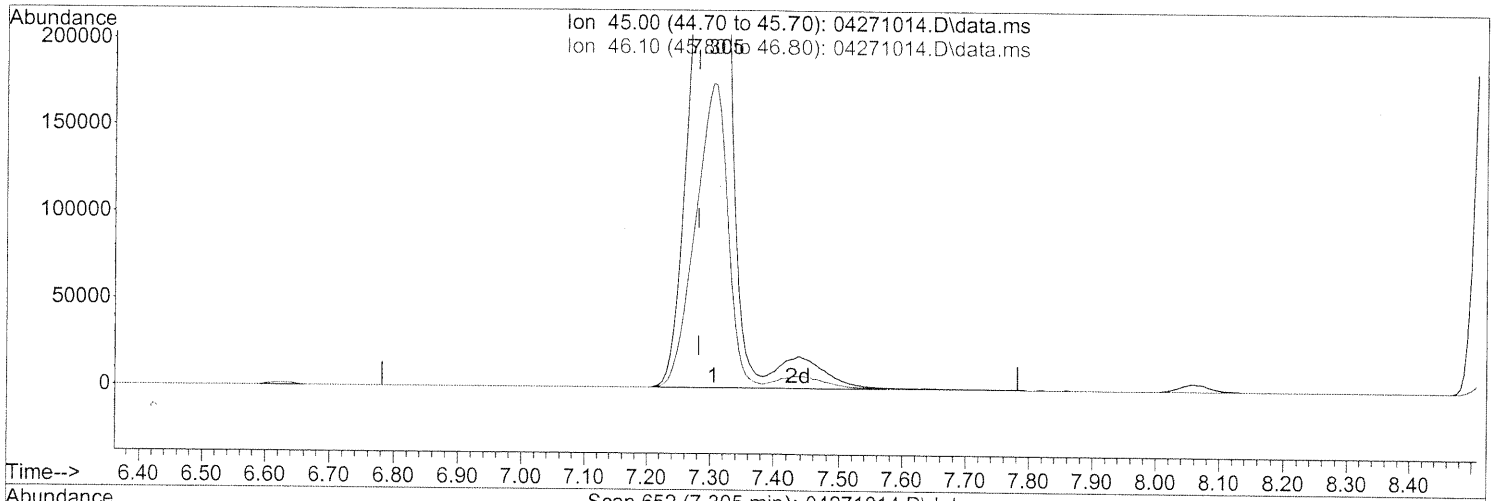
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.45 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

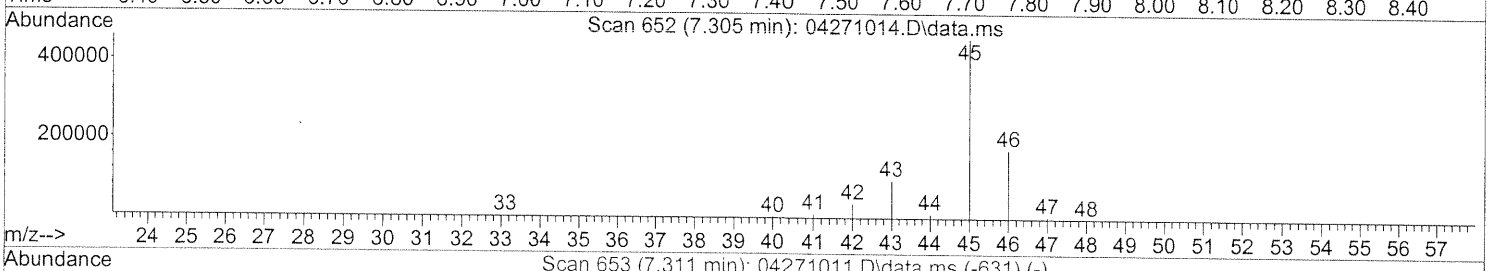
SP

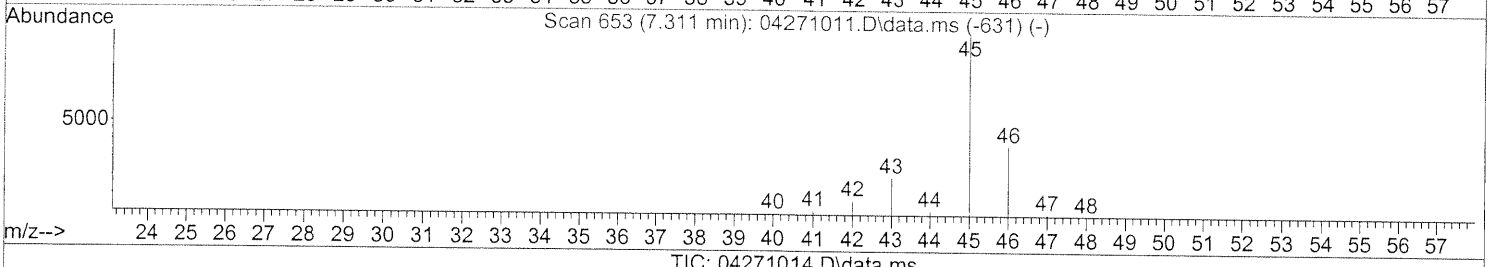
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:34:27 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 04271014.D\data.ms

(10) Ethanol (T)

7.305min (+0.023) 136.48ng m

response 1706057

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 36.37 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → K

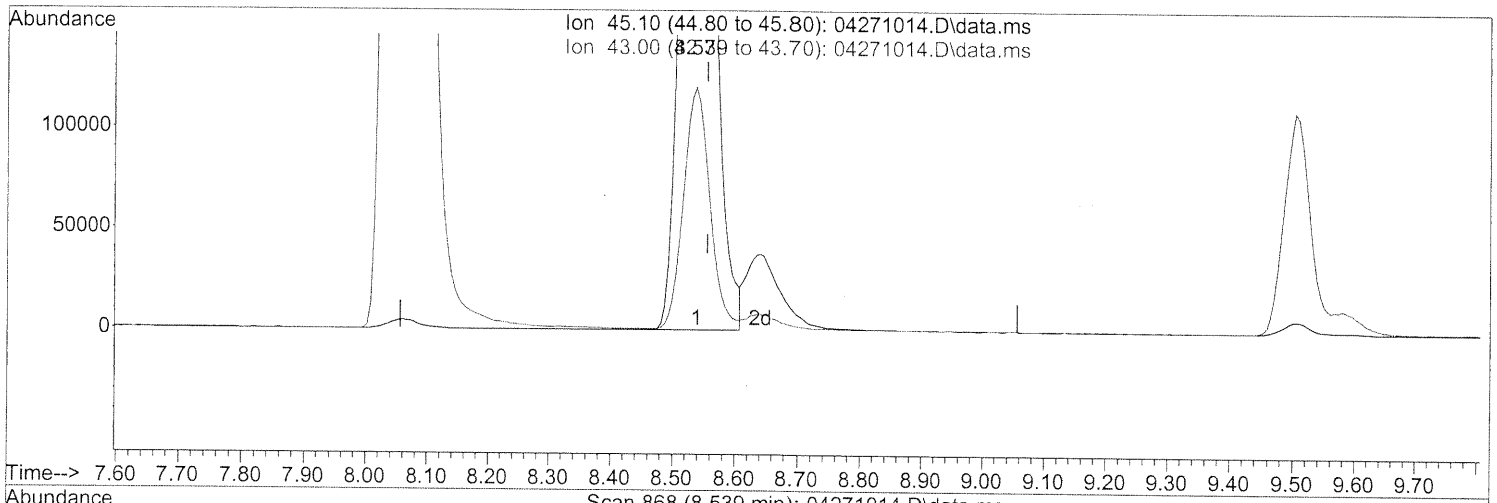
4/28/10

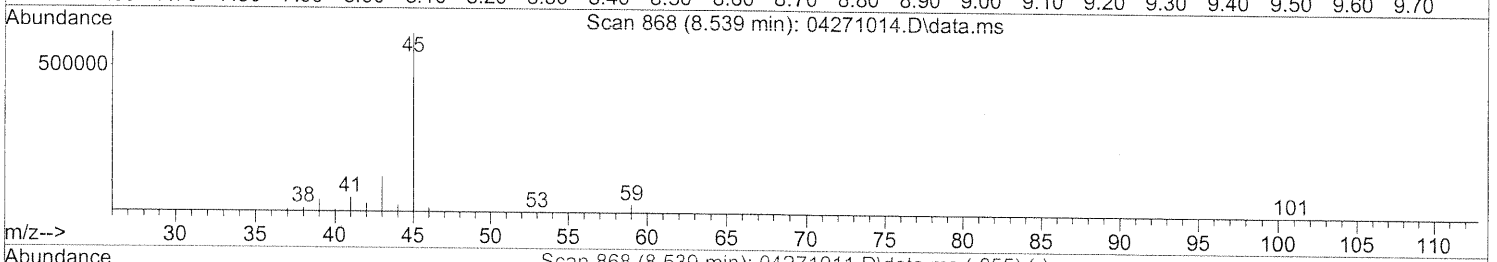
4/30/10

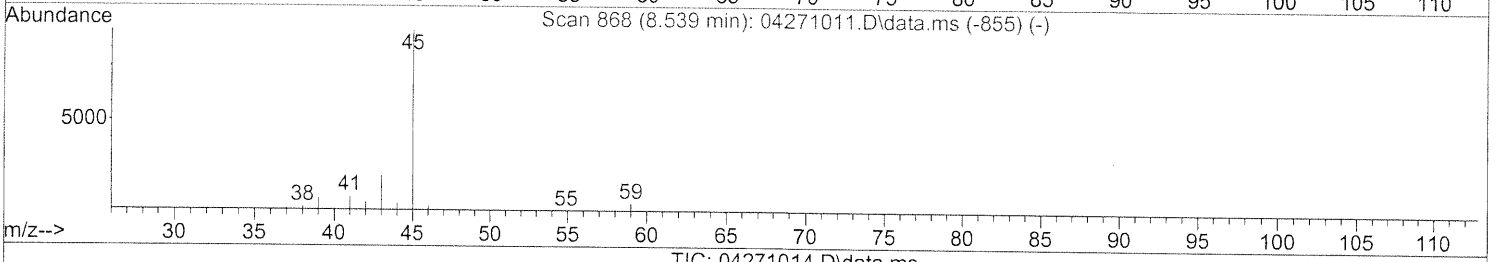
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:34:27 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 04271014.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.539min (-0.017) 38.94ng

response 1812276

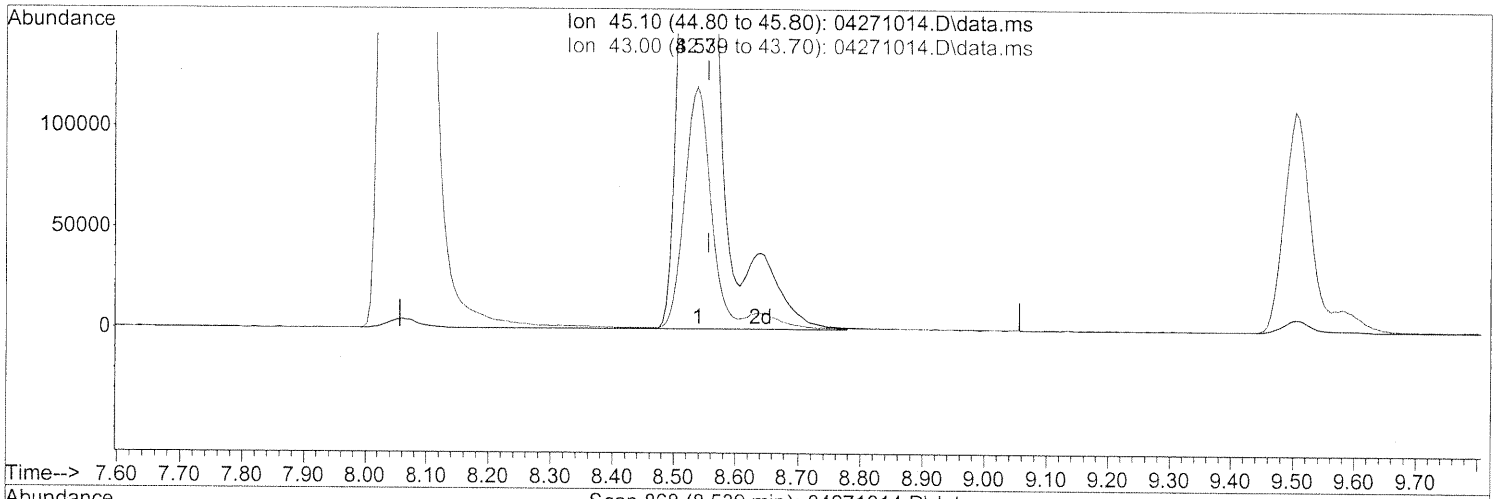
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 19.49 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

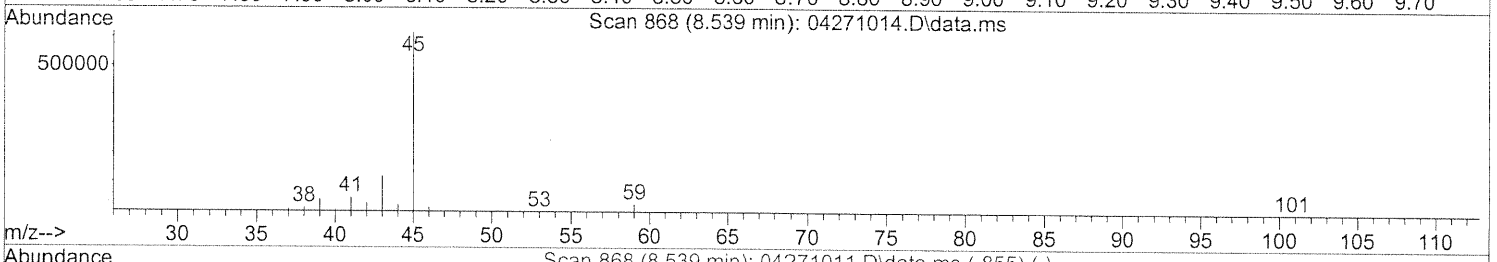
SP

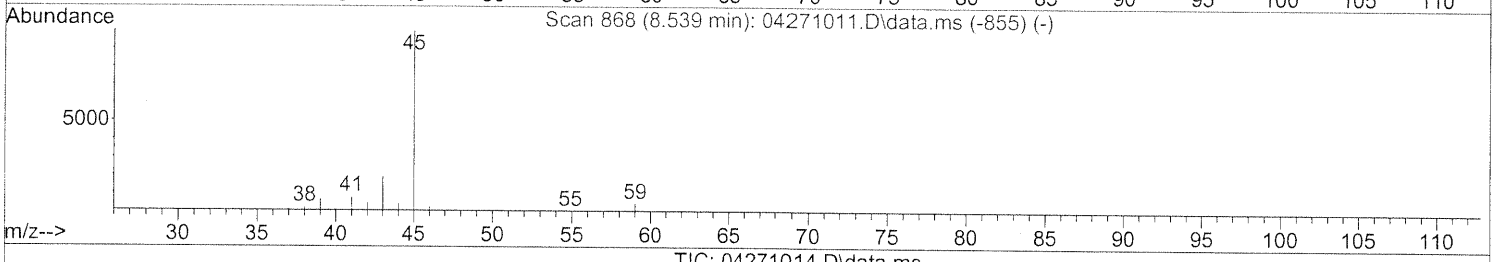
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:34:27 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 04271014.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.539min (-0.017) 42.13ng m

response 1960729

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 18.02 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP → IC

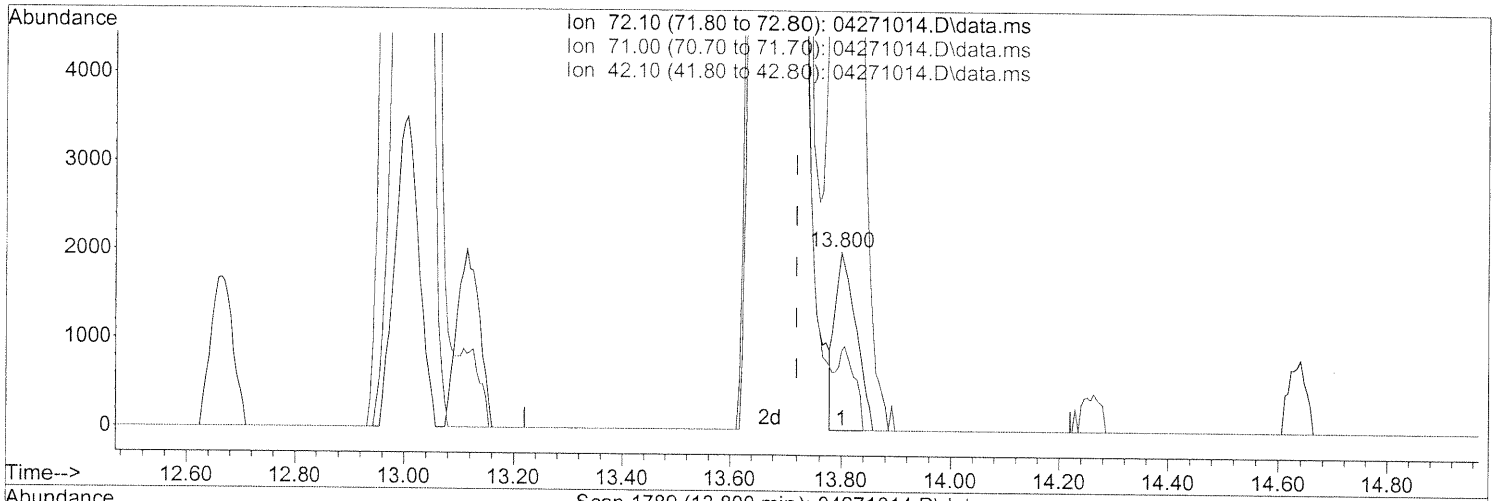
4/28/10

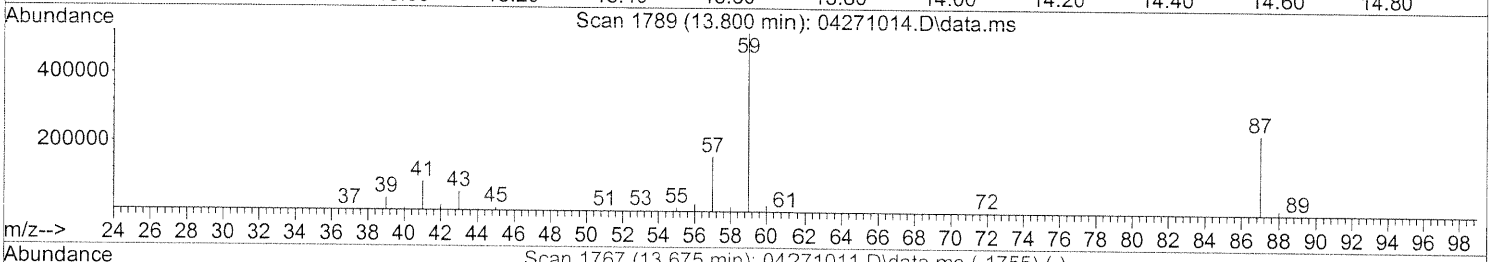
4/30/10

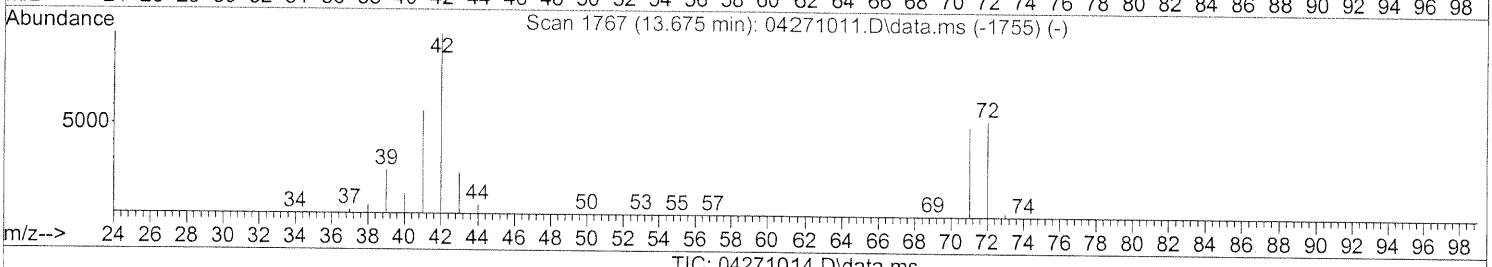
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:35:33 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 04271014.D\data.ms

