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

# LABORATORY REPORT

September 3, 2009

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

**RE: 16512**

Dear Brian:

Enclosed are the results of the samples submitted to our laboratory on August 12, 2009. For your reference, these analyses have been assigned our service request number P0902766.

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 302 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; Department of the Navy (NFESC); Pennsylvania Registration No. 68-03307; TX Commission of Environmental Quality, NELAP ID T104704413-08-TX. 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

Client: Environmental Health & Engineering, Incorporated CAS Project No: P0902766
Project: 16512

## CASE NARRATIVE

The samples were received intact under chain of custody on August 12, 2009 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 Relative Percent Difference (RPD) criterion was exceeded for the replicate analysis of 2-Hexanone in sample 101160. However, analyte concentrations close to the Method Reporting Limit (MRL) may not be subject to the same precision criteria as results derived from measurements higher in the calibration range for the method. The magnitude of error may increase as the concentrations get closer to the reporting limit; therefore, the reported precision may be unrealistically large.

*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:** P0902766

**Project:** 16512

## 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 | Bottle Order # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P0902766-001.01 | 101160 | 6.0 L-Summa Canister Ambient | -3.9 | -1.9 | 3.5 | | | | AC01202 | **14190** | | |
| P0902766-002.01 | 101161 | 6.0 L-Summa Canister Ambient | -1.2 | -0.6 | 3.5 | | | | AC00989 | **14190** | | |
| P0902766-003.01 | 101162 | 6.0 L-Summa Canister Ambient | -7.9 | -3.9 | 3.5 | | | | AC00977 | **14190** | | |
| P0902766-004.01 | 101163 | 6.0 L-Summa Canister Ambient | -2.5 | -1.2 | 3.6 | | | | AC00631 | **14190** | | |

Miscellaneous Items - received

AVG00698
AVG01146
AVG01140
FC00018
FC00204
AVG00761
FC00269
FC00656

**Environmental Health & Engineering, Inc.**

# CHAIN OF CUSTODY FORM

DATE: 11 Aug 09

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725 P0902766

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 # 16512

The cost of this analysis will be covered by EH&E Purchase Order # 16512

For EH & E Data Coordinator - URGENT DATA ☒

| SAMPLE ID | SAMPLE TYPE | ANALYTICAL METHOD/NUMBER | OTHER: Time/Date/Vol. |
|---|---|---|---|
| 101160 | Summa | EPA-TO15 Low Level Analysis | 120 min |
| 101161 | ↓ | List of 75 | ↓ |
| 101162 | | ↓ | |
| 101163 | | | |

**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 mfragala@eheinc.com

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

Relinquished by: _____ of Environmental Health & Engineering, Inc. Date: 8/11/09

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

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

Received by: _____ of (company name) CAS Date: 08/12/09 0930

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

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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, Incorporated  Work order: P0902766

Project: Project # 16512 / 16512

Sample(s) received on: 8/12/2009  Date opened: 8/12/2009  by: ADAVID

*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 |
|---|---|---|---|---|---|---|
| P0902766-001.01 | 6.0 L Ambient Can | | | | | |
| P0902766-002.01 | 6.0 L Ambient Can | | | | | |
| P0902766-003.01 | 6.0 L Ambient Can | | | | | |
| P0902766-004.01 | 6.0 L Ambient Can | | | | | |
| | | | | | | |
| | | | | | | |

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

Missing 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:** **101160**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01202

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/18/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.9 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.42