(34) Tetrahydrofuran (THF) (T)

13.800min (+0.080) 0.38ng

response 5425

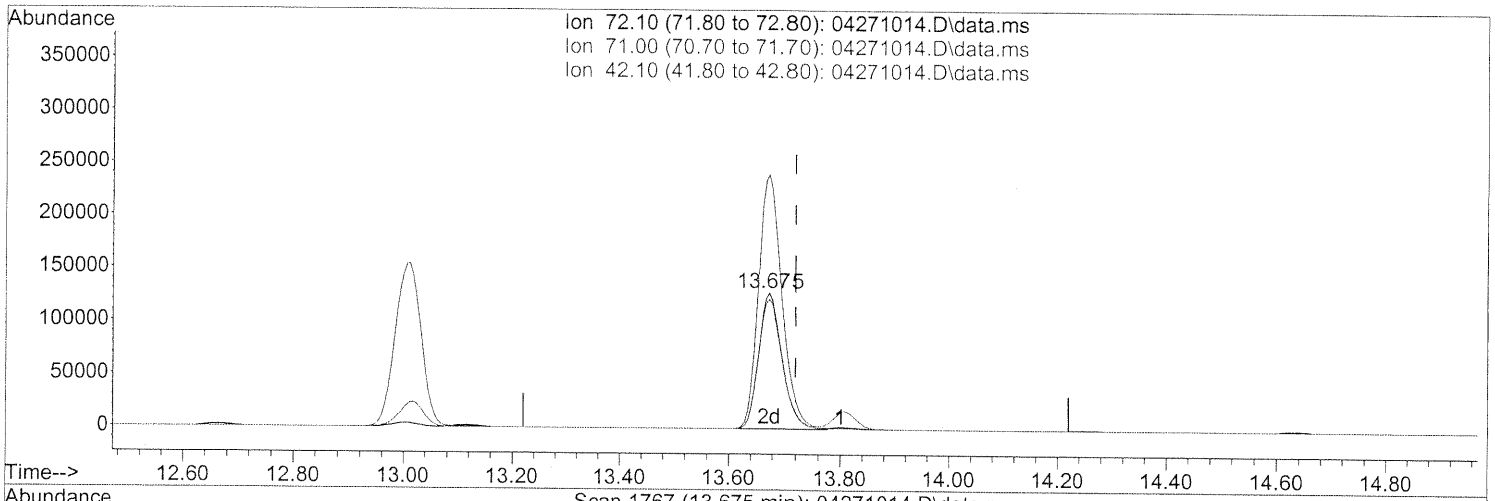
MP

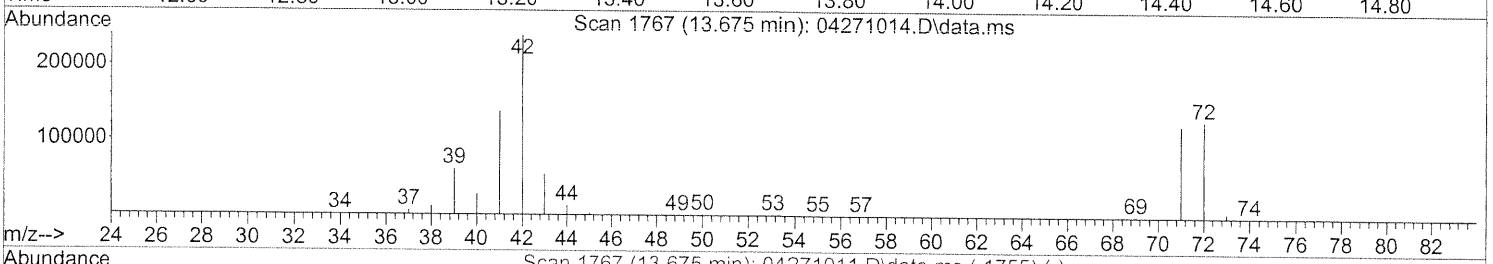
| Ion | Exp% | Act% |
|---|---|---|
| 72.10 | 100 | 100 |
| 71.00 | 96.00 | 35.48# |
| 42.10 | 251.90 | 926.91# |
| 0.00 | 0.00 | 0.00 |

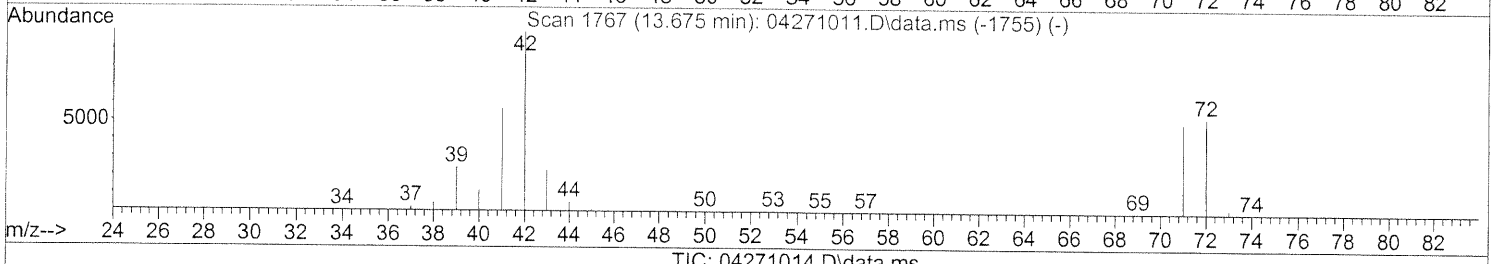
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271014.D
Acq On : 27 Apr 2010 23:57
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-04261002/S20-04231001
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 28 14:35:33 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 04271014.D\data.ms

(34) Tetrahydrofuran (THF) (T)

13.675min (-0.046) 26.40ng m

response 376226

| Ion | Exp% | Act% |
|---|---|---|
| 72.10 | 100 | 100 |
| 71.00 | 96.00 | 0.51# |
| 42.10 | 251.90 | 13.37# |
| 0.00 | 0.00 | 0.00 |

MP → IC

ADA 4/28/10

KR 4/30/10

# INITIAL CALIBRATION VERIFICATION CHECK SHEET

**Data File Name:** 04271014.D **Acq. Method File:** TO15LOW.M
**Data File Path:** J:\MS09\Data\2010_04\27\ **Name:** 25ng TO-15 ICV STD
**Operator:** WA **Misc Info:** S20-04261002/S20-04231001
**Date Acquired:** 4/27/10 23:57 **Instrument Name:** MS09

| # | Compound | Ret. Time | Amt. (ng) | Spike Amt.(ng) | % Rec. | Lower Limit | Upper Limit | * OR Fail |
|---|---|---|---|---|---|---|---|---|
| 2) | Propene | 4.86 | 27.8 | 26.3 | 105.7 | 70 | 130 | * |
| 3) | Dichlorodifluoromethane (CFC | 5.03 | 24.3 | 26.0 | 93.5 | 70 | 130 | * |
| 4) | Chloromethane | 5.36 | 24.1 | 25.0 | 96.4 | 70 | 130 | * |
| 5) | 1,2-Dichloro-1,1,2,2-tetrafluoro( | 5.63 | 25.5 | 26.0 | 98.1 | 70 | 130 | * |
| 6) | Vinyl Chloride | 5.83 | 24.6 | 25.3 | 97.2 | 70 | 130 | * |
| 7) | 1,3-Butadiene | 6.12 | 27.2 | 26.8 | 101.5 | 70 | 130 | * |
| 8) | Bromomethane | 6.63 | 25.7 | 25.8 | 99.6 | 70 | 130 | * |
| 9) | Chloroethane | 6.98 | 24.8 | 25.5 | 97.3 | 70 | 130 | * |
| 10) | Ethanol | 7.31 | 136.5 | 130.0 | 105.0 | 70 | 130 | * |
| 11) | Acetonitrile | 7.63 | 26.0 | 26.0 | 100.0 | 70 | 130 | * |
| 12) | Acrolein | 7.84 | 23.7 | 26.3 | 90.1 | 70 | 130 | * |
| 13) | Acetone | 8.07 | 121.1 | 132.0 | 91.7 | 70 | 130 | * |
| 14) | Trichlorofluoromethane | 8.35 | 24.3 | 26.3 | 92.4 | 70 | 130 | * |
| 15) | 2-Propanol (Isopropanol) | 8.54 | 42.1 | 48.0 | 87.7 | 70 | 130 | * |
| 16) | Acrylonitrile | 8.86 | 27.3 | 25.8 | 105.8 | 70 | 130 | * |
| 17) | 1,1-Dichloroethene | 9.40 | 27.3 | 27.5 | 99.3 | 70 | 130 | * |
| 18) | 2-Methyl-2-Propanol (tert-Butyl Al | 9.50 | 48.1 | 50.0 | 96.2 | 70 | 130 | * |
| 19) | Methylene Chloride | 9.61 | 24.4 | 26.8 | 91.0 | 70 | 130 | * |
| 20) | 3-Chloro-1-propene (Allyl Chlor | 9.80 | 28.5 | 27.0 | 105.6 | 70 | 130 | * |
| 21) | Trichlorotrifluoroethane | 10.06 | 26.9 | 27.5 | 97.8 | 70 | 130 | * |
| 22) | Carbon Disulfide | 10.01 | 25.5 | 26.0 | 98.1 | 70 | 130 | * |
| 23) | trans-1,2-Dichloroethene | 11.08 | 25.9 | 25.5 | 101.6 | 70 | 130 | * |
| 24) | 1,1-Dichloroethane | 11.40 | 25.4 | 26.5 | 95.8 | 70 | 130 | * |
| 25) | Methyl tert-Butyl Ether | 11.48 | 26.0 | 26.3 | 98.9 | 70 | 130 | * |
| 26) | Vinyl Acetate | 11.64 | 136.4 | 126.0 | 108.3 | 70 | 130 | * |
| 27) | 2-Butanone (MEK) | 11.98 | 27.3 | 26.8 | 101.9 | 70 | 130 | * |
| 28) | cis-1,2-Dichloroethene | 12.66 | 26.7 | 27.0 | 98.9 | 70 | 130 | * |
| 29) | Diisopropyl Ether | 13.00 | 26.2 | 26.5 | 98.9 | 70 | 130 | * |
| 30) | Ethyl Acetate | 12.99 | 53.1 | 52.0 | 102.1 | 70 | 130 | * |
| 31) | n-Hexane | 13.02 | 25.1 | 26.0 | 96.5 | 70 | 130 | * |
| 32) | Chloroform | 13.11 | 25.5 | 27.5 | 92.7 | 70 | 130 | * |
| 34) | Tetrahydrofuran (THF) | 13.67 | 26.4 | 26.5 | 99.6 | 70 | 130 | * |
| 35) | Ethyl tert-Butyl Ether | 13.81 | 25.4 | 25.5 | 99.6 | 70 | 130 | * |
| 36) | 1,2-Dichloroethane | 14.23 | 25.4 | 26.3 | 96.6 | 70 | 130 | * |
| 38) | 1,1,1-Trichloroethane | 14.63 | 26.2 | 26.0 | 100.8 | 70 | 130 | * |
| 39) | Isopropyl Acetate | 15.17 | 54.8 | 52.3 | 104.8 | 70 | 130 | * |
| 40) | 1-Butanol | 15.18 | 51.3 | 52.8 | 97.2 | 70 | 130 | * |
| 41) | Benzene | 15.33 | 24.3 | 25.8 | 94.2 | 70 | 130 | * |
| 42) | Carbon Tetrachloride | 15.56 | 27.7 | 26.3 | 105.3 | 70 | 130 | * |
| 43) | Cyclohexane | 15.75 | 51.1 | 51.8 | 98.6 | 70 | 130 | * |
| 44) | tert-Amyl Methyl Ether | 16.20 | 26.0 | 25.5 | 102.0 | 70 | 130 | * |
| 45) | 1,2-Dichloropropane | 16.53 | 25.4 | 26.0 | 97.7 | 70 | 130 | * |
| 46) | Bromodichloromethane | 16.79 | 26.9 | 26.3 | 102.3 | 70 | 130 | * |
| 47) | Trichloroethene | 16.87 | 25.9 | 25.8 | 100.4 | 70 | 130 | * |
| 48) | 1,4-Dioxane | 16.81 | 26.0 | 26.0 | 100.0 | 70 | 130 | * |
| 49) | 2,2,4-Trimethylpentane (Isooctan | 16.96 | 24.9 | 25.8 | 96.5 | 70 | 130 | * |
| 50) | Methyl Methacrylate | 17.11 | 57.1 | 52.8 | 108.1 | 70 | 130 | * |



DH 4/28/10

# INITIAL CALIBRATION VERIFICATION CHECK SHEET

**Data File Name:** 04271014.D **Acq. Method File:** TO15LOW.M
**Data File Path:** J:\MS09\Data\2010_04\27\ **Name:** 25ng TO-15 ICV STD
**Operator:** WA **Misc Info:** S20-04261002/S20-04231001
**Date Acquired:** 4/27/10 23:57 **Instrument Name:** MS09

| # | Compound | Ret. Time | Amt. (ng) | Spike Amt.(ng) | % Rec. | Lower Limit | Upper Limit | * OR Fail |
|---|---|---|---|---|---|---|---|---|
| 51) | n-Heptane | 17.31 | 25.7 | 25.8 | 99.6 | 70 | 130 | * |
| 52) | cis-1,3-Dichloropropene | 18.04 | 26.1 | 24.5 | 106.5 | 70 | 130 | * |
| 53) | 4-Methyl-2-pentanone | 18.08 | 27.3 | 26.8 | 101.9 | 70 | 130 | * |
| 54) | trans-1,3-Dichloropropene | 18.74 | 30.0 | 27.0 | 111.1 | 70 | 130 | * |
| 55) | 1,1,2-Trichloroethane | 18.98 | 26.3 | 26.0 | 101.2 | 70 | 130 | * |
| 58) | Toluene | 19.38 | 25.9 | 26.8 | 96.6 | 70 | 130 | * |
| 59) | 2-Hexanone | 19.67 | 26.2 | 27.0 | 97.0 | 70 | 130 | * |
| 60) | Dibromochloromethane | 19.91 | 30.2 | 28.3 | 106.7 | 70 | 130 | * |
| 61) | 1,2-Dibromoethane | 20.24 | 27.2 | 26.3 | 103.4 | 70 | 130 | * |
| 62) | n-Butyl Acetate | 20.48 | 27.1 | 27.5 | 98.5 | 70 | 130 | * |
| 63) | n-Octane | 20.66 | 26.5 | 26.3 | 100.8 | 70 | 130 | * |
| 64) | Tetrachloroethene | 20.85 | 24.9 | 25.3 | 98.4 | 70 | 130 | * |
| 65) | Chlorobenzene | 21.72 | 25.8 | 26.5 | 97.4 | 70 | 130 | * |
| 66) | Ethylbenzene | 22.19 | 26.3 | 26.3 | 100.0 | 70 | 130 | * |
| 67) | m- & p-Xylenes | 22.43 | 52.5 | 51.5 | 101.9 | 70 | 130 | * |
| 68) | Bromoform | 22.51 | 28.8 | 26.5 | 108.7 | 70 | 130 | * |
| 69) | Styrene | 22.87 | 27.9 | 26.3 | 106.1 | 70 | 130 | * |
| 70) | o-Xylene | 23.02 | 26.4 | 26.0 | 101.5 | 70 | 130 | * |
| 71) | n-Nonane | 23.28 | 25.9 | 25.8 | 100.4 | 70 | 130 | * |
| 72) | 1,1,2,2-Tetrachloroethane | 22.99 | 27.2 | 27.0 | 100.7 | 70 | 130 | * |
| 74) | Cumene | 23.76 | 25.2 | 25.3 | 99.6 | 70 | 130 | * |
| 75) | alpha-Pinene | 24.25 | 25.5 | 24.8 | 102.8 | 70 | 130 | * |
| 76) | n-Propylbenzene | 24.38 | 25.7 | 25.3 | 101.6 | 70 | 130 | * |
| 77) | 3-Ethyltoluene | 24.50 | 27.7 | 26.3 | 105.3 | 70 | 130 | * |
| 78) | 4-Ethyltoluene | 24.56 | 26.9 | 26.3 | 102.3 | 70 | 130 | * |
| 79) | 1,3,5-Trimethylbenzene | 24.64 | 28.0 | 26.5 | 105.7 | 70 | 130 | * |
| 80) | alpha-Methylstyrene | 24.83 | 28.9 | 26.0 | 111.2 | 70 | 130 | * |
| 81) | 2-Ethyltoluene | 24.88 | 26.5 | 26.0 | 101.9 | 70 | 130 | * |
| 82) | 1,2,4-Trimethylbenzene | 25.15 | 28.2 | 25.5 | 110.6 | 70 | 130 | * |
| 83) | n-Decane | 25.25 | 27.3 | 26.3 | 103.8 | 70 | 130 | * |
| 84) | Benzyl Chloride | 25.31 | 31.9 | 26.8 | 119.0 | 70 | 130 | * |
| 85) | 1,3-Dichlorobenzene | 25.35 | 28.0 | 26.0 | 107.7 | 70 | 130 | * |
| 86) | 1,4-Dichlorobenzene | 25.42 | 27.3 | 26.3 | 103.8 | 70 | 130 | * |
| 87) | sec-Butylbenzene | 25.48 | 26.8 | 25.8 | 103.9 | 70 | 130 | * |
| 88) | 4-Isopropyltoluene (p-Cymene) | 25.66 | 27.2 | 25.0 | 108.8 | 70 | 130 | * |
| 89) | 1,2,3-Trimethylbenzene | 25.66 | 28.2 | 26.0 | 108.5 | 70 | 130 | * |
| 90) | 1,2-Dichlorobenzene | 25.84 | 28.0 | 25.8 | 108.5 | 70 | 130 | * |
| 91) | d-Limonene | 25.84 | 29.7 | 26.5 | 112.1 | 70 | 130 | * |
| 92) | 1,2-Dibromo-3-Chloropropane | 26.36 | 31.3 | 27.0 | 115.9 | 70 | 130 | * |
| 93) | n-Undecane | 26.76 | 28.1 | 26.3 | 106.8 | 70 | 130 | * |
| 94) | 1,2,4-Trichlorobenzene | 27.90 | 29.1 | 27.3 | 106.6 | 70 | 130 | * |
| 95) | Naphthalene | 28.05 | 27.2 | 25.0 | 108.8 | 70 | 130 | * |
| 96) | n-Dodecane | 28.00 | 25.2 | 24.3 | 103.7 | 70 | 130 | * |
| 97) | Hexachlorobutadiene | 28.48 | 28.7 | 26.8 | 107.1 | 70 | 130 | * |
| 98) | Cyclohexanone | 22.61 | 22.5 | 24.8 | 90.7 | 70 | 130 | * |
| 99) | tert-Butylbenzene | 25.15 | 27.2 | 26.5 | 102.6 | 70 | 130 | * |
| 100) | n-Butylbenzene | 26.17 | 28.0 | 26.5 | 105.7 | 70 | 130 | * |