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | ND | 0.71 | ND | 0.41 | |
| 75-71-8 | **Dichlorodifluoromethane (CFC 12)** | **3.2** | 0.71 | **0.64** | 0.14 | |
| 74-87-3 | **Chloromethane** | **1.1** | 0.14 | **0.53** | 0.069 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.71 | ND | 0.10 | |
| 75-01-4 | Vinyl Chloride | ND | 0.14 | ND | 0.056 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.14 | ND | 0.064 | |
| 74-83-9 | Bromomethane | ND | 0.14 | ND | 0.037 | |
| 75-00-3 | Chloroethane | ND | 0.14 | ND | 0.054 | |
| 64-17-5 | **Ethanol** | **430** | 7.1 | **230** | 3.8 | |
| 75-05-8 | **Acetonitrile** | **120** | 0.71 | **71** | 0.42 | |
| 107-02-8 | **Acrolein** | **7.0** | 0.71 | **3.1** | 0.31 | |
| 67-64-1 | **Acetone** | **75** | 7.1 | **32** | 3.0 | |
| 75-69-4 | **Trichlorofluoromethane** | **1.6** | 0.14 | **0.28** | 0.025 | |
| 67-63-0 | **2-Propanol (Isopropyl Alcohol)** | **13** | 0.71 | **5.1** | 0.29 | |
| 107-13-1 | Acrylonitrile | ND | 0.71 | ND | 0.33 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.14 | ND | 0.036 | |
| 75-09-2 | **Methylene Chloride** | **0.79** | 0.71 | **0.23** | 0.20 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.14 | ND | 0.045 | |
| 76-13-1 | **Trichlorotrifluoroethane** | **0.79** | 0.14 | **0.10** | 0.019 | |
| 75-15-0 | **Carbon Disulfide** | **2.0** | 0.71 | **0.65** | 0.23 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.14 | ND | 0.036 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.14 | ND | 0.035 | |
| 1634-04-4 | **Methyl tert-Butyl Ether** | **1.2** | 0.14 | **0.35** | 0.039 | |
| 108-05-4 | Vinyl Acetate | ND | 7.1 | ND | 2.0 | |
| 78-93-3 | **2-Butanone (MEK)** | **6.7** | 0.71 | **2.3** | 0.24 | |

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: _____ Date: 8/25/09

## COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101160**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01202

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/18/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.9 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.42

| 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** | **2.4** | 0.71 | **0.67** | 0.20 | |
| 110-54-3 | **n-Hexane** | **2.2** | 0.71 | **0.64** | 0.20 | |
| 67-66-3 | **Chloroform** | **0.86** | 0.14 | **0.18** | 0.029 | |
| 109-99-9 | **Tetrahydrofuran (THF)** | **3.4** | 0.71 | **1.1** | 0.24 | |
| 107-06-2 | **1,2-Dichloroethane** | **0.86** | 0.14 | **0.21** | 0.035 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.14 | ND | 0.026 | |
| 71-43-2 | **Benzene** | **2.4** | 0.14 | **0.75** | 0.044 | |
| 56-23-5 | **Carbon Tetrachloride** | **0.70** | 0.14 | **0.11** | 0.023 | |
| 110-82-7 | **Cyclohexane** | **1.7** | 0.71 | **0.48** | 0.21 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.14 | ND | 0.031 | |
| 75-27-4 | Bromodichloromethane | ND | 0.14 | ND | 0.021 | |
| 79-01-6 | Trichloroethene | ND | 0.14 | ND | 0.026 | |
| 123-91-1 | 1,4-Dioxane | ND | 0.71 | ND | 0.20 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.71 | ND | 0.17 | |
| 142-82-5 | **n-Heptane** | **2.4** | 0.71 | **0.59** | 0.17 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.71 | ND | 0.16 | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.71 | ND | 0.17 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.71 | ND | 0.16 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.14 | ND | 0.026 | |
| 108-88-3 | **Toluene** | **13** | 0.71 | **3.4** | 0.19 | |
| 591-78-6 | **2-Hexanone** | **1.0** | 0.71 | **0.25** | 0.17 | |
| 124-48-1 | **Dibromochloromethane** | **0.17** | 0.14 | **0.020** | 0.017 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.14 | ND | 0.018 | |
| 123-86-4 | **n-Butyl Acetate** | **3.1** | 0.71 | **0.66** | 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: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101160**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-001

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01202

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/18/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.9 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.42