* Denotes Passing Criterion



DA 4/28/10

CONTINUING CALIBRATION STANDARDS

# Evaluate Continuing Calibration Report

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

u 5/18/10

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | IR | Bromochloromethane (IS1) | 1.000 | 1.000 | 0.0 | 116 | 0.01 |
| 2 | T | Propene | 1.416 | 1.539 | -8.7 | 123 | -0.03 |
| 3 | T | Dichlorodifluoromethane (CF | 3.331 | 2.756 | 17.3 | 102 | -0.03 |
| 4 | T | Chloromethane | 2.019 | 1.716 | 15.0 | 111 | -0.03 |
| 5 | T | 1,2-Dichloro-1,1,2,2-tetraf | 1.935 | 1.523 | 21.3 | 97 | -0.02 |
| 6 | T | Vinyl Chloride | 2.262 | 1.952 | 13.7 | 105 | -0.02 |
| 7 | T | 1,3-Butadiene | 1.648 | 1.395 | 15.4 | 103 | -0.02 |
| 8 | T | Bromomethane | 1.510 | 1.199 | 20.6 | 99 | -0.01 |
| 9 | T | Chloroethane | 1.154 | 1.018 | 11.8 | 108 | -0.02 |
| 10 | T | Ethanol | 0.863 | 0.777 | 10.0 | 115 | -0.02 |
| 11 | T | Acetonitrile | 2.090 | 1.935 | 7.4 | 114 | -0.03 |
| 12 | T | Acrolein | 0.851 | 0.675 | 20.7 | 109 | -0.03 |
| 13 | T | Acetone | 1.102 | 0.955 | 13.3 | 112 | -0.05 |
| 14 | T | Trichlorofluoromethane | 3.031 | 2.425 | 20.0 | 99 | -0.02 |
| 15 | T | 2-Propanol (Isopropanol) | 3.212 | 2.373 | 26.1 | 103 | -0.05 |
| 16 | T | Acrylonitrile | 1.680 | 1.573 | 6.4 | 112 | -0.01 |
| 17 | T | 1,1-Dichloroethene | 1.521 | 1.272 | 16.4 | 103 | -0.01 |
| 18 | T | 2-Methyl-2-Propanol (tert-B | 3.791 | 3.311 | 12.7 | 104 | -0.09 |
| 19 | T | Methylene Chloride | 1.658 | 1.346 | 18.8 | 106 | 0.00 |
| 20 | T | 3-Chloro-1-propene (Allyl C | 1.675 | 1.575 | 6.0 | 112 | 0.00 |
| 21 | T | Trichlorotrifluoroethane | 1.519 | 1.226 | 19.3 | 101 | 0.00 |
| 22 | T | Carbon Disulfide | 5.356 | 4.715 | 12.0 | 107 | -0.01 |
| 23 | T | trans-1,2-Dichloroethene | 2.005 | 1.774 | 11.5 | 108 | 0.00 |
| 24 | T | 1,1-Dichloroethane | 2.610 | 2.266 | 13.2 | 107 | 0.00 |
| 25 | T | Methyl tert-Butyl Ether | 4.668 | 3.964 | 15.1 | 103 | -0.05 |
| 26 | T | Vinyl Acetate | 0.384 | 0.280 | 27.1 | 85 | 0.00 |
| 27 | T | 2-Butanone (MEK) | 1.013 | 0.921 | 9.1 | 105 | -0.05 |
| 28 | T | cis-1,2-Dichloroethene | 1.945 | 1.673 | 14.0 | 105 | 0.00 |
| 29 | T | Diisopropyl Ether | 1.387 | 1.189 | 14.3 | 104 | -0.03 |
| 30 | T | Ethyl Acetate | 0.538 | 0.490 | 8.9 | 107 | -0.02 |
| 31 | T | n-Hexane | 2.563 | 2.248 | 12.3 | 109 | 0.00 |
| 32 | T | Chloroform | 2.724 | 2.255 | 17.2 | 102 | 0.00 |
| 33 | S | 1,2-Dichloroethane-d4(SS1) | 1.509 | 1.498 | 0.7 | 114 | 0.00 |
| 34 | T | Tetrahydrofuran (THF) | 0.984 | 0.871 | 11.5 | 106 | 0.00 |
| 35 | T | Ethyl tert-Butyl Ether | 2.040 | 1.717 | 15.8 | 102 | -0.03 |
| 36 | T | 1,2-Dichloroethane | 2.044 | 1.658 | 18.9 | 100 | 0.00 |
| 37 | IR | 1,4-Difluorobenzene (IS2) | 1.000 | 1.000 | 0.0 | 115 | 0.00 |
| 38 | T | 1,1,1-Trichloroethane | 0.525 | 0.426 | 18.9 | 101 | -0.01 |

Evaluate Continuing Calibration Report

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 39 | T | Isopropyl Acetate | 0.192 | 0.173 | 9.9 | 106 | -0.02 |
| 40 | T | 1-Butanol | 0.302 | 0.273 | 9.6 | 116 | -0.03 |
| 41 | T | Benzene | 1.423 | 1.150 | 19.2 | 104 | 0.00 |
| 42 | T | Carbon Tetrachloride | 0.437 | 0.360 | 17.6 | 101 | 0.01 |
| 43 | T | Cyclohexane | 0.530 | 0.452 | 14.7 | 104 | 0.00 |
| 44 | T | tert-Amyl Methyl Ether | 0.959 | 0.815 | 15.0 | 103 | -0.02 |
| 45 | T | 1,2-Dichloropropane | 0.310 | 0.269 | 13.2 | 107 | 0.00 |
| 46 | T | Bromodichloromethane | 0.427 | 0.362 | 15.2 | 103 | 0.00 |
| 47 | T | Trichloroethene | 0.397 | 0.331 | 16.6 | 105 | 0.00 |
| 48 | T | 1,4-Dioxane | 0.277 | 0.240 | 13.4 | 105 | -0.04 |
| 49 | T | 2,2,4-Trimethylpentane (Iso | 1.307 | 1.169 | 10.6 | 109 | 0.00 |
| 50 | T | Methyl Methacrylate | 0.151 | 0.130 | 13.9 | 101 | 0.00 |
| 51 | T | n-Heptane | 0.339 | 0.295 | 13.0 | 105 | 0.00 |
| 52 | T | cis-1,3-Dichloropropene | 0.507 | 0.438 | 13.6 | 104 | 0.00 |
| 53 | T | 4-Methyl-2-pentanone | 0.270 | 0.253 | 6.3 | 109 | -0.02 |
| 54 | T | trans-1,3-Dichloropropene | 0.459 | 0.392 | 14.6 | 101 | 0.00 |
| 55 | T | 1,1,2-Trichloroethane | 0.328 | 0.277 | 15.5 | 103 | 0.00 |
| 56 | IR | Chlorobenzene-d5 (IS3) | 1.000 | 1.000 | 0.0 | 116 | 0.00 |
| 57 | S | Toluene-d8 (SS2) | 2.521 | 2.509 | 0.5 | 116 | 0.00 |
| 58 | T | Toluene | 3.556 | 2.917 | 18.0 | 102 | 0.00 |
| 59 | T | 2-Hexanone | 1.506 | 1.369 | 9.1 | 109 | -0.02 |
| 60 | T | Dibromochloromethane | 0.850 | 0.712 | 16.2 | 102 | 0.00 |
| 61 | T | 1,2-Dibromoethane | 0.902 | 0.743 | 17.6 | 101 | 0.00 |
| 62 | T | n-Butyl Acetate | 1.718 | 1.528 | 11.1 | 106 | -0.01 |
| 63 | T | n-Octane | 0.638 | 0.568 | 11.0 | 108 | 0.00 |
| 64 | T | Tetrachloroethene | 1.111 | 0.869 | 21.8 | 100 | 0.00 |
| 65 | T | Chlorobenzene | 2.363 | 1.906 | 19.3 | 102 | 0.00 |
| 66 | T | Ethylbenzene | 3.898 | 3.255 | 16.5 | 102 | 0.00 |
| 67 | T | m- & p-Xylenes | 3.080 | 2.564 | 16.8 | 102 | 0.02 |
| 68 | T | Bromoform | 0.798 | 0.673 | 15.7 | 102 | 0.00 |
| 69 | T | Styrene | 2.423 | 2.045 | 15.6 | 101 | 0.00 |
| 70 | T | o-Xylene | 3.140 | 2.587 | 17.6 | 102 | 0.00 |
| 71 | T | n-Nonane | 1.370 | 1.212 | 11.5 | 108 | 0.00 |
| 72 | T | 1,1,2,2-Tetrachloroethane | 1.322 | 1.088 | 17.7 | 99 | 0.00 |
| 73 | S | Bromofluorobenzene (SS3) | 0.883 | 0.839 | 5.0 | 110 | 0.00 |
| 74 | T | Cumene | 4.291 | 3.506 | 18.3 | 101 | 0.00 |
| 75 | T | alpha-Pinene | 1.991 | 1.672 | 16.0 | 100 | 0.00 |
| 76 | T | n-Propylbenzene | 4.977 | 4.210 | 15.4 | 102 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

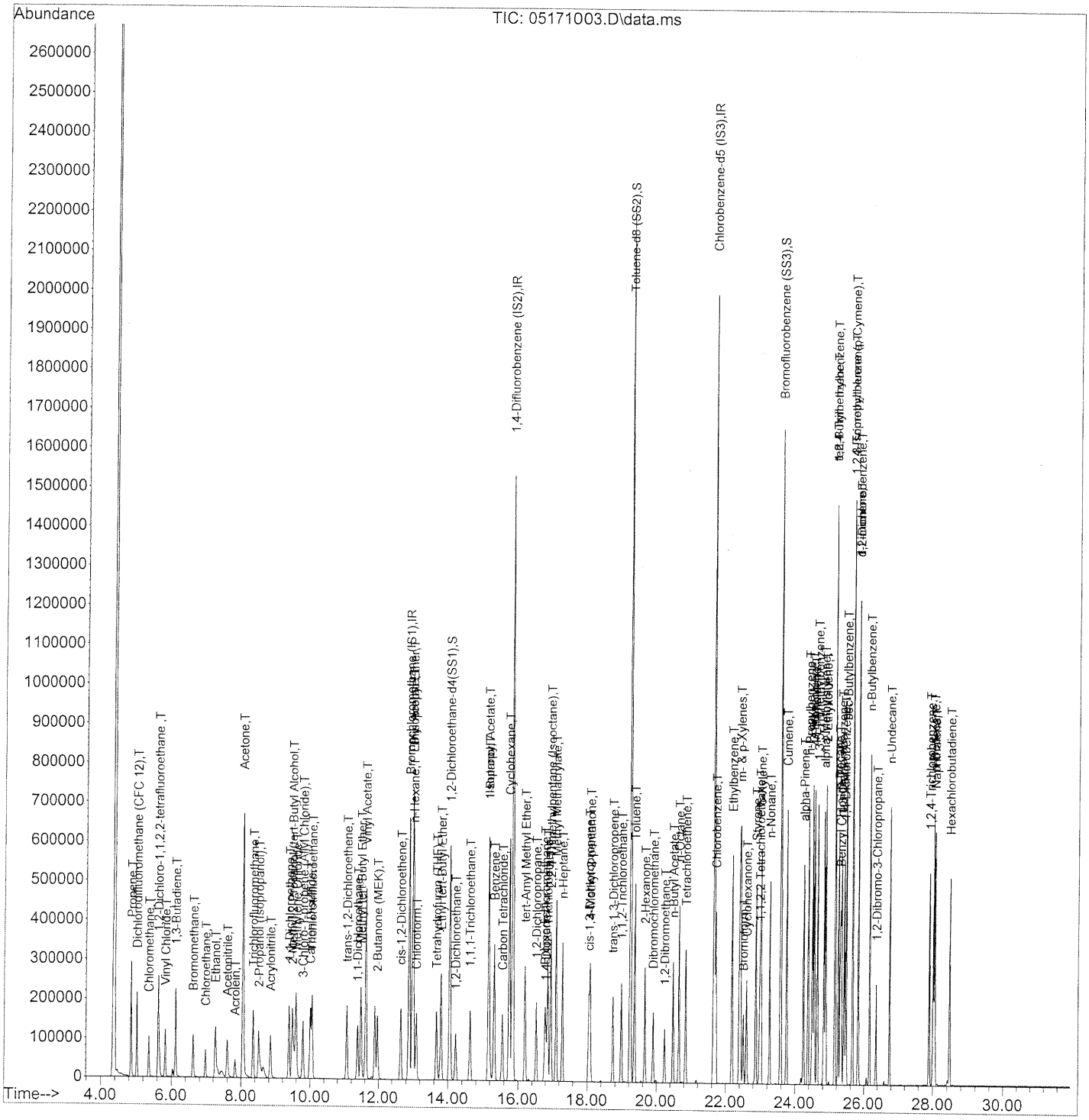
| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 77 | T | 3-Ethyltoluene | 3.929 | 3.340 | 15.0 | 103 | 0.00 |
| 78 | T | 4-Ethyltoluene | 3.959 | 3.232 | 18.4 | 98 | 0.00 |
| 79 | T | 1,3,5-Trimethylbenzene | 3.231 | 2.667 | 17.5 | 100 | 0.00 |
| 80 | T | alpha-Methylstyrene | 1.790 | 1.526 | 14.7 | 98 | 0.00 |
| 81 | T | 2-Ethyltoluene | 4.077 | 3.387 | 16.9 | 101 | 0.00 |
| 82 | T | 1,2,4-Trimethylbenzene | 3.341 | 2.793 | 16.4 | 101 | 0.00 |
| 83 | T | n-Decane | 1.523 | 1.336 | 12.3 | 107 | 0.00 |
| 84 | T | Benzyl Chloride | 2.507 | 1.988 | 20.7 | 92 | 0.00 |
| 85 | T | 1,3-Dichlorobenzene | 2.037 | 1.643 | 19.3 | 100 | 0.00 |
| 86 | T | 1,4-Dichlorobenzene | 2.112 | 1.707 | 19.2 | 100 | 0.00 |
| 87 | T | sec-Butylbenzene | 4.535 | 3.797 | 16.3 | 100 | 0.00 |
| 88 | T | 4-Isopropyltoluene (p-Cymen | 4.314 | 3.688 | 14.5 | 100 | 0.00 |
| 89 | T | 1,2,3-Trimethylbenzene | 3.367 | 2.828 | 16.0 | 101 | 0.00 |
| 90 | T | 1,2-Dichlorobenzene | 1.940 | 1.593 | 17.9 | 99 | 0.00 |
| 91 | T | d-Limonene | 1.160 | 1.018 | 12.2 | 103 | 0.00 |
| 92 | T | 1,2-Dibromo-3-Chloropropane | 0.624 | 0.506 | 18.9 | 98 | 0.00 |
| 93 | T | n-Undecane | 1.508 | 1.352 | 10.3 | 109 | 0.00 |
| 94 | T | 1,2,4-Trichlorobenzene | 1.372 | 1.131 | 17.6 | 104 | 0.00 |
| 95 | T | Naphthalene | 4.243 | 3.611 | 14.9 | 110 | 0.00 |
| 96 | T | n-Dodecane | 1.563 | 1.451 | 7.2 | 121 | 0.00 |
| 97 | T | Hexachlorobutadiene | 0.885 | 0.711 | 19.7 | 101 | 0.00 |
| 98 | T | Cyclohexanone | 1.020 | 0.912 | 10.6 | 108 | -0.02 |
| 99 | T | tert-Butylbenzene | 3.455 | 2.881 | 16.6 | 100 | 0.00 |
| 100 | T | n-Butylbenzene | 3.441 | 2.941 | 14.5 | 102 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

LM 5/18/10

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 393814 | 25.000 | ng | | 0.01 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1906134 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.66 | 82 | 799936 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 589781 | 24.814 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.24% | | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 2006863 | 24.874 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 99.48% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 670848 | 23.738 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 94.96% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 129697 | 5.813 | ng | | 98 |
| 3) Dichlorodifluoromethan... | 5.03 | 85 | 227930 | 4.344 | ng | | 100 |
| 4) Chloromethane | 5.36 | 50 | 135141 | 4.249 | ng | | 100 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.63 | 135 | 127155 | 4.172 | ng | | 99 |
| 6) Vinyl Chloride | 5.83 | 62 | 155275 | 4.359 | ng | | 100 |
| 7) 1,3-Butadiene | 6.12 | 54 | 131864 | 5.079 | ng | | 92 |
| 8) Bromomethane | 6.62 | 94 | 96361 | 4.051 | ng | | 98 |
| 9) Chloroethane | 6.97 | 64 | 80950 | 4.454 | ng | | 100 |
| 10) Ethanol | 7.26 | 45 | 318315m | 23.424 | ng | | |
| 11) Acetonitrile | 7.60 | 41 | 160012 | 4.859 | ng | | 98 |
| 12) Acrolein | 7.83 | 56 | 57406 | 4.283 | ng | | 99 |
| 13) Acetone | 8.05 | 58 | 413633 | 23.820 | ng | # | 84 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 200551 | 4.200 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.51 | 45 | 353283m | 6.983 | ng | | |
| 16) Acrylonitrile | 8.85 | 53 | 131323 | 4.962 | ng | | 98 |
| 17) 1,1-Dichloroethene | 9.38 | 96 | 110177 | 4.598 | ng | # | 75 |
| 18) 2-Methyl-2-Propanol (t... | 9.48 | 59 | 526771 | 8.822 | ng | | 97 |
| 19) Methylene Chloride | 9.60 | 84 | 113439 | 4.343 | ng | # | 75 |
| 20) 3-Chloro-1-propene (Al... | 9.79 | 41 | 133947 | 5.077 | ng | | 83 |
| 21) Trichlorotrifluoroethane | 10.05 | 151 | 106195 | 4.437 | ng | # | 77 |
| 22) Carbon Disulfide | 10.00 | 76 | 397392 | 4.710 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 11.07 | 61 | 148137 | 4.691 | ng | | 78 |
| 24) 1,1-Dichloroethane | 11.38 | 63 | 189208 | 4.602 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.48 | 73 | 340349 | 4.629 | ng | | 94 |
| 26) Vinyl Acetate | 11.62 | 86 | 110713 | 18.321 | ng | # | 29 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 79793 | 5.003 | ng | # | 70 |
| 28) cis-1,2-Dichloroethene | 12.65 | 61 | 143665 | 4.688 | ng | | 78 |
| 29) Diisopropyl Ether | 13.00 | 87 | 100174 | 4.586 | ng | # | 42 |
| 30) Ethyl Acetate | 12.99 | 61 | 82521 | 9.742 | ng | | 90 |
| 31) n-Hexane | 13.01 | 57 | 192990 | 4.780 | ng | # | 98 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 13.10 | 83 | 190082 | 4.430 ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.67 | 72 | 75462 | 4.870 ng | # | 79 |
| 35) Ethyl tert-Butyl Ether | 13.81 | 87 | 139332 | 4.336 ng | # | 79 |
| 36) 1,2-Dichloroethane | 14.22 | 62 | 138422 | 4.298 ng | | 100 |
| 38) 1,1,1-Trichloroethane | 14.62 | 97 | 170398 | 4.257 ng | | 95 |
| 39) Isopropyl Acetate | 15.16 | 61 | 138623 | 9.470 ng | # | 91 |
| 40) 1-Butanol | 15.17 | 56 | 216378 | 9.413 ng | | 89 |
| 41) Benzene | 15.32 | 78 | 464614 | 4.282 ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 148094 | 4.442 ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 371907 | 9.205 ng | # | 81 |
| 44) tert-Amyl Methyl Ether | 16.20 | 73 | 322999 | 4.417 ng | | 92 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 107868 | 4.566 ng | | 98 |
| 46) Bromodichloromethane | 16.78 | 83 | 148901 | 4.570 ng | | 99 |
| 47) Trichloroethene | 16.86 | 130 | 133874 | 4.421 ng | | 99 |
| 48) 1,4-Dioxane | 16.81 | 88 | 97981 | 4.632 ng | | 84 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 463285 | 4.648 ng | | 93 |
| 50) Methyl Methacrylate | 17.11 | 100 | 105798 | 9.202 ng | # | 66 |
| 51) n-Heptane | 17.30 | 71 | 119049 | 4.612 ng | | 90 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 165487 | 4.284 ng | | 100 |
| 53) 4-Methyl-2-pentanone | 18.07 | 58 | 105900 | 5.154 ng | # | 86 |
| 54) trans-1,3-Dichloropropene | 18.73 | 75 | 164458 | 4.702 ng | | 100 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 111049 | 4.443 ng | | 93 |
| 58) Toluene | 19.37 | 91 | 504005 | 4.429 ng | | 99 |
| 59) 2-Hexanone | 19.67 | 43 | 240946 | 5.001 ng | | 91 |
| 60) Dibromochloromethane | 19.91 | 129 | 131088 | 4.820 ng | | 100 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 126078 | 4.368 ng | | 99 |
| 62) n-Butyl Acetate | 20.48 | 43 | 268875 | 4.890 ng | | 93 |
| 63) n-Octane | 20.65 | 57 | 97174 | 4.759 ng | # | 82 |
| 64) Tetrachloroethene | 20.85 | 166 | 141837 | 3.989 ng | | 99 |
| 65) Chlorobenzene | 21.71 | 112 | 329366 | 4.356 ng | | 100 |
| 66) Ethylbenzene | 22.19 | 91 | 551993 | 4.426 ng | | 95 |
| 67) m- & p-Xylenes | 22.42 | 91 | 853089 | 8.657 ng | | 93 |
| 68) Bromoform | 22.51 | 173 | 110837 | 4.338 ng | | 100 |
| 69) Styrene | 22.87 | 104 | 350105 | 4.516 ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 438703 | 4.367 ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 205463 | 4.688 ng | | 86 |
| 72) 1,1,2,2-Tetrachloroethane | 22.98 | 83 | 186182 | 4.401 ng | | 98 |
| 74) Cumene | 23.75 | 105 | 577748 | 4.208 ng | | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 270250 | 4.243 ng | | 93 |
| 76) n-Propylbenzene | 24.38 | 91 | 693706 | 4.356 ng | | 94 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 582374 | 4.632 ng | | 97 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 563682 | 4.450 ng | | 95 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 465159 | 4.499 ng | | 92 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:47 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

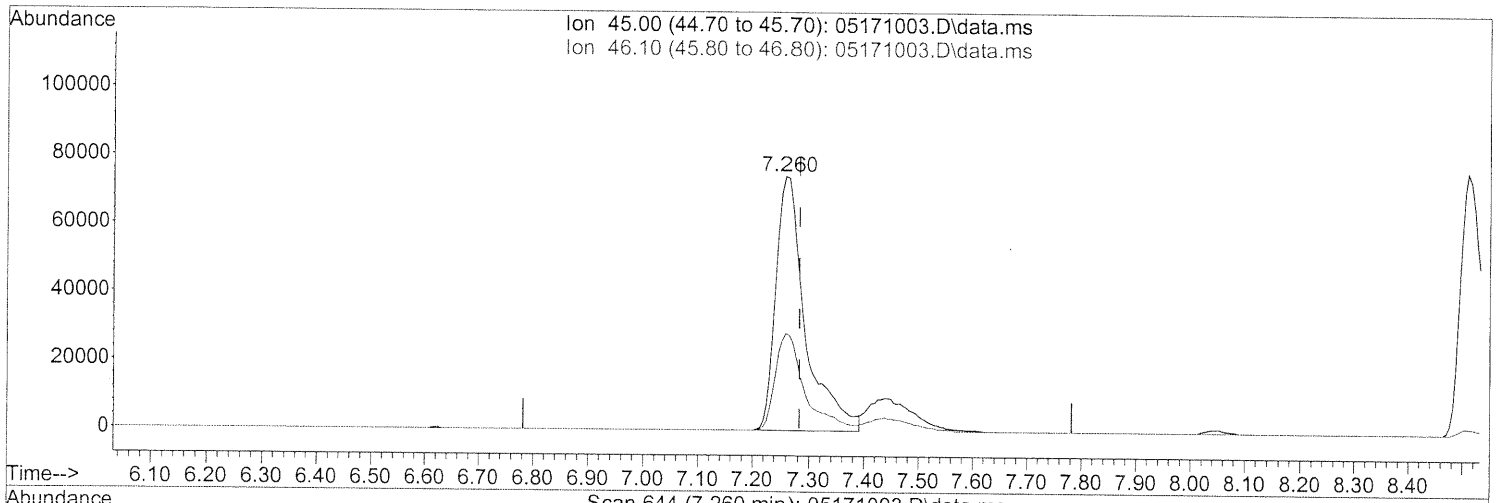
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 261263 | 4.561 ng | | 96 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 568941 | 4.361 ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 473672 | 4.431 ng | | 91 |
| 83) n-Decane | 25.25 | 57 | 230787 | 4.737 ng | | 90 |
| 84) Benzyl Chloride | 25.31 | 91 | 349904 | 4.362 ng | | 92 |
| 85) 1,3-Dichlorobenzene | 25.34 | 146 | 286453 | 4.394 ng | | 100 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 289499 | 4.283 ng | | 100 |
| 87) sec-Butylbenzene | 25.48 | 105 | 643994 | 4.438 ng | | 94 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 607802 | 4.403 ng | | 93 |
| 89) 1,2,3-Trimethylbenzene | 25.67 | 105 | 484174 | 4.494 ng | | 90 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 270231 | 4.353 ng | | 100 |
| 91) d-Limonene | 25.84 | 68 | 177559 | 4.783 ng | | 84 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 89124 | 4.463 ng | # | 62 |
| 93) n-Undecane | 26.76 | 57 | 235785 | 4.888 ng | | 90 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 202579 | 4.614 ng | | 99 |
| 95) Naphthalene | 28.05 | 128 | 612344 | 4.511 ng | | 99 |
| 96) n-Dodecane | 28.01 | 57 | 229892 | 4.596 ng | | 90 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 125109 | 4.418 ng | | 99 |
| 98) Cyclohexanone | 22.60 | 55 | 142935 | 4.379 ng | # | 87 |
| 99) tert-Butylbenzene | 25.15 | 119 | 488616 | 4.420 ng | | 96 |
| 100) n-Butylbenzene | 26.16 | 91 | 512790 | 4.657 ng | # | 96 |

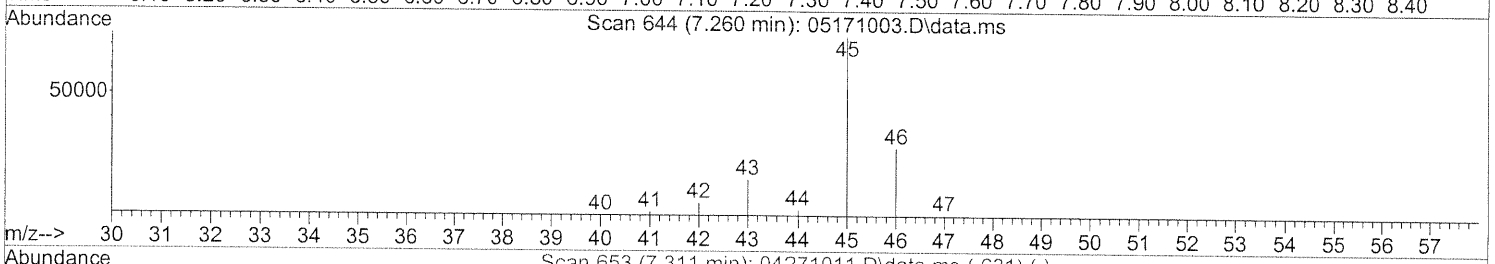
(#) = qualifier out of range (m) = manual integration (+) = signals summed

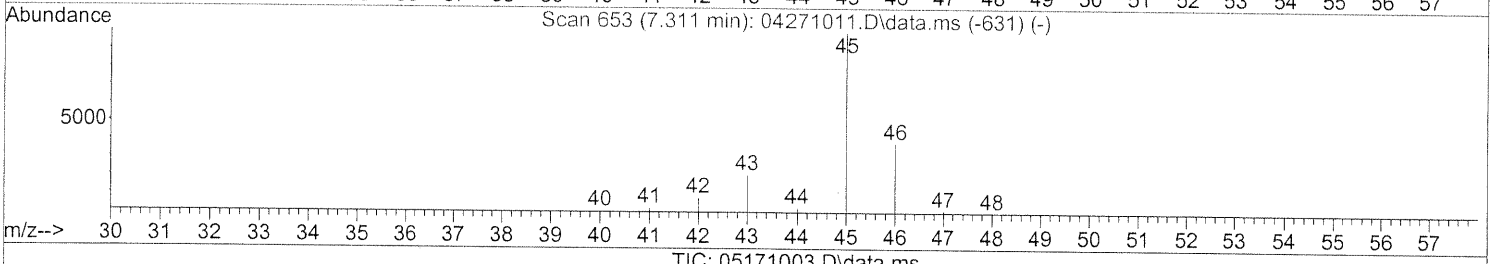
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:21 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171003.D\data.ms

(10) Ethanol (T)

7.260min (-0.023) 19.25ng

response 261659

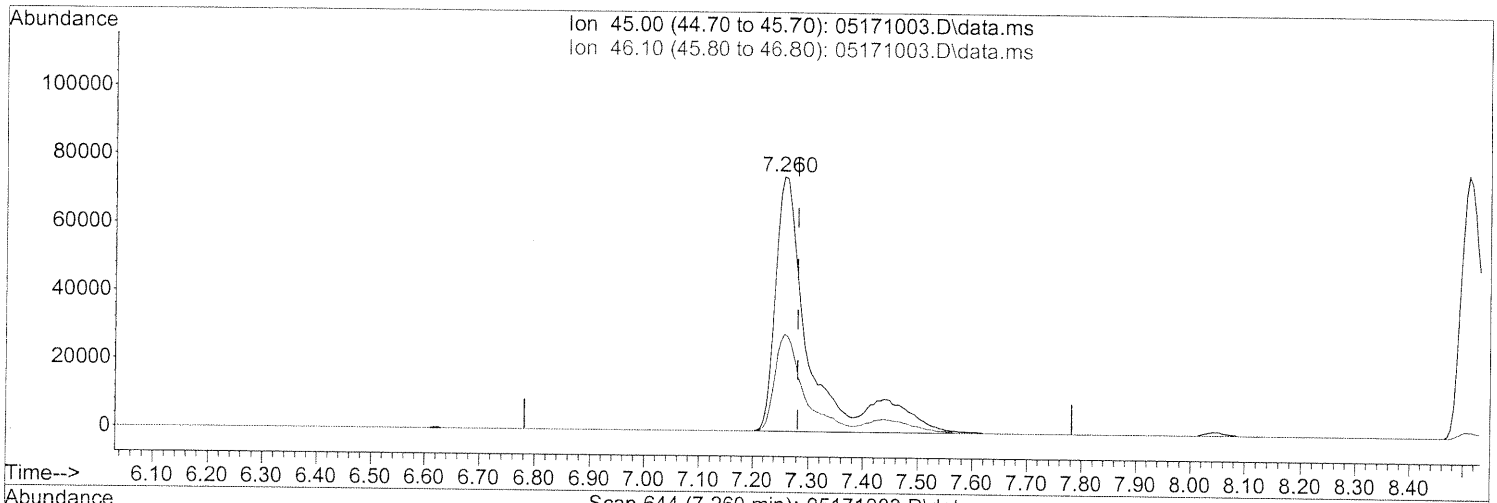
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.65 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

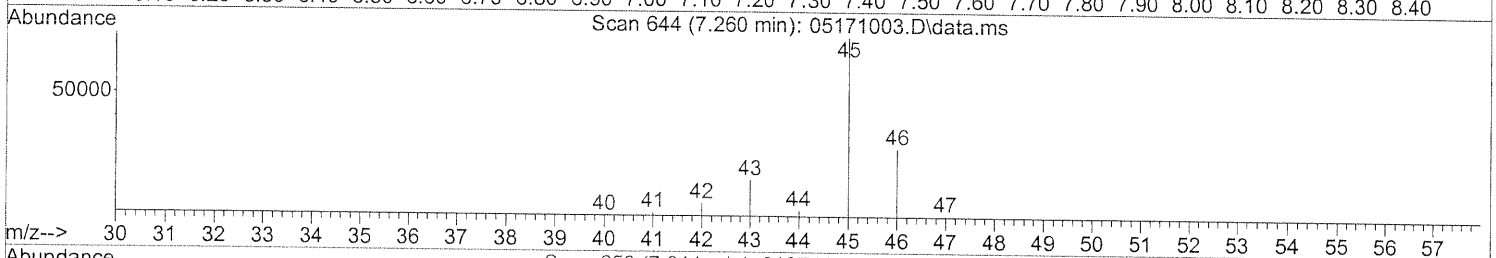
PT

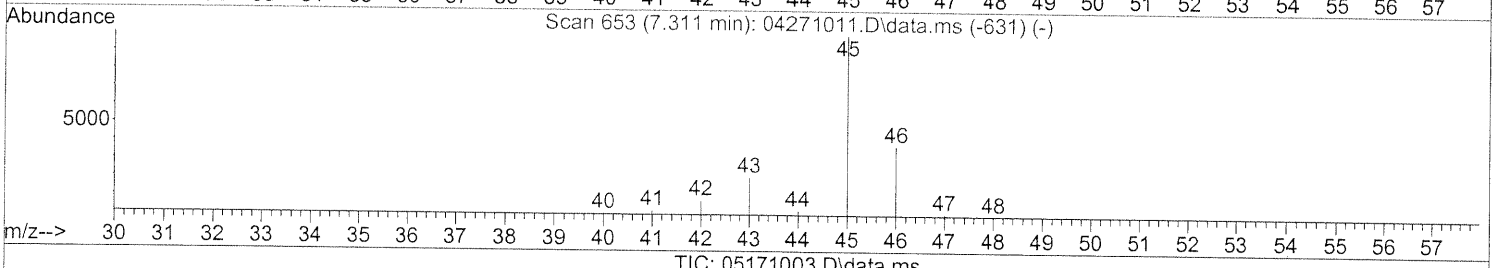
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:21 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171003.D\data.ms

(10) Ethanol (T)

7.260min (-0.023) 23.42ng m

response 318315

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 31.77 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

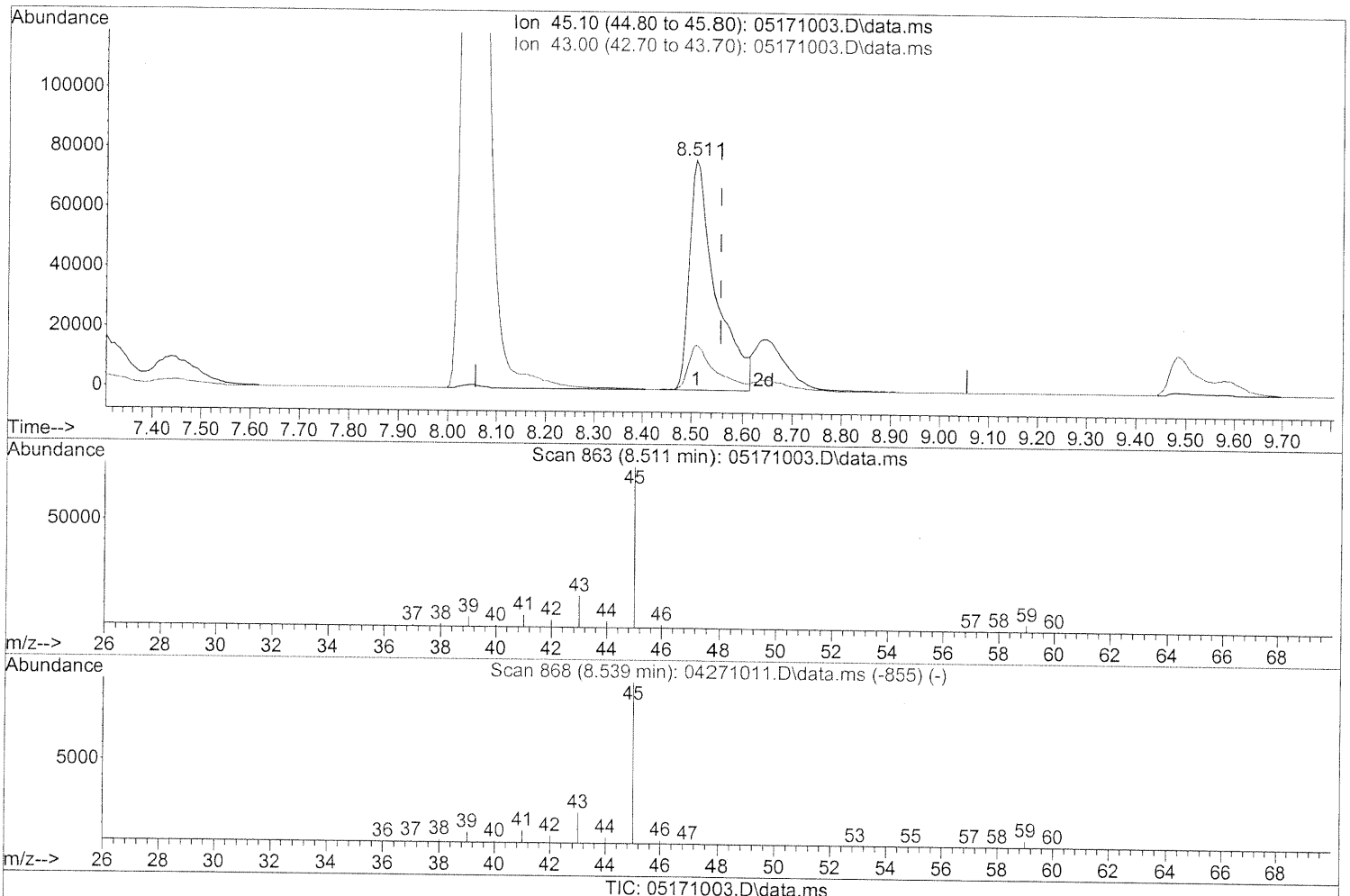
PT->IC
LM 5/18/10

5/18/10

# Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:21 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