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | **n-Octane** | **1.9** | 0.71 | **0.40** | 0.15 | |
| 127-18-4 | **Tetrachloroethene** | **0.68** | 0.14 | **0.10** | 0.021 | |
| 108-90-7 | Chlorobenzene | ND | 0.14 | ND | 0.031 | |
| 100-41-4 | **Ethylbenzene** | **5.7** | 0.71 | **1.3** | 0.16 | |
| 179601-23-1 | **m,p-Xylenes** | **16** | 0.71 | **3.6** | 0.16 | |
| 75-25-2 | Bromoform | ND | 0.71 | ND | 0.069 | |
| 100-42-5 | **Styrene** | **2.5** | 0.71 | **0.58** | 0.17 | |
| 95-47-6 | **o-Xylene** | **5.6** | 0.71 | **1.3** | 0.16 | |
| 111-84-2 | **n-Nonane** | **8.8** | 0.71 | **1.7** | 0.14 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.14 | ND | 0.021 | |
| 98-82-8 | Cumene | ND | 0.71 | ND | 0.14 | |
| 80-56-8 | **alpha-Pinene** | **38** | 0.71 | **6.8** | 0.13 | |
| 103-65-1 | **n-Propylbenzene** | **1.0** | 0.71 | **0.21** | 0.14 | |
| 622-96-8 | **4-Ethyltoluene** | **1.4** | 0.71 | **0.29** | 0.14 | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **1.9** | 0.71 | **0.38** | 0.14 | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **5.3** | 0.71 | **1.1** | 0.14 | |
| 100-44-7 | Benzyl Chloride | ND | 0.14 | ND | 0.027 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.14 | ND | 0.024 | |
| 106-46-7 | **1,4-Dichlorobenzene** | **0.31** | 0.14 | **0.051** | 0.024 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.14 | ND | 0.024 | |
| 5989-27-5 | **d-Limonene** | **17** | 0.71 | **3.0** | 0.13 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.71 | ND | 0.073 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.71 | ND | 0.096 | |
| 91-20-3 | **Naphthalene** | **0.97** | 0.71 | **0.19** | 0.14 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.71 | ND | 0.067 | |