(15) 2-Propanol (Isopropanol) (T)

8.511min (-0.045) 5.43ng

response 274603

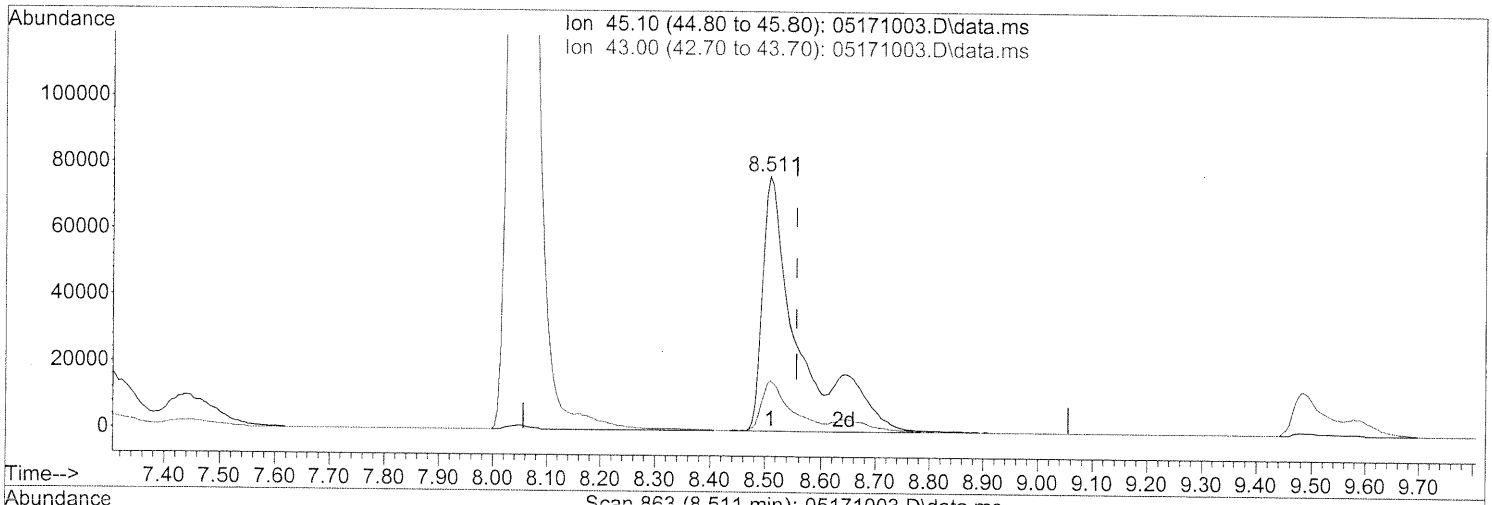
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 20.27 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

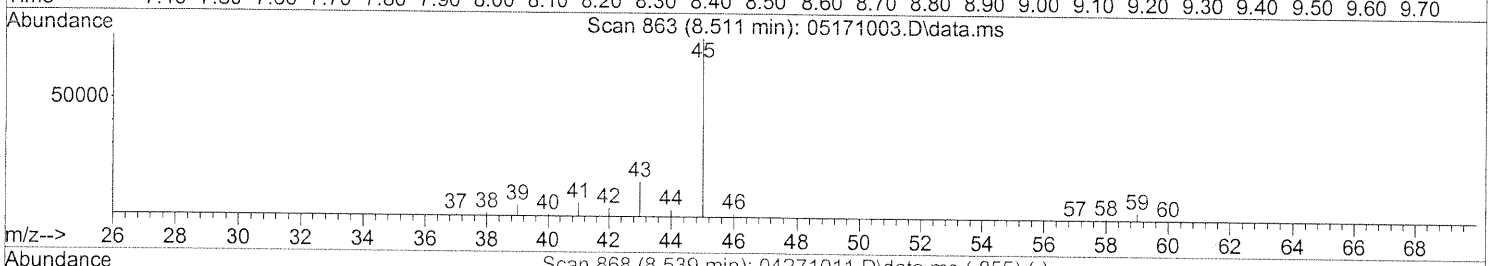
SH

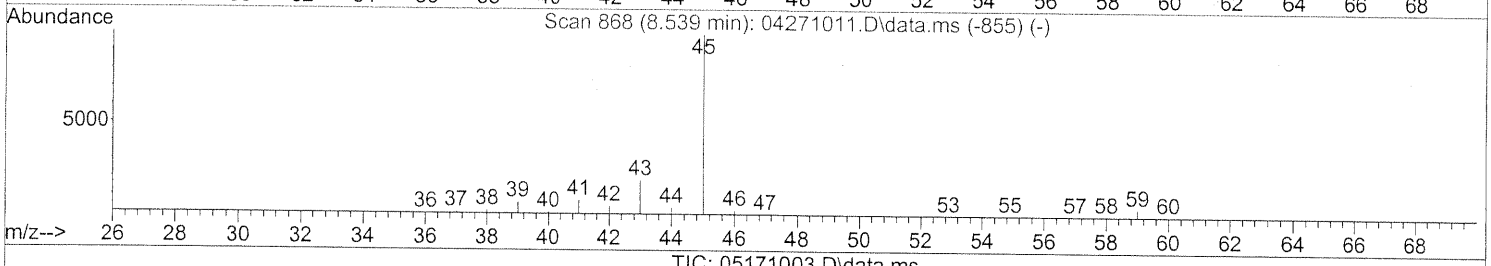
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 07:56:21 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05171003.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.511min (-0.045) 6.98ng m

response 353283

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 15.75 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SH->IC
LM 5/18/10

DA 5/18/10

# Evaluate Continuing Calibration Report

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:41 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | IR | Bromochloromethane (IS1) | 1.000 | 1.000 | 0.0 | 115 | 0.01 |
| 2 | T | Propene | 1.416 | 1.601 | -13.1 | 128 | -0.03 |
| 3 | T | Dichlorodifluoromethane (CF | 3.331 | 2.839 | 14.8 | 105 | -0.02 |
| 4 | T | Chloromethane | 2.019 | 1.721 | 14.8 | 111 | -0.02 |
| 5 | T | 1,2-Dichloro-1,1,2,2-tetraf | 1.935 | 1.593 | 17.7 | 101 | -0.02 |
| 6 | T | Vinyl Chloride | 2.262 | 1.987 | 12.2 | 106 | -0.02 |
| 7 | T | 1,3-Butadiene | 1.648 | 1.478 | 10.3 | 109 | -0.02 |
| 8 | T | Bromomethane | 1.510 | 1.264 | 16.3 | 104 | 0.00 |
| 9 | T | Chloroethane | 1.154 | 1.054 | 8.7 | 111 | -0.02 |
| 10 | T | Ethanol | 0.863 | 0.798 | 7.5 | 117 | -0.02 |
| 11 | T | Acetonitrile | 2.090 | 1.983 | 5.1 | 117 | -0.03 |
| 12 | T | Acrolein | 0.851 | 0.699 | 17.9 | 113 | -0.03 |
| 13 | T | Acetone | 1.102 | 0.983 | 10.8 | 114 | -0.04 |
| 14 | T | Trichlorofluoromethane | 3.031 | 2.532 | 16.5 | 103 | -0.02 |
| 15 | T | 2-Propanol (Isopropanol) | 3.212 | 2.395 | 25.4 | 103 | -0.04 |
| 16 | T | Acrylonitrile | 1.680 | 1.627 | 3.2 | 115 | -0.01 |
| 17 | T | 1,1-Dichloroethene | 1.521 | 1.327 | 12.8 | 108 | 0.00 |
| 18 | T | 2-Methyl-2-Propanol (tert-B | 3.791 | 3.491 | 7.9 | 109 | -0.08 |
| 19 | T | Methylene Chloride | 1.658 | 1.371 | 17.3 | 107 | 0.00 |
| 20 | T | 3-Chloro-1-propene (Allyl C | 1.675 | 1.632 | 2.6 | 116 | 0.01 |
| 21 | T | Trichlorotrifluoroethane | 1.519 | 1.269 | 16.5 | 104 | 0.00 |
| 22 | T | Carbon Disulfide | 5.356 | 4.902 | 8.5 | 111 | -0.01 |
| 23 | T | trans-1,2-Dichloroethene | 2.005 | 1.817 | 9.4 | 110 | 0.00 |
| 24 | T | 1,1-Dichloroethane | 2.610 | 2.331 | 10.7 | 110 | 0.01 |
| 25 | T | Methyl tert-Butyl Ether | 4.668 | 4.164 | 10.8 | 108 | -0.05 |
| 26 | T | Vinyl Acetate | 0.384 | 0.286 | 25.5 | 86 | 0.00 |
| 27 | T | 2-Butanone (MEK) | 1.013 | 0.951 | 6.1 | 108 | -0.04 |
| 28 | T | cis-1,2-Dichloroethene | 1.945 | 1.749 | 10.1 | 109 | 0.00 |
| 29 | T | Diisopropyl Ether | 1.387 | 1.229 | 11.4 | 107 | -0.03 |
| 30 | T | Ethyl Acetate | 0.538 | 0.505 | 6.1 | 110 | -0.02 |
| 31 | T | n-Hexane | 2.563 | 2.305 | 10.1 | 112 | 0.00 |
| 32 | T | Chloroform | 2.724 | 2.343 | 14.0 | 106 | 0.01 |
| 33 | S | 1,2-Dichloroethane-d4(SS1) | 1.509 | 1.493 | 1.1 | 113 | 0.00 |
| 34 | T | Tetrahydrofuran (THF) | 0.984 | 0.902 | 8.3 | 109 | 0.00 |
| 35 | T | Ethyl tert-Butyl Ether | 2.040 | 1.814 | 11.1 | 107 | -0.03 |
| 36 | T | 1,2-Dichloroethane | 2.044 | 1.724 | 15.7 | 104 | 0.00 |
| 37 | IR | 1,4-Difluorobenzene (IS2) | 1.000 | 1.000 | 0.0 | 113 | 0.00 |
| 38 | T | 1,1,1-Trichloroethane | 0.525 | 0.450 | 14.3 | 105 | 0.00 |



DA 5/18/10

Evaluate Continuing Calibration Report

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:41 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 39 | T | Isopropyl Acetate | 0.192 | 0.181 | 5.7 | 110 | -0.02 |
| 40 | T | 1-Butanol | 0.302 | 0.288 | 4.6 | 120 | -0.03 |
| 41 | T | Benzene | 1.423 | 1.196 | 16.0 | 106 | 0.00 |
| 42 | T | Carbon Tetrachloride | 0.437 | 0.380 | 13.0 | 104 | 0.01 |
| 43 | T | Cyclohexane | 0.530 | 0.472 | 10.9 | 107 | 0.00 |
| 44 | T | tert-Amyl Methyl Ether | 0.959 | 0.862 | 10.1 | 107 | -0.02 |
| 45 | T | 1,2-Dichloropropane | 0.310 | 0.277 | 10.6 | 109 | 0.00 |
| 46 | T | Bromodichloromethane | 0.427 | 0.377 | 11.7 | 106 | 0.00 |
| 47 | T | Trichloroethene | 0.397 | 0.346 | 12.8 | 108 | 0.01 |
| 48 | T | 1,4-Dioxane | 0.277 | 0.251 | 9.4 | 108 | -0.03 |
| 49 | T | 2,2,4-Trimethylpentane (Iso | 1.307 | 1.217 | 6.9 | 112 | 0.00 |
| 50 | T | Methyl Methacrylate | 0.151 | 0.136 | 9.9 | 104 | 0.00 |
| 51 | T | n-Heptane | 0.339 | 0.309 | 8.8 | 109 | 0.00 |
| 52 | T | cis-1,3-Dichloropropene | 0.507 | 0.460 | 9.3 | 107 | 0.00 |
| 53 | T | 4-Methyl-2-pentanone | 0.270 | 0.263 | 2.6 | 111 | -0.02 |
| 54 | T | trans-1,3-Dichloropropene | 0.459 | 0.414 | 9.8 | 105 | 0.00 |
| 55 | T | 1,1,2-Trichloroethane | 0.328 | 0.292 | 11.0 | 107 | 0.00 |
| 56 | IR | Chlorobenzene-d5 (IS3) | 1.000 | 1.000 | 0.0 | 115 | 0.00 |
| 57 | S | Toluene-d8 (SS2) | 2.521 | 2.477 | 1.7 | 114 | 0.00 |
| 58 | T | Toluene | 3.556 | 3.018 | 15.1 | 105 | 0.00 |
| 59 | T | 2-Hexanone | 1.506 | 1.423 | 5.5 | 112 | -0.02 |
| 60 | T | Dibromochloromethane | 0.850 | 0.743 | 12.6 | 105 | 0.00 |
| 61 | T | 1,2-Dibromoethane | 0.902 | 0.777 | 13.9 | 105 | 0.00 |
| 62 | T | n-Butyl Acetate | 1.718 | 1.612 | 6.2 | 111 | -0.01 |
| 63 | T | n-Octane | 0.638 | 0.585 | 8.3 | 111 | 0.00 |
| 64 | T | Tetrachloroethene | 1.111 | 0.903 | 18.7 | 103 | 0.00 |
| 65 | T | Chlorobenzene | 2.363 | 1.967 | 16.8 | 105 | 0.00 |
| 66 | T | Ethylbenzene | 3.898 | 3.376 | 13.4 | 106 | 0.00 |
| 67 | T | m- & p-Xylenes | 3.080 | 2.657 | 13.7 | 105 | 0.02 |
| 68 | T | Bromoform | 0.798 | 0.696 | 12.8 | 105 | 0.00 |
| 69 | T | Styrene | 2.423 | 2.123 | 12.4 | 105 | 0.00 |
| 70 | T | o-Xylene | 3.140 | 2.673 | 14.9 | 105 | 0.00 |
| 71 | T | n-Nonane | 1.370 | 1.244 | 9.2 | 111 | 0.00 |
| 72 | T | 1,1,2,2-Tetrachloroethane | 1.322 | 1.126 | 14.8 | 102 | 0.00 |
| 73 | S | Bromofluorobenzene (SS3) | 0.883 | 0.839 | 5.0 | 110 | 0.00 |
| 74 | T | Cumene | 4.291 | 3.636 | 15.3 | 104 | 0.00 |
| 75 | T | alpha-Pinene | 1.991 | 1.752 | 12.0 | 104 | 0.00 |
| 76 | T | n-Propylbenzene | 4.977 | 4.352 | 12.6 | 105 | 0.00 |



DA 5/18/10

# Evaluate Continuing Calibration Report

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:41 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 77 | T | 3-Ethyltoluene | 3.929 | 3.453 | 12.1 | 106 | 0.00 |
| 78 | T | 4-Ethyltoluene | 3.959 | 3.356 | 15.2 | 101 | 0.00 |
| 79 | T | 1,3,5-Trimethylbenzene | 3.231 | 2.770 | 14.3 | 104 | 0.00 |
| 80 | T | alpha-Methylstyrene | 1.790 | 1.583 | 11.6 | 102 | 0.00 |
| 81 | T | 2-Ethyltoluene | 4.077 | 3.510 | 13.9 | 104 | 0.00 |
| 82 | T | 1,2,4-Trimethylbenzene | 3.341 | 2.881 | 13.8 | 103 | 0.00 |
| 83 | T | n-Decane | 1.523 | 1.379 | 9.5 | 110 | 0.00 |
| 84 | T | Benzyl Chloride | 2.507 | 2.061 | 17.8 | 95 | 0.00 |
| 85 | T | 1,3-Dichlorobenzene | 2.037 | 1.696 | 16.7 | 102 | 0.00 |
| 86 | T | 1,4-Dichlorobenzene | 2.112 | 1.765 | 16.4 | 103 | 0.00 |
| 87 | T | sec-Butylbenzene | 4.535 | 3.925 | 13.5 | 103 | 0.00 |
| 88 | T | 4-Isopropyltoluene (p-Cymen | 4.314 | 3.817 | 11.5 | 103 | 0.00 |
| 89 | T | 1,2,3-Trimethylbenzene | 3.367 | 2.931 | 12.9 | 104 | 0.00 |
| 90 | T | 1,2-Dichlorobenzene | 1.940 | 1.648 | 15.1 | 102 | 0.00 |
| 91 | T | d-Limonene | 1.160 | 1.054 | 9.1 | 106 | 0.00 |
| 92 | T | 1,2-Dibromo-3-Chloropropane | 0.624 | 0.526 | 15.7 | 101 | 0.00 |
| 93 | T | n-Undecane | 1.508 | 1.399 | 7.2 | 113 | 0.00 |
| 94 | T | 1,2,4-Trichlorobenzene | 1.372 | 1.173 | 14.5 | 108 | 0.00 |
| 95 | T | Naphthalene | 4.243 | 3.749 | 11.6 | 114 | 0.00 |
| 96 | T | n-Dodecane | 1.563 | 1.492 | 4.5 | 123 | 0.00 |
| 97 | T | Hexachlorobutadiene | 0.885 | 0.734 | 17.1 | 104 | 0.00 |
| 98 | T | Cyclohexanone | 1.020 | 0.938 | 8.0 | 111 | -0.02 |
| 99 | T | tert-Butylbenzene | 3.455 | 2.982 | 13.7 | 103 | 0.00 |
| 100 | T | n-Butylbenzene | 3.441 | 3.032 | 11.9 | 104 | 0.00 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