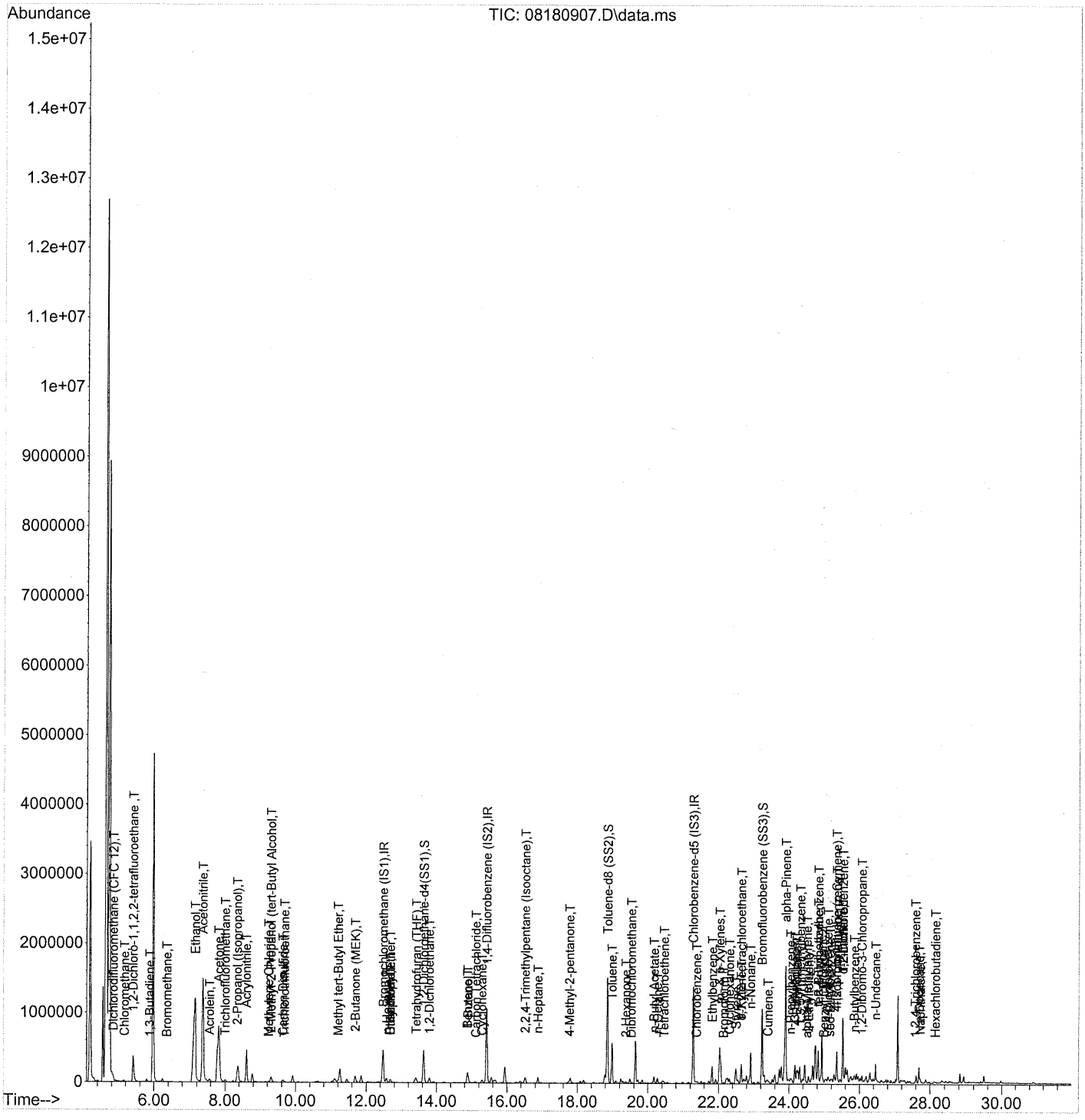
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 8/25/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:25:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160 ✓
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:25:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 234186 | 25.000 | ng | | -0.02 |
| 37) 1,4-Difluorobenzene (IS2) | 15.42 | 114 | 1196873 | 25.000 | ng | | -0.02 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 568508 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 476081 | 23.389 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery = | 93.56% | | | ✓ |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1305741 | 26.286 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = | 105.16% | | | ✓ |
| 73) Bromofluorobenzene (SS3) | 23.23 | 174 | 341477 | 26.067 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = | 104.28% | | | ✓ |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 0.00 | 42 | 0 | N.D. | d | | |
| 3) Dichlorodifluoromethan... | 4.85 | 85 | 58470 | 2.226 | ng | | 98 |
| 4) Chloromethane | 5.17 | 50 | 13678 | 0.775 | ng | | 96 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.41 | 135 | 1034 | 0.097 | ng | # | 44 |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 5.87 | 54 | 886 | 0.073 | ng | # | 27 |
| 8) Bromomethane | 6.36 | 94 | 569 | 0.055 | ng | # | 64 |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | | | |
| 10) Ethanol | 7.15 | 45 | 3101524 | 304.473 | ng | | 100 |
| 11) Acetonitrile | 7.37 | 41 | 2487974 | 83.399 | ng | | 100 |
| 12) Acrolein | 7.57 | 56 | 38195 | 4.926 | ng | | 99 |
| 13) Acetone | 7.82 | 58 | 506479 | 52.696 | ng | | 90 |
| 14) Trichlorofluoromethane | 8.01 | 101 | 26253 | 1.106 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.35 | 45 | 334748 | 8.863 | ng | # | 58 |
| 16) Acrylonitrile | 8.61 | 53 | 7841 | 0.452 | ng | # | 36 |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.30 | 59 | 15128 | 0.451 | ng | # | 1 |
| 19) Methylene Chloride | 9.24 | 84 | 7211 | 0.559 | ng | | 93 |
| 20) 3-Chloro-1-propene (Al... | 9.40 | 41 | 86 | N.D. | | | |
| 21) Trichlorotrifluoroethane | 9.68 | 151 | 4805 | 0.557 | ng | | 90 |
| 22) Carbon Disulfide | 9.63 | 76 | 65127 | 1.431 | ng | | 99 |
| 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 | 11.20 | 73 | 31876 | 0.877 | ng | | 97 |
| 26) Vinyl Acetate | 0.00 | 86 | 0 | N.D. | d | | |
| 27) 2-Butanone (MEK) | 11.69 | 72 | 41079 | 4.734 | ng | | 92 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 12.68 | 87 | 1159 | 0.100 | ng | # | 1 |
| 30) Ethyl Acetate | 12.69 | 61 | 7696 | 1.702 | ng | | 93 |
| 31) n-Hexane | 12.59 | 57 | 36481 | 1.577 | ng | | 99 |

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DA 8/22/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:25:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 12.68 | 83 | 12349 | 0.607 ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.42 | 72 | 22060 | 2.385 ng | # | 68 |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 13.79 | 62 | 11213 | 0.603 ng | | 98 |
| 38) 1,1,1-Trichloroethane | 14.19 | 97 | 318 | N.D. | | |
| 39) Isopropyl Acetate | 14.86 | 61 | 123 | N.D. | | |
| 40) 1-Butanol | 14.89 | 56 | 76556 | 4.928 ng | | 84 |
| 41) Benzene | 14.88 | 78 | 89171 | 1.695 ng | | 99 |
| 42) Carbon Tetrachloride | 15.11 | 117 | 8297 | 0.495 ng | | 99 |
| 43) Cyclohexane | 15.29 | 84 | 22628 | 1.174 ng | | 99 |
| 44) tert-Amyl Methyl Ether | 15.87 | 73 | 1226 | N.D. | | |
| 45) 1,2-Dichloropropane | 16.10 | 63 | 91 | N.D. | | |
| 46) Bromodichloromethane | 0.00 | 83 | 0 | N.D. d | | |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | | |
| 48) 1,4-Dioxane | 16.54 | 88 | 222 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.52 | 57 | 82850 | 1.337 ng | | 87 |
| 50) Methyl Methacrylate | 16.78 | 100 | 87 | N.D. | | |
| 51) n-Heptane | 16.88 | 71 | 24123 | 1.708 ng | | 94 |
| 52) cis-1,3-Dichloropropene | 17.65 | 75 | 91 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 17.78 | 58 | 5200 | 0.411 ng | | 100 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. d | | |
| 58) Toluene | 18.98 | 91 | 440701 | 9.027 ng | | 98 |
| 59) 2-Hexanone | 19.38 | 43 | 23529 | 0.725 ng | | 93 |
| 60) Dibromochloromethane | 19.53 | 129 | 1403 | 0.121 ng | | 89 |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.18 | 43 | 84681 | 2.213 ng | | 96 |
| 63) n-Octane | 20.28 | 57 | 15578 | 1.320 ng | | 95 |
| 64) Tetrachloroethene | 20.46 | 166 | 5440 | 0.482 ng | | 96 |
| 65) Chlorobenzene | 21.38 | 112 | 3256 | 0.108 ng | # | 43 |
| 66) Ethylbenzene | 21.82 | 91 | 223900 | 4.012 ng | | 98 |
| 67) m- & p-Xylenes | 22.04 | 91 | 498455 | 11.041 ng | | 99 |
| 68) Bromoform | 22.15 | 173 | 2256 | 0.235 ng | | 88 |
| 69) Styrene | 22.51 | 104 | 56990 | 1.747 ng | | 97 |
| 70) o-Xylene | 22.65 | 91 | 177450 | 3.920 ng | | 97 |
| 71) n-Nonane | 22.91 | 43 | 186896 | 6.214 ng | | 96 |
| 72) 1,1,2,2-Tetrachloroethane | 22.65 | 83 | 1533 | 0.076 ng | # | 18 |
| 74) Cumene | 23.41 | 105 | 17238 | 0.301 ng | | 97 |
| 75) alpha-Pinene | 23.90 | 93 | 777153 | 26.517 ng | | 71 |
| 76) n-Propylbenzene | 24.05 | 91 | 51522 | 0.717 ng | | 98 |
| 77) 3-Ethyltoluene | 24.17 | 105 | 129846 | 2.376 ng | | 99 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 52997 | 1.001 ng | | 96 |
| 79) 1,3,5-Trimethylbenzene | 24.32 | 105 | 58497 | 1.310 ng | | 100 |