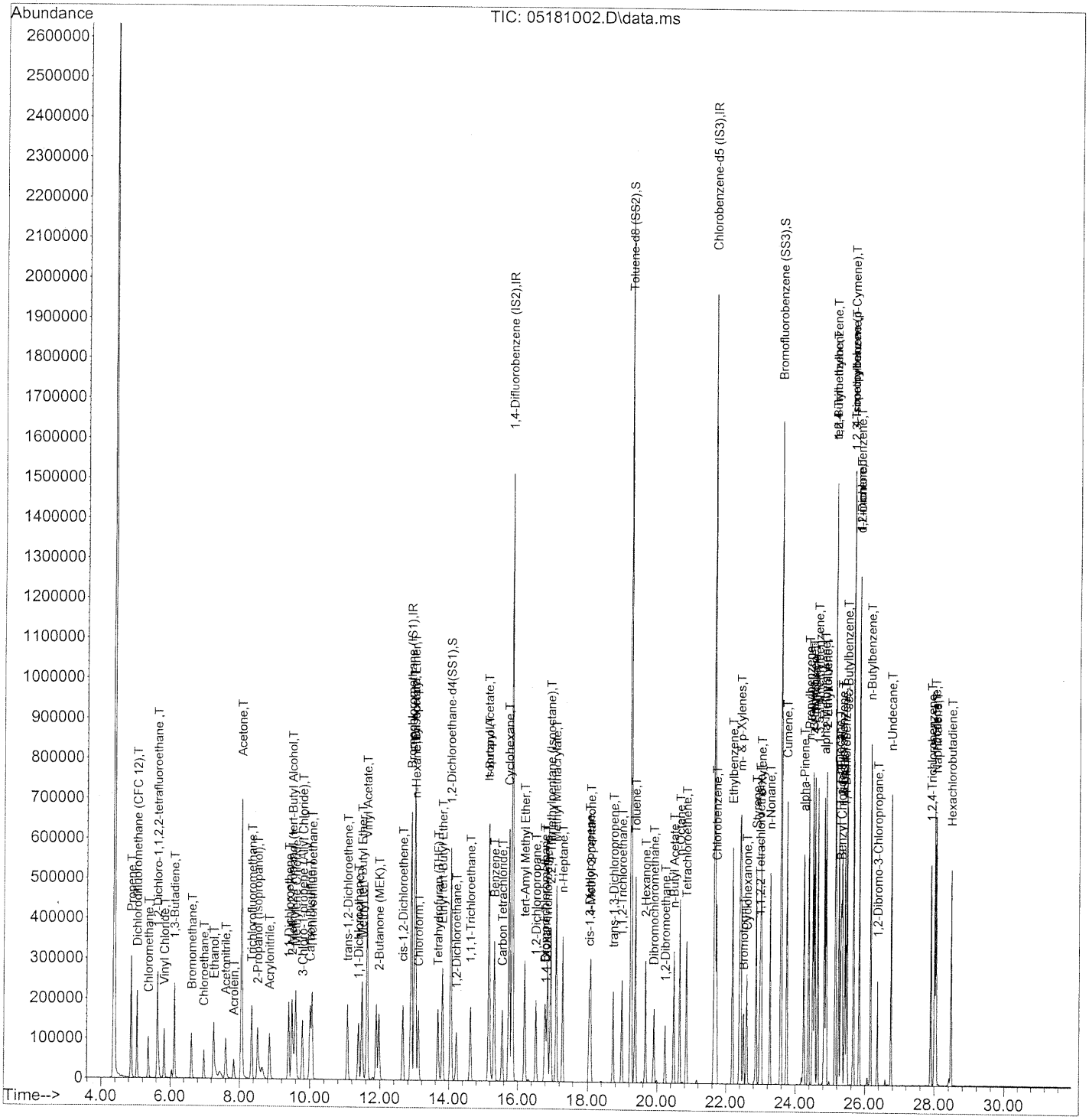


DM 5/18/10

Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:41 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:41 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.89 | 130 | 392236 | 25.000 | ng | | 0.01 |
| 37) 1,4-Difluorobenzene (IS2) | 15.85 | 114 | 1875370 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.65 | 82 | 795986 | 25.000 | ng | | 0.00 |
| System Monitoring Compounds | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 14.05 | 65 | 585536 | 24.734 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 98.92% | | | | |
| 57) Toluene-d8 (SS2) | 19.24 | 98 | 1972013 | 24.563 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 98.24% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.59 | 174 | 667457 | 23.735 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 94.92% | | | | |
| Target Compounds | | | | | | | Qvalue |
| 2) Propene | 4.87 | 42 | 134386 | 6.048 | ng | | 100 |
| 3) Dichlorodifluoromethan... | 5.04 | 85 | 233857 | 4.475 | ng | | 99 |
| 4) Chloromethane | 5.37 | 50 | 134987 | 4.261 | ng | | 100 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.63 | 135 | 132486 | 4.364 | ng | | 99 |
| 6) Vinyl Chloride | 5.83 | 62 | 157462 | 4.438 | ng | | 100 |
| 7) 1,3-Butadiene | 6.12 | 54 | 139098 | 5.379 | ng | | 92 |
| 8) Bromomethane | 6.63 | 94 | 101163 | 4.270 | ng | | 100 |
| 9) Chloroethane | 6.98 | 64 | 83513 | 4.613 | ng | | 100 |
| 10) Ethanol | 7.27 | 45 | 325544m | 24.052 | ng | | |
| 11) Acetonitrile | 7.60 | 41 | 163378 | 4.982 | ng | | 99 |
| 12) Acrolein | 7.83 | 56 | 59242 | 4.438 | ng | | 98 |
| 13) Acetone | 8.05 | 58 | 424201 | 24.527 | ng | | 86 |
| 14) Trichlorofluoromethane | 8.35 | 101 | 208576 | 4.386 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.52 | 45 | 355041m | 7.046 | ng | | |
| 16) Acrylonitrile | 8.85 | 53 | 135302 | 5.133 | ng | | 98 |
| 17) 1,1-Dichloroethene | 9.39 | 96 | 114519 | 4.799 | ng | # | 75 |
| 18) 2-Methyl-2-Propanol (t... | 9.49 | 59 | 553169 | 9.301 | ng | | 96 |
| 19) Methylene Chloride | 9.60 | 84 | 115077 | 4.424 | ng | # | 75 |
| 20) 3-Chloro-1-propene (Al... | 9.80 | 41 | 138255 | 5.262 | ng | | 83 |
| 21) Trichlorotrifluoroethane | 10.06 | 151 | 109513 | 4.594 | ng | # | 77 |
| 22) Carbon Disulfide | 10.00 | 76 | 411468 | 4.896 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 11.07 | 61 | 151075 | 4.803 | ng | | 78 |
| 24) 1,1-Dichloroethane | 11.38 | 63 | 193829 | 4.733 | ng | | 99 |
| 25) Methyl tert-Butyl Ether | 11.48 | 73 | 356040 | 4.861 | ng | | 94 |
| 26) Vinyl Acetate | 11.62 | 86 | 112467 | 18.686 | ng | # | 29 |
| 27) 2-Butanone (MEK) | 11.97 | 72 | 82058 | 5.166 | ng | # | 70 |
| 28) cis-1,2-Dichloroethene | 12.65 | 61 | 149585 | 4.901 | ng | | 78 |
| 29) Diisopropyl Ether | 12.99 | 87 | 103120 | 4.740 | ng | # | 40 |
| 30) Ethyl Acetate | 12.99 | 61 | 84832 | 10.055 | ng | | 90 |
| 31) n-Hexane | 13.01 | 57 | 197134 | 4.902 | ng | # | 98 |



DA 5/18/10

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:41 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 13.10 | 83 | 196657 | 4.601 | ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.67 | 72 | 77862 | 5.045 | ng | # | 78 |
| 35) Ethyl tert-Butyl Ether | 13.81 | 87 | 146591 | 4.581 | ng | # | 78 |
| 36) 1,2-Dichloroethane | 14.22 | 62 | 143335 | 4.469 | ng | | 100 |
| 38) 1,1,1-Trichloroethane | 14.63 | 97 | 177081 | 4.496 | ng | | 95 |
| 39) Isopropyl Acetate | 15.16 | 61 | 142790 | 9.915 | ng | # | 92 |
| 40) 1-Butanol | 15.17 | 56 | 224866 | 9.942 | ng | | 89 |
| 41) Benzene | 15.33 | 78 | 475533 | 4.454 | ng | | 98 |
| 42) Carbon Tetrachloride | 15.55 | 117 | 153862 | 4.690 | ng | | 99 |
| 43) Cyclohexane | 15.75 | 84 | 382011 | 9.610 | ng | # | 81 |
| 44) tert-Amyl Methyl Ether | 16.20 | 73 | 336421 | 4.676 | ng | | 92 |
| 45) 1,2-Dichloropropane | 16.53 | 63 | 109268 | 4.701 | ng | | 98 |
| 46) Bromodichloromethane | 16.78 | 83 | 152690 | 4.763 | ng | | 99 |
| 47) Trichloroethene | 16.86 | 130 | 137607 | 4.619 | ng | | 99 |
| 48) 1,4-Dioxane | 16.81 | 88 | 100674 | 4.837 | ng | | 85 |
| 49) 2,2,4-Trimethylpentane... | 16.95 | 57 | 474812 | 4.842 | ng | | 94 |
| 50) Methyl Methacrylate | 17.11 | 100 | 108936 | 9.630 | ng | # | 66 |
| 51) n-Heptane | 17.30 | 71 | 122766 | 4.834 | ng | | 90 |
| 52) cis-1,3-Dichloropropene | 18.04 | 75 | 170694 | 4.492 | ng | | 100 |
| 53) 4-Methyl-2-pentanone | 18.08 | 58 | 108421 | 5.363 | ng | # | 87 |
| 54) trans-1,3-Dichloropropene | 18.74 | 75 | 170864 | 4.966 | ng | | 100 |
| 55) 1,1,2-Trichloroethane | 18.98 | 97 | 115038 | 4.678 | ng | | 92 |
| 58) Toluene | 19.37 | 91 | 518914 | 4.583 | ng | | 99 |
| 59) 2-Hexanone | 19.67 | 43 | 249109 | 5.196 | ng | | 91 |
| 60) Dibromochloromethane | 19.91 | 129 | 136065 | 5.027 | ng | | 98 |
| 61) 1,2-Dibromoethane | 20.24 | 107 | 131119 | 4.565 | ng | | 100 |
| 62) n-Butyl Acetate | 20.48 | 43 | 282275 | 5.159 | ng | | 93 |
| 63) n-Octane | 20.66 | 57 | 99618 | 4.903 | ng | # | 82 |
| 64) Tetrachloroethene | 20.85 | 166 | 146704 | 4.146 | ng | | 99 |
| 65) Chlorobenzene | 21.71 | 112 | 338226 | 4.496 | ng | | 100 |
| 66) Ethylbenzene | 22.19 | 91 | 569777 | 4.591 | ng | | 96 |
| 67) m- & p-Xylenes | 22.42 | 91 | 879754 | 8.972 | ng | | 93 |
| 68) Bromoform | 22.51 | 173 | 114044 | 4.486 | ng | | 100 |
| 69) Styrene | 22.87 | 104 | 361610 | 4.687 | ng | | 93 |
| 70) o-Xylene | 23.01 | 91 | 451119 | 4.513 | ng | | 93 |
| 71) n-Nonane | 23.27 | 43 | 210007 | 4.816 | ng | | 86 |
| 72) 1,1,2,2-Tetrachloroethane | 22.98 | 83 | 191824 | 4.556 | ng | | 99 |
| 74) Cumene | 23.75 | 105 | 596183 | 4.364 | ng | | 96 |
| 75) alpha-Pinene | 24.24 | 93 | 281749 | 4.445 | ng | | 93 |
| 76) n-Propylbenzene | 24.38 | 91 | 713676 | 4.504 | ng | | 94 |
| 77) 3-Ethyltoluene | 24.50 | 105 | 599139 | 4.789 | ng | | 96 |
| 78) 4-Ethyltoluene | 24.55 | 105 | 582273 | 4.619 | ng | | 95 |
| 79) 1,3,5-Trimethylbenzene | 24.64 | 105 | 480683 | 4.673 | ng | | 92 |

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:41 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration

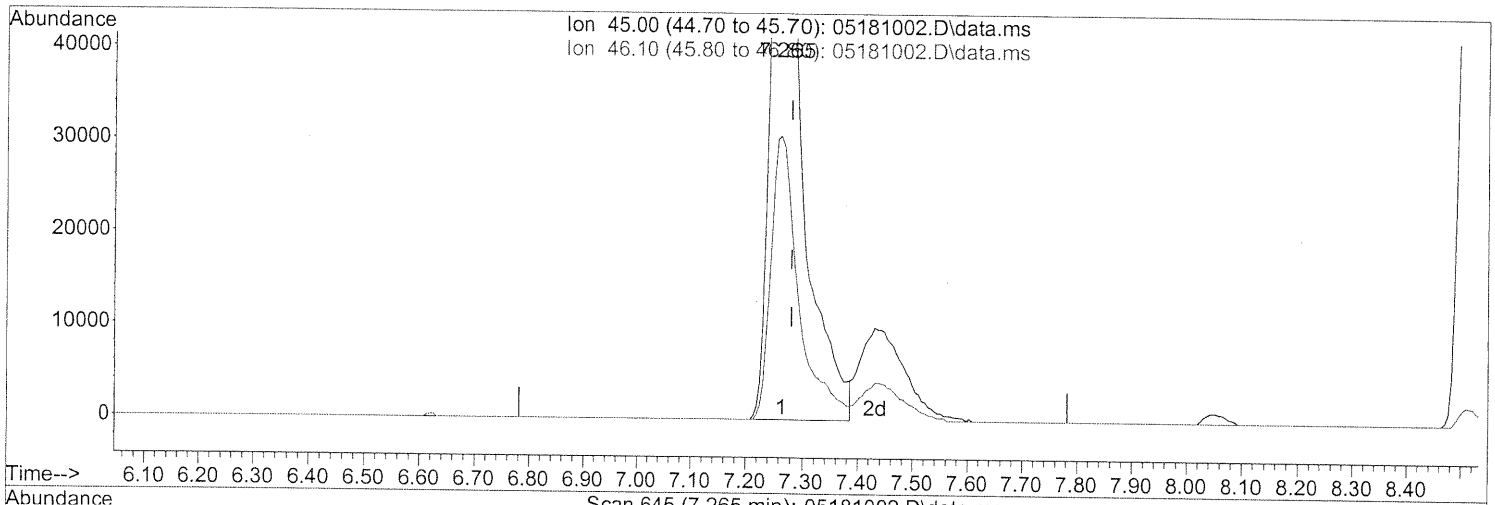
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.83 | 118 | 269583 | 4.729 ng | | 96 |
| 81) 2-Ethyltoluene | 24.88 | 105 | 586704 | 4.519 ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 25.15 | 105 | 486207 | 4.571 ng | | 91 |
| 83) n-Decane | 25.25 | 57 | 237054 | 4.890 ng | | 90 |
| 84) Benzyl Chloride | 25.31 | 91 | 360876 | 4.521 ng | | 92 |
| 85) 1,3-Dichlorobenzene | 25.34 | 146 | 294377 | 4.538 ng | | 99 |
| 86) 1,4-Dichlorobenzene | 25.42 | 146 | 297844 | 4.428 ng | | 99 |
| 87) sec-Butylbenzene | 25.48 | 105 | 662320 | 4.587 ng | | 95 |
| 88) 4-Isopropyltoluene (p-... | 25.66 | 119 | 625845 | 4.556 ng | | 93 |
| 89) 1,2,3-Trimethylbenzene | 25.66 | 105 | 499193 | 4.657 ng | | 90 |
| 90) 1,2-Dichlorobenzene | 25.84 | 146 | 278033 | 4.501 ng | | 100 |
| 91) d-Limonene | 25.84 | 68 | 182834 | 4.950 ng | | 84 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.36 | 157 | 92075 | 4.634 ng | # | 62 |
| 93) n-Undecane | 26.76 | 57 | 242763 | 5.057 ng | | 90 |
| 94) 1,2,4-Trichlorobenzene | 27.90 | 180 | 209216 | 4.789 ng | | 99 |
| 95) Naphthalene | 28.05 | 128 | 632660 | 4.683 ng | | 99 |
| 96) n-Dodecane | 28.01 | 57 | 235164 | 4.725 ng | | 90 |
| 97) Hexachlorobutadiene | 28.48 | 225 | 128587 | 4.563 ng | | 99 |
| 98) Cyclohexanone | 22.60 | 55 | 146385 | 4.507 ng | # | 88 |
| 99) tert-Butylbenzene | 25.15 | 119 | 503221 | 4.574 ng | | 95 |
| 100) n-Butylbenzene | 26.16 | 91 | 526072 | 4.802 ng | # | 96 |

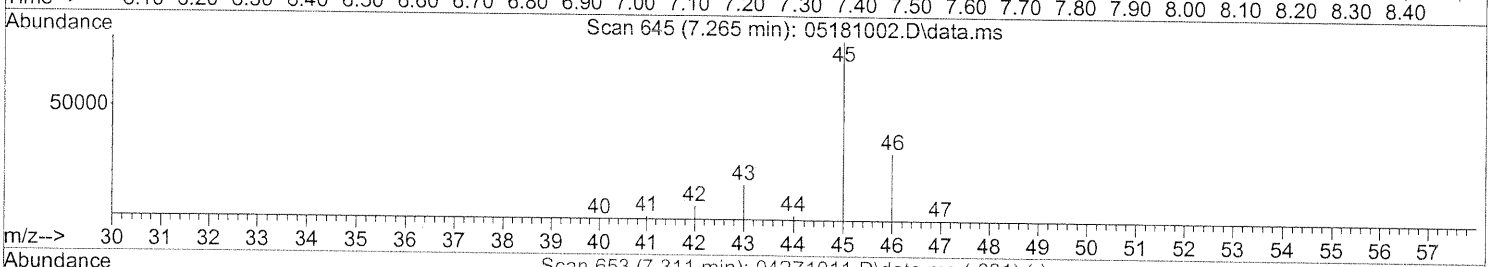
(#) = qualifier out of range (m) = manual integration (+) = signals summed

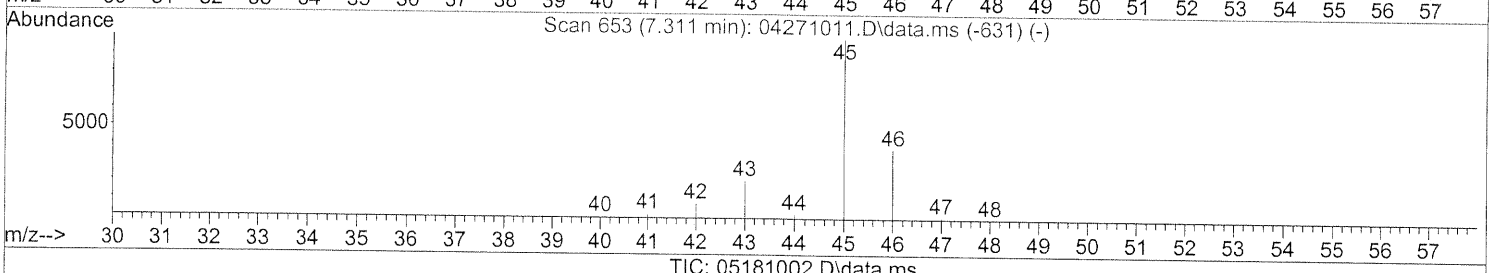
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:09 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181002.D\data.ms

(10) Ethanol (T)

7.265min (-0.017) 19.84ng

response 268589

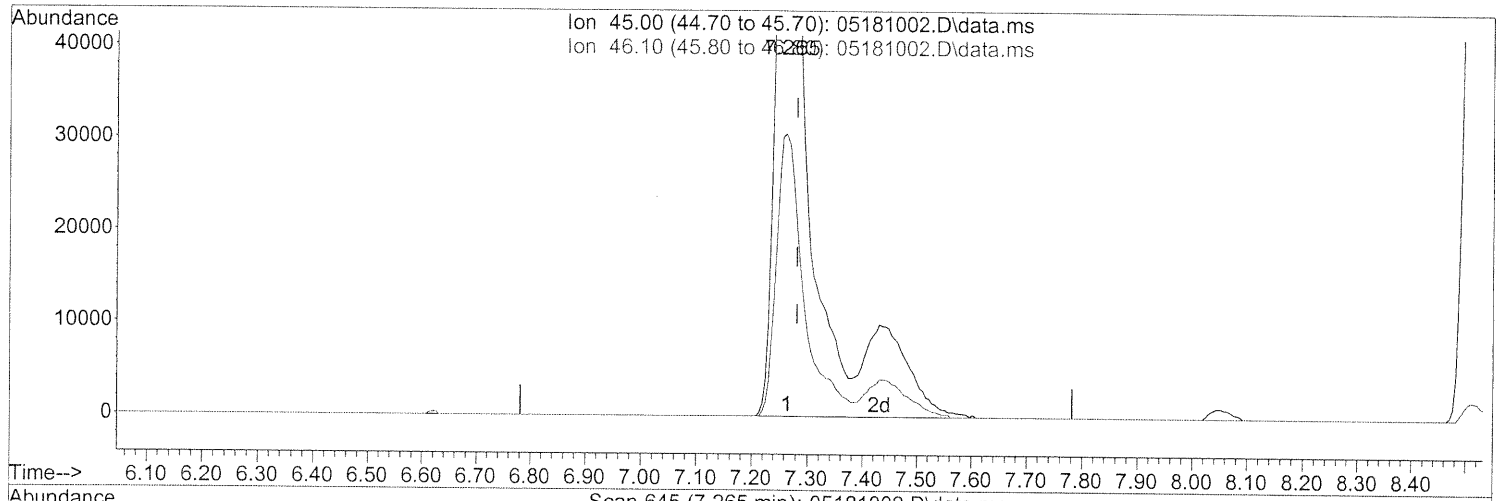
| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.26 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