12

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:25:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

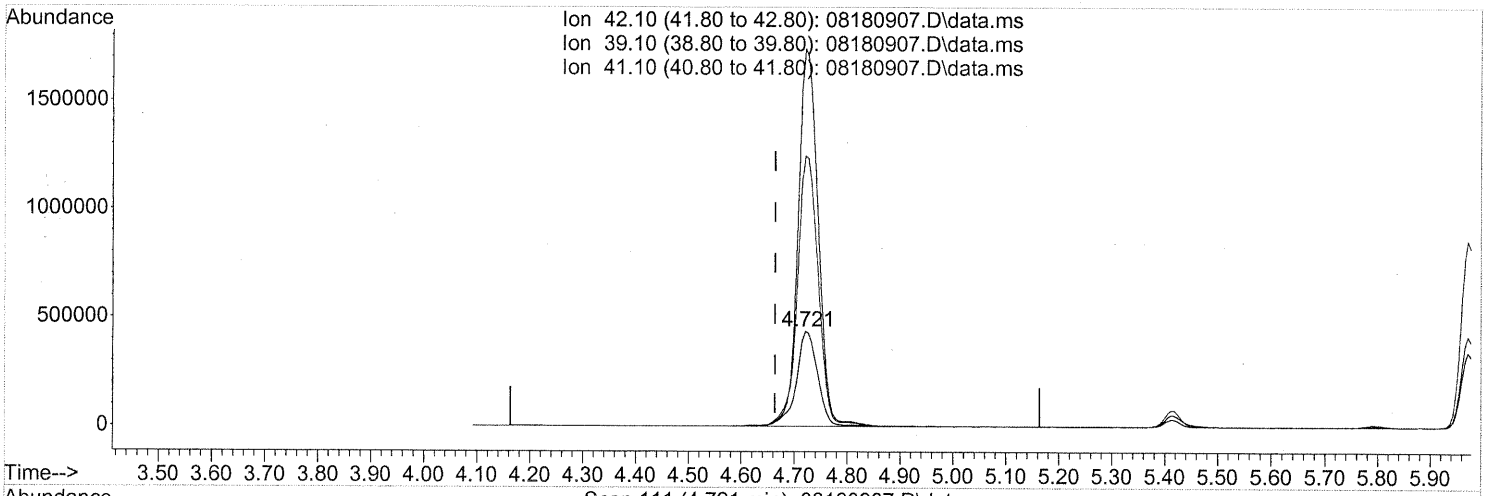
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 1913 | 0.080 ng | | 83 |
| 81) 2-Ethyltoluene | 24.56 | 105 | 54913 | 0.997 ng | | 97 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 169251 | 3.717 ng | | 88 |
| 83) n-Decane | 24.93 | 57 | 249543 | 8.428 ng | | 97 |
| 84) Benzyl Chloride | 24.99 | 91 | 5195 | ~~0.122 ng~~ JP | | 66 |
| 85) 1,3-Dichlorobenzene | 25.02 | 146 | 964 | N.D. | | |
| 86) 1,4-Dichlorobenzene | 25.10 | 146 | 5329 | 0.217 ng | | 98 |
| 87) sec-Butylbenzene | 25.17 | 105 | 6232 | 0.101 ng | # | 80 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 79863 | 1.456 ng | | 98 |
| 89) 1,2,3-Trimethylbenzene | 25.35 | 105 | 50584 | 1.090 ng | | 94 |
| 90) 1,2-Dichlorobenzene | 25.53 | 146 | 1147 | ~~0.052 ng~~ | | 85 |
| 91) d-Limonene | 25.53 | 68 | 230185 | 11.887 ng | | 83 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.06 | 157 | 1371 | ~~0.182 ng~~ | # | 35 |
| 93) n-Undecane | 26.46 | 57 | 84040 | 2.668 ng | | 89 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 2530 | ~~0.168 ng~~ RL# | | 94 |
| 95) Naphthalene | 27.73 | 128 | 42285 | 0.684 ng | | 99 |
| 96) n-Dodecane | 27.70 | 57 | 71914 | 1.965 ng | | 99 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 2147 | ~~0.225 ng~~ RL | | 96 |
| 98) Cyclohexanone | 22.31 | 55 | 33087 | 1.636 ng | | 92 |
| 99) tert-Butylbenzene | 24.83 | 119 | 21060 | 0.478 ng | # | 57 |
| 100) n-Butylbenzene | 25.85 | 91 | 14570 | 0.287 ng | # | 41 |