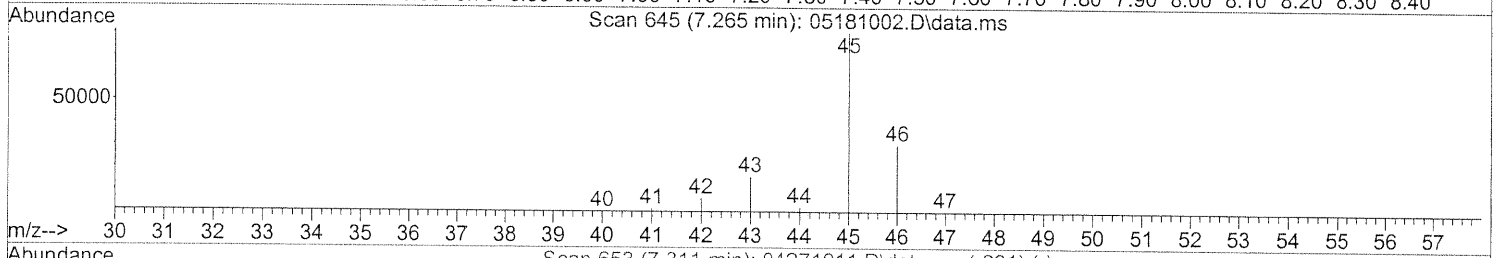
SP

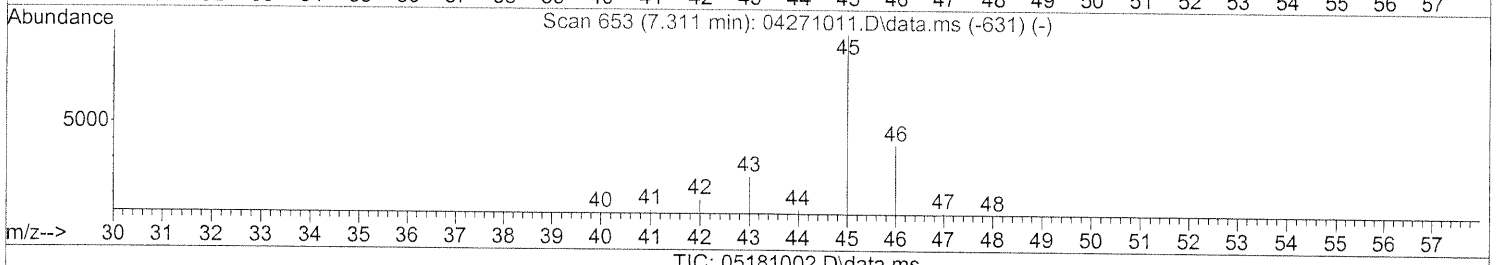
Quantitation Report (Qedit)

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:09 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181002.D\data.ms

(10) Ethanol (T)

7.265min (-0.017) 24.05ng m

response 325544

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 31.56 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

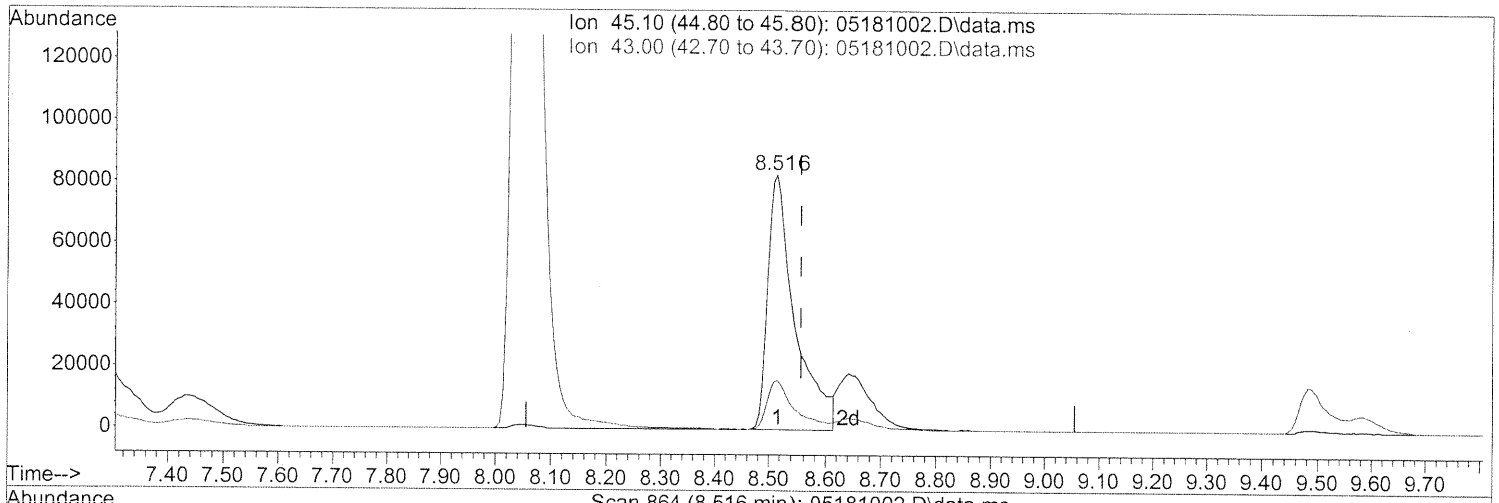
SP → IC

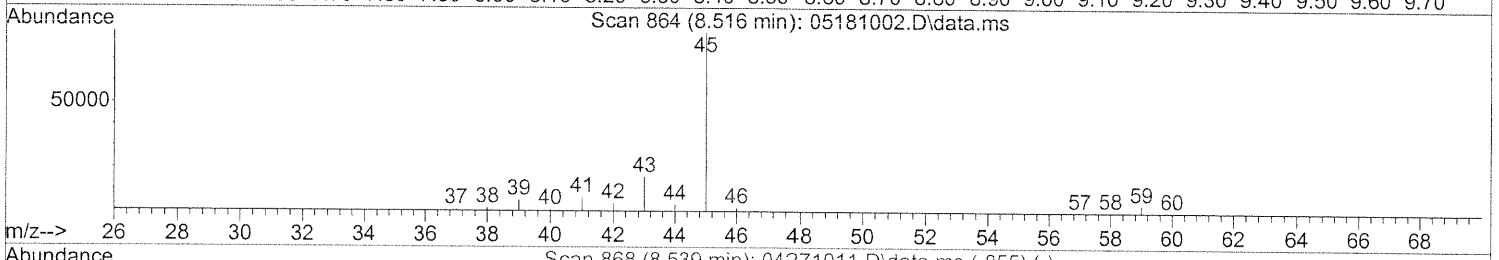
LDA 5/18/10

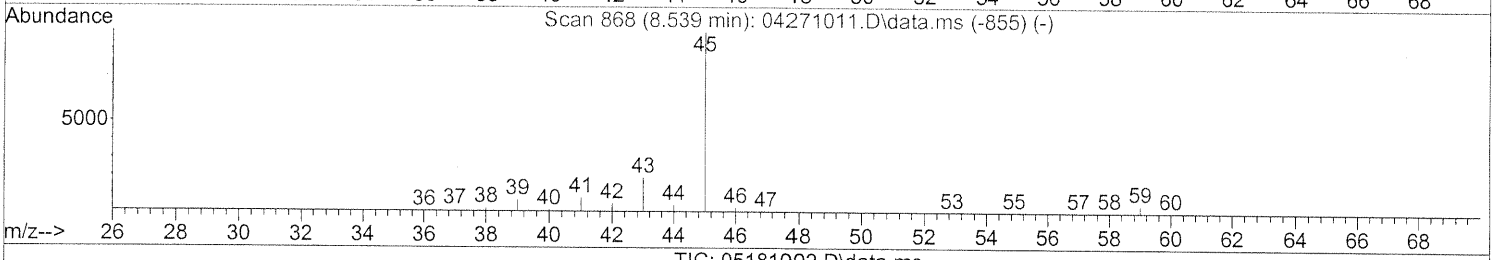
CC
5-15-10

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:09 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181002.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.516min (-0.040) 5.51ng

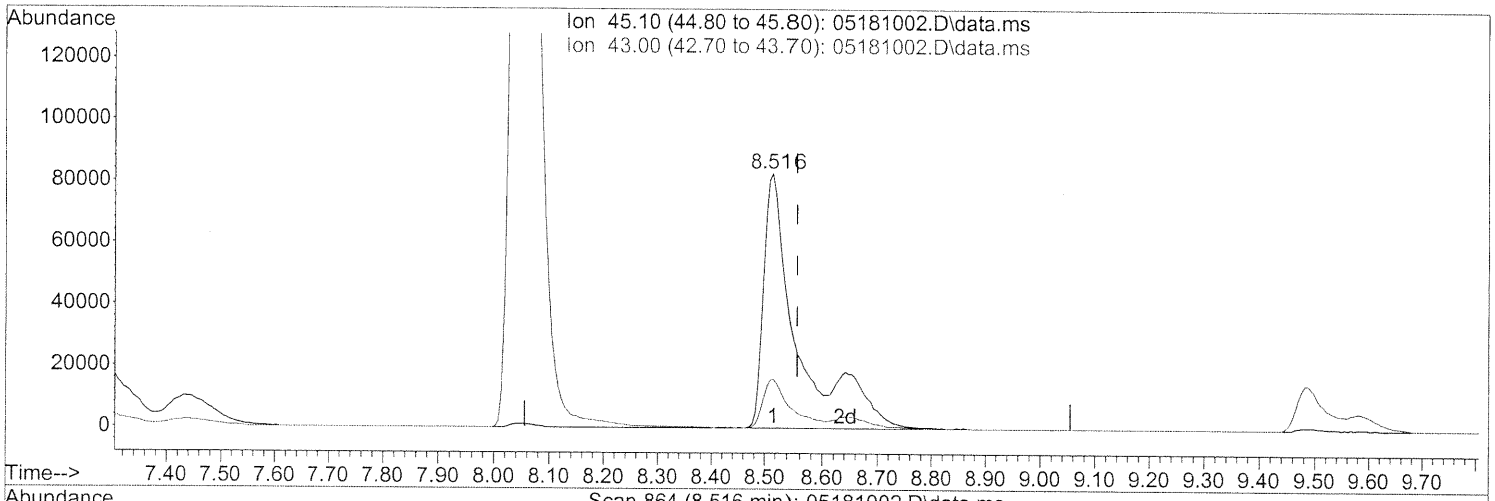
response 277698

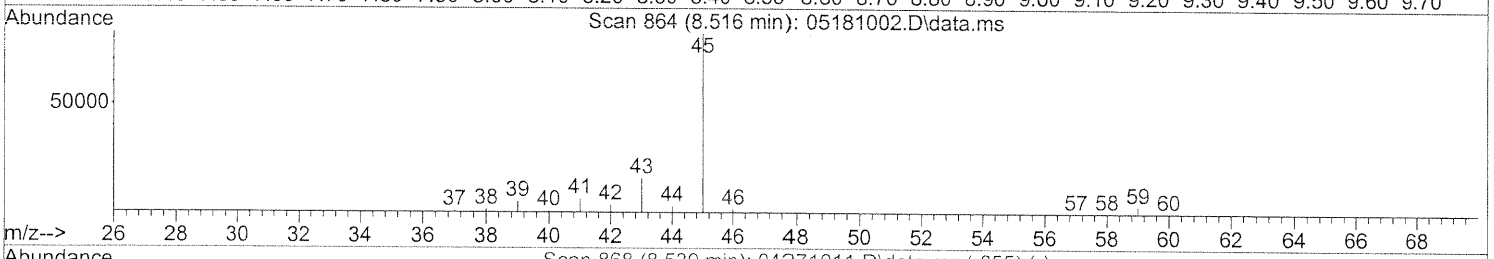
| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 19.86 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

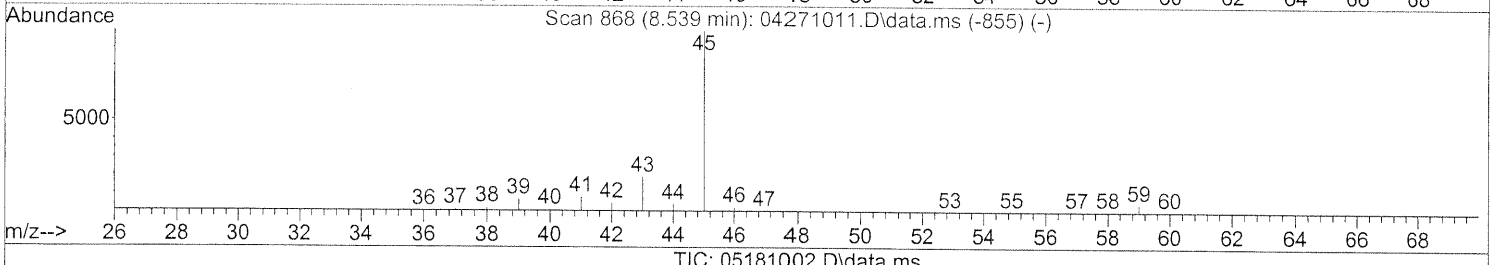
SP

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 18 10:29:09 2010
Quant Method : J:\MS09\Methods\R9042710.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Wed Apr 28 14:31:40 2010
Response via : Initial Calibration




TIC: 05181002.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.516min (-0.040) 7.05ng m

response 355041

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.20 | 15.53 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP—7 IC

DA 5/18/10

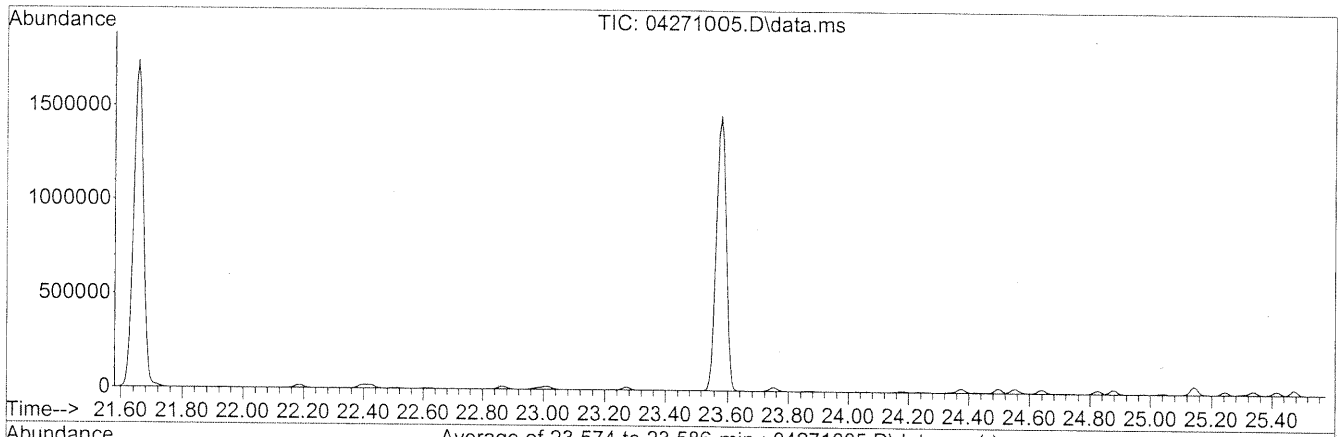
CC 5-18-10

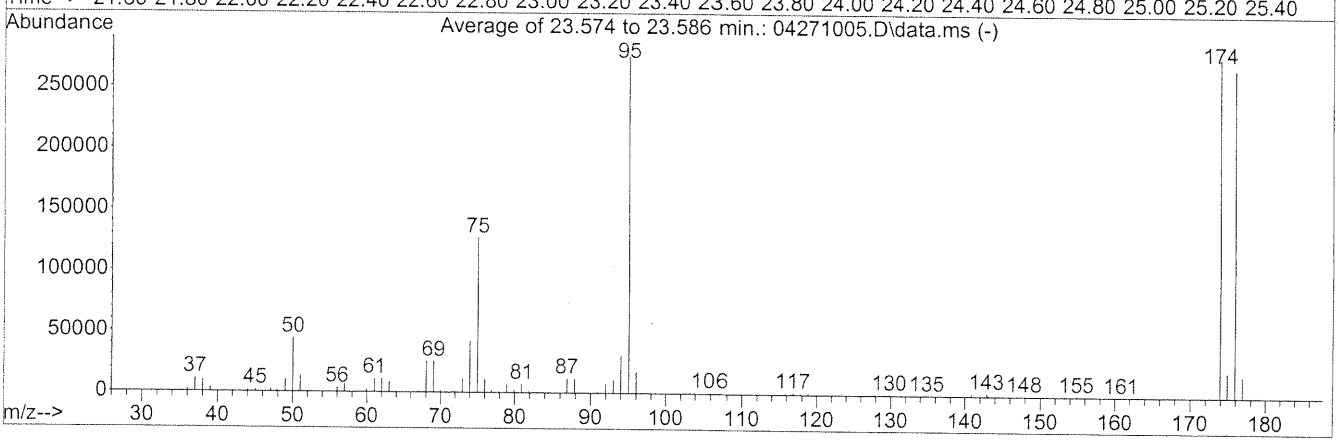
# BFB TUNING & MASS CALIBRATIONS

Data Path : J:\MS09\Data\2010_04\27\
Data File : 04271005.D
Acq On : 27 Apr 2010 17:40
Operator : WA
Sample : 25ng TO-15 BFB STD
Misc : S20-04261002
ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS09\Methods\R9042710.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 14:31:40 2010



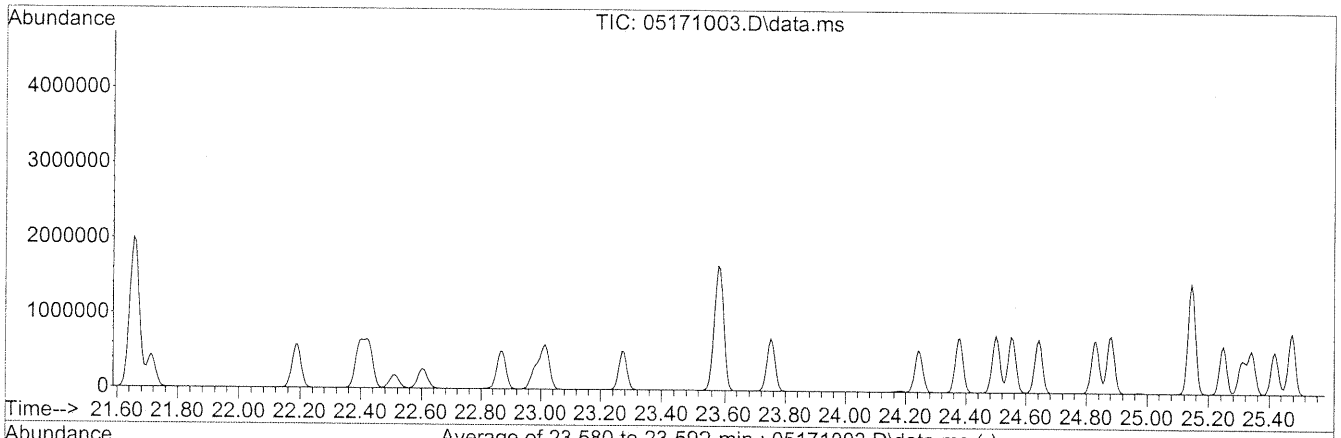

AutoFind: Scans 3500, 3501, 3502; Background Corrected with Scan 3490

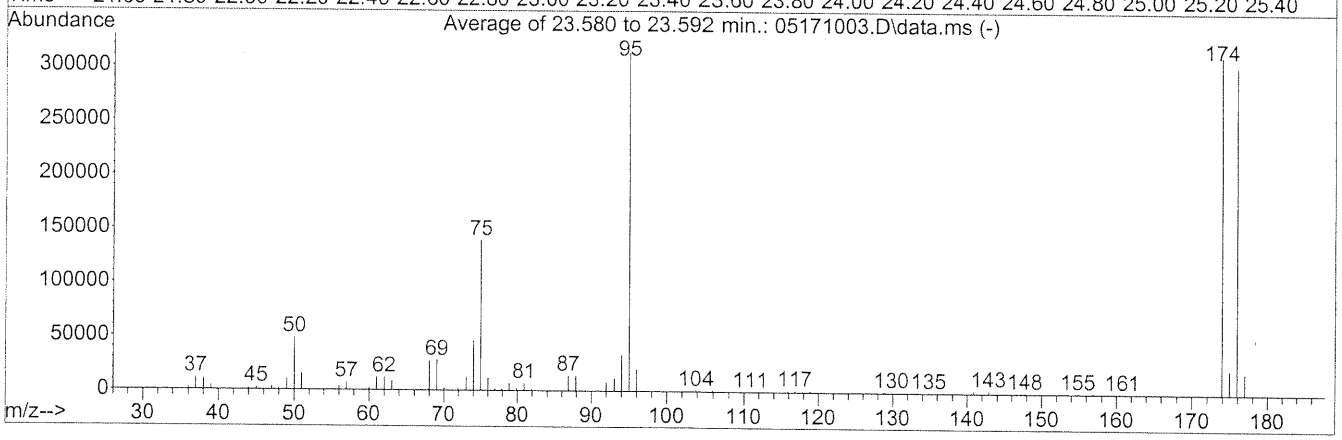
| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 16.0 | 44192 | PASS |
| 75 | 95 | 30 | 66 | 46.0 | 126891 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 275776 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 17932 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 100.4 | 276800 | PASS |
| 175 | 174 | 4 | 9 | 7.3 | 20304 | PASS |
| 176 | 174 | 93 | 101 | 96.8 | 267861 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 17173 | PASS |

Data Path : J:\MS09\Data\2010_05\17\
Data File : 05171003.D
Acq On : 17 May 2010 7:27
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS09\Methods\R9042710.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 14:31:40 2010




AutoFind: Scans 3501, 3502, 3503; Background Corrected with Scan 3490

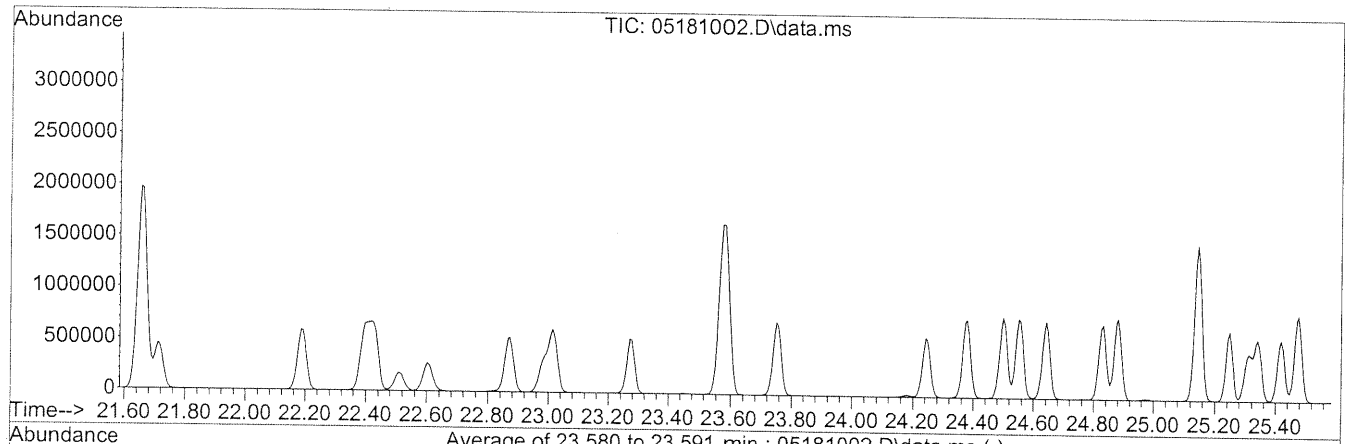
| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 15.4 | 48269 | PASS |
| 75 | 95 | 30 | 66 | 44.5 | 139264 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 312704 | PASS |
| 96 | 95 | 5 | 9 | 6.3 | 19835 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 99.7 | 311659 | PASS |
| 175 | 174 | 4 | 9 | 7.1 | 22224 | PASS |
| 176 | 174 | 93 | 101 | 97.0 | 302443 | PASS |
| 177 | 176 | 5 | 9 | 6.5 | 19531 | PASS |

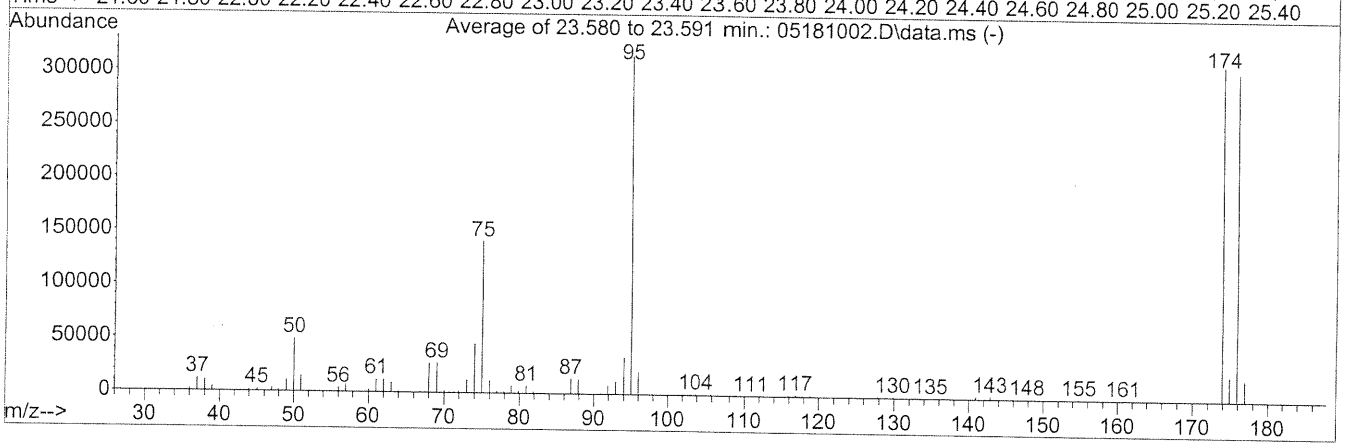
LM 5/18/10

Data Path : J:\MS09\Data\2010_05\18\
Data File : 05181002.D
Acq On : 18 May 2010 8:16
Operator : LM
Sample : 5.0ng TO-15 CCV STD
Misc : S20-04261002/S20-04301002
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS09\Methods\R9042710.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Wed Apr 28 14:31:40 2010




AutoFind: Scans 3501, 3502, 3503; Background Corrected with Scan 3490

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 15.6 | 49267 | PASS |
| 75 | 95 | 30 | 66 | 44.7 | 141051 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 315328 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 20464 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 99.1 | 312384 | PASS |
| 175 | 174 | 4 | 9 | 7.3 | 22661 | PASS |
| 176 | 174 | 93 | 101 | 97.7 | 305280 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 19459 | PASS |

RUN LOGS

ASH 4/28/10

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment |
|---|---|---|---|---|---|---|---|
| 1 | 04/27/10 14:49 | 04271001.D | TO-15 STD Check (2.5) | S20-04261002/S20-04191001 | WA | 1 | |
| 2 | 04/27/10 15:30 | 04271002.D | TO-15 STD Check (0.1) | S20-04261002/S20-04261003 | WA | 13 | |
| 3 | 04/27/10 16:17 | 04271003.D | 25ng TO-15 BFB STD | S20-04261002 | WA | 4 | |
| 4 | 04/27/10 16:58 | 04271004.D | 0.1ng TO-15 ICAL STD | S20-04261002/S20-04191001 | WA | 13 | |
| 5 | 04/27/10 17:40 | 04271005.D | 25ng TO-15 BFB STD | S20-04261002 | WA | 4 | *Pass* |
| 6 | 04/27/10 18:22 | 04271006.D | 0.1ng TO-15 ICAL STD | S20-04261002/S20-04191001 | WA | 13 | |
| 7 | 04/27/10 19:03 | 04271007.D | 0.2ng TO-15 ICAL STD | S20-04261002/S20-04191001 | WA | 13 | |
| 8 | 04/27/10 19:45 | 04271008.D | 0.5ng TO-15 ICAL STD | S20-04261002/S20-04261003 | WA | 1 | |
| 9 | 04/27/10 20:27 | 04271009.D | 1.0ng TO-15 ICAL STD | S20-04261002/S20-04261003 | WA | 1 | |
| 10 | 04/27/10 21:09 | 04271010.D | 5.0ng TO-15 ICAL STD | S20-04261002/S20-04261003 | WA | 1 | |
| 11 | 04/27/10 21:51 | 04271011.D | 25ng TO-15 ICAL STD | S20-04261002/S20-04191004 | WA | 1 | |
| 12 | 04/27/10 22:33 | 04271012.D | 50ng TO-15 ICAL STD | S20-04261002/S20-04191004 | WA | 1 | |
| 13 | 04/27/10 23:15 | 04271013.D | 100ng TO-15 ICAL STD | S20-04261002/S20-04191004 | WA | 1 | |
| | *ICALsaved as R9042710.M; good from 0.1ng ---> 100ng; except: tert-Butanol: 0.2ng ---> 100ng* | | | | | | |
| 14 | 04/27/10 23:57 | 04271014.D | 25ng TO-15 ICV STD | S20-04261002/S20-04231001 | WA | 3 | *Pass all cmpds* |

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment | |
|---|---|---|---|---|---|---|---|---|
| 20 | 05/14/10 22:18 | 05141020.D | blank (100ml) | system check | LM | 1 | | |
| 21 | 05/14/10 23:00 | 05141021.D | P1001634-001 (1000ml) | | LM | 14 | | |
| 22 | 05/14/10 23:42 | 05141022.D | P1001634-002 (1000ml) | | LM | 15 | | |
| 23 | 05/15/10 0:24 | 05141023.D | P1001643-002 dup (1000ml) | | LM | 15 | *case file* | |
| 24 | 05/15/10 1:06 | 05141024.D | CAS CAN QC C2S 4994/4974S | SC00618 150#16 | LM | 9 | | |
| 25 | 05/15/10 1:48 | 05141025.D | CAS CAN QC C2S 4994/4974S | SC00211 150#16 | LM | 11 | | |
| 26 | 05/15/10 2:30 | 05141026.D | CAS CAN QC C2S 4994/4974S | SC00526 150#16 | LM | 12 | | |
| 27 | 05/15/10 3:12 | 05141027.D | CAS CAN QC C2S 4994/4974S | SC01020 150#16 | LM | 13 | | |
| 28 | 05/15/10 3:54 | 05141028.D | CAS CAN QC | AC01087/FC00287/AVG01321 | LM | 5 | | |
| 29 | 05/15/10 4:36 | 05141029.D | CAS CAN QC | AC01427/FC00573/AVG01286 | LM | 6 | | |
| 30 | 05/15/10 5:18 | 05141030.D | CAS CAN QC | AC01641/FC00540/AVG00850 | LM | 7 | | |
| 31 | 05/15/10 5:59 | 05141031.D | CAS CAN QC | AC01020/FC00498/AVG01238 | LM | 8 | | DM 5/18/10 |

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment | |
|---|---|---|---|---|---|---|---|---|
| 1 | 05/17/10 5:51 | 05171001.D | Blank | S20-04261002/S20-04191004 | LM | 1 | | |
| 2 | 05/17/10 6:33 | 05171002.D | 5.0ng TO-15 Custom STD | S20-04261002/S20-04211005 | LM | 2 | *Passed* | |
| 3 | 05/17/10 7:27 | 05171003.D | 5.0ng TO-15 CCV STD | S20-04261002/S20-04301002 | LM | 1 | *Passed* | |
| 4 | 05/17/10 11:10 | 05171004.D | Method Blank (1000ml) | S20-04261002 | LM | 1 | *Passed* | |
| 5 | 05/17/10 11:57 | 05171005.D | 25ng TO-15 LCS STD | S20-04261002/S20-04231004 | LM | 3 | *case file* | |
| 6 | 05/17/10 13:13 | 05171006.D | P1001525-002 (100ml) | [redacted] | LM | 5 | ↓ | |
| 7 | 05/17/10 13:55 | 05171007.D | P1001525-001 (100ml) | [redacted] | LM | 6 | ↓ | |
| 8 | 05/17/10 15:39 | 05171008.D | P1001650-001 (1000ml) | | LM | 9 | | |
| 9 | 05/17/10 16:20 | 05171009.D | P1001627-019 dil (100ml) | [redacted] | LM | 1 | case file | |
| 10 | 05/17/10 17:02 | 05171010.D | P1001627-019 dil (10ml) | | LM | 1 | ↓ | |
| 11 | 05/17/10 18:18 | 05171011.D | P1001650-002 (1000ml) | | LM | 10 | | |
| 12 | 05/17/10 19:00 | 05171012.D | P1001650-002 dup (1000ml) | | LM | 10 | Pass | |
| 13 | 05/17/10 19:42 | 05171013.D | P1001650-002 dil (100ml) | | LM | 10 | | |
| 14 | 05/17/10 20:24 | 05171014.D | P1001650-002 dupdil (100ml) | | LM | 10 | | |
| 15 | 05/17/10 21:06 | 05171015.D | P1001650-003 (1000ml) | | LM | 11 | | |
| 16 | 05/17/10 21:48 | 05171016.D | P1001650-003 dil (100ml) | | LM | 11 | | |
| 17 | 05/17/10 22:30 | 05171017.D | P1001650-004 (1000ml) | | LM | 12 | | |
| 18 | 05/17/10 23:11 | 05171018.D | P1001650-004 dil (100ml) | | LM | 12 | case file | |
| 19 | 05/17/10 23:53 | 05171019.D | P1001679-001 (1000ml) | | LM | 13 | | |
| 20 | 05/18/10 0:35 | 05171020.D | P1001679-001 dil (100ml) | | LM | 13 | | |
| 21 | 05/18/10 1:17 | 05171021.D | P1001627-019 dil (15ml) | | LM | 16 | | |
| 22 | 05/18/10 1:59 | 05171022.D | Blank(200ml) | | LM | 1 | | |
| 23 | 05/18/10 2:41 | 05171023.D | 25ng TO-15 LCS STD | S20-04261002/S20-04231004 | LM | 3 | *Passed* | |
| 24 | 05/18/10 3:23 | 05171024.D | P1001521-003 (100ml) | Blank Pos 3 | LM | 5 | | |
| 25 | 05/18/10 4:06 | 05171025.D | P1001521-004 (100ml) | Blank Pos 4 | LM | 6 | | |
| 26 | 05/18/10 4:48 | 05171026.D | P1001521-002 (100ml) | | LM | 8 | | |
| 27 | 05/18/10 5:29 | 05171027.D | P1001521-001 (25ml) | | LM | 7 | | |
| 28 | 05/18/10 6:11 | 05171028.D | Blank | | LM | 1 | | |
| 29 | 05/18/10 6:53 | 05171029.D | 25ng TO-15 LCSD STD | S20-04261002/S20-04231004 | LM | 3 | *Passed* | DM 5/18/10 |

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment |
|---|---|---|---|---|---|---|---|
| 1 | 05/18/10 7:35 | 05181001.D | 2.5ng TO-15 ACF STD | S20-04261002/S20-04211005 | LM | 2 | *Passed* |
| 2 | 05/18/10 8:16 | 05181002.D | 5.0ng TO-15 CCV STD | S20-04261002/S20-04301002 | LM | 1 | *Passed* |
| 3 | 05/18/10 9:10 | 05181003.D | TO-15 Method Blank (1000mL) | S20-04261002 | LM | 4 | *Passed* |
| 4 | 05/18/10 9:51 | 05181004.D | P1001521-001 dIL (15ml) | | WA | 7 | |
| 5 | 05/18/10 10:33 | 05181005.D | P1001605-001 dIL (100ml) | | WA | 9 | |
| 6 | 05/18/10 11:15 | 05181006.D | 25ng TO-15 LCS STD | S20-04261002/S20-04231004 | WA | 3 | *Passed* |
| 7 | 05/18/10 11:56 | 05181007.D | P1001634-001 Dil (200mL) | | WA | 14 | |
| 8 | 05/18/10 12:38 | 05181008.D | P1001634-002 Dil (200mL) | | WA | 15 | |
| 9 | 05/18/10 14:26 | 05181009.D | P1001634-003 (1000mL) | | WA | 14 | |
| 10 | 05/18/10 15:07 | 05181010.D | P1001634-003 Dil (100mL) | | WA | 14 | |
| 11 | 05/18/10 15:49 | 05181011.D | P1001703-001 (1000mL) | | WA | 5 | |
| 12 | 05/18/10 16:31 | 05181012.D | P1001703-002 (1000mL) | | WA | 6 | |
| 13 | 05/18/10 17:13 | 05181013.D | P1001703-002 Dup(1000mL) | | WA | 6 | *Passed* |
| 14 | 05/18/10 17:54 | 05181014.D | P1001703-003 (1000mL) | | WA | 7 | |
| 15 | 05/18/10 18:36 | 05181015.D | P1001703-004 (1000mL) | | WA | 8 | |
| 16 | 05/18/10 19:18 | 05181016.D | P1001703-005 (1000mL) | | WA | 9 | |
| 17 | 05/18/10 20:00 | 05181017.D | P1001703-006 (1000mL) | | WA | 10 | |
| 18 | 05/18/10 20:41 | 05181018.D | P1001703-007 (1000mL) | | WA | 11 | |
| 19 | 05/18/10 21:23 | 05181019.D | P1001703-008 (1000mL) | | WA | 12 | |
| 20 | 05/18/10 22:05 | 05181020.D | P1001703-009 (1000mL) | | WA | 13 | |
| 21 | 05/18/10 22:47 | 05181021.D | Blank | | WA | 1 | |
| 22 | 05/18/10 23:29 | 05181022.D | P1001643-001 (100mL) | | WA | 15 | |
| 23 | 05/19/10 0:11 | 05181023.D | P1001643-002 (100mL) | | WA | 16 | |
| 24 | 05/19/10 0:53 | 05181024.D | Blank | | WA | 1 | |

5/19/10