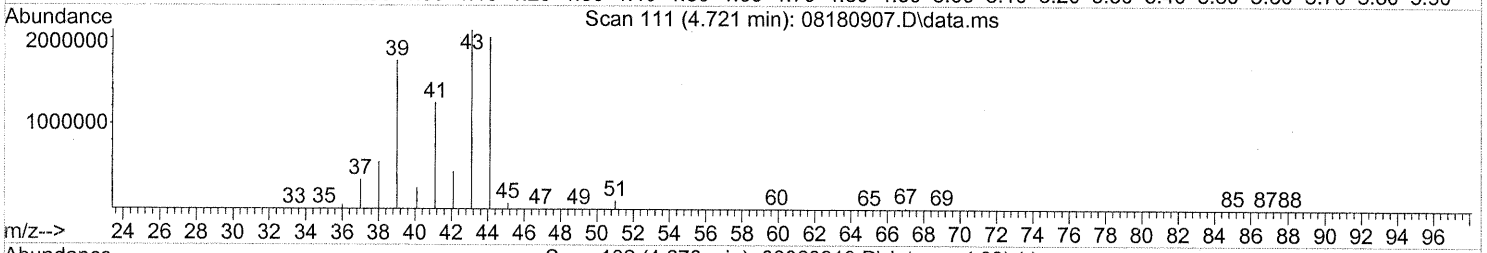
(#) = qualifier out of range (m) = manual integration (+) = signals summed

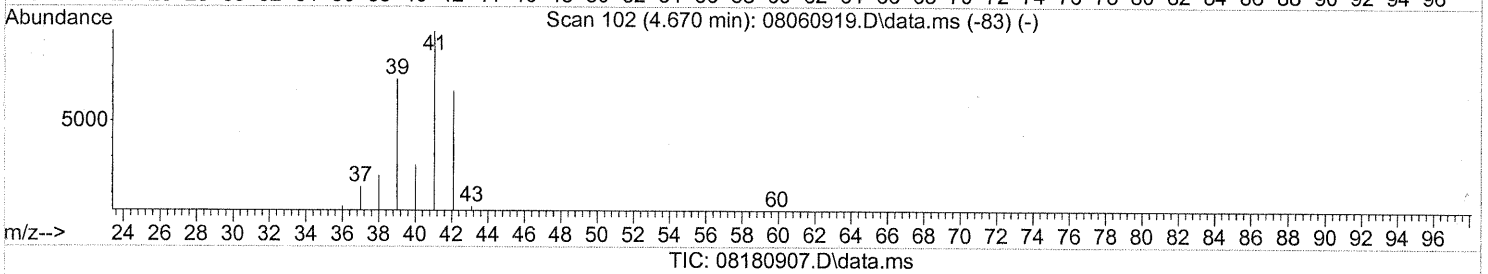
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(2) Propene (T)

4.721min (+0.057) 77.45ng

response 1244667

| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 111.90 | 370.60# |
| 41.10 | 150.20 | 276.59# |
| 0.00 | 0.00 | 0.00 |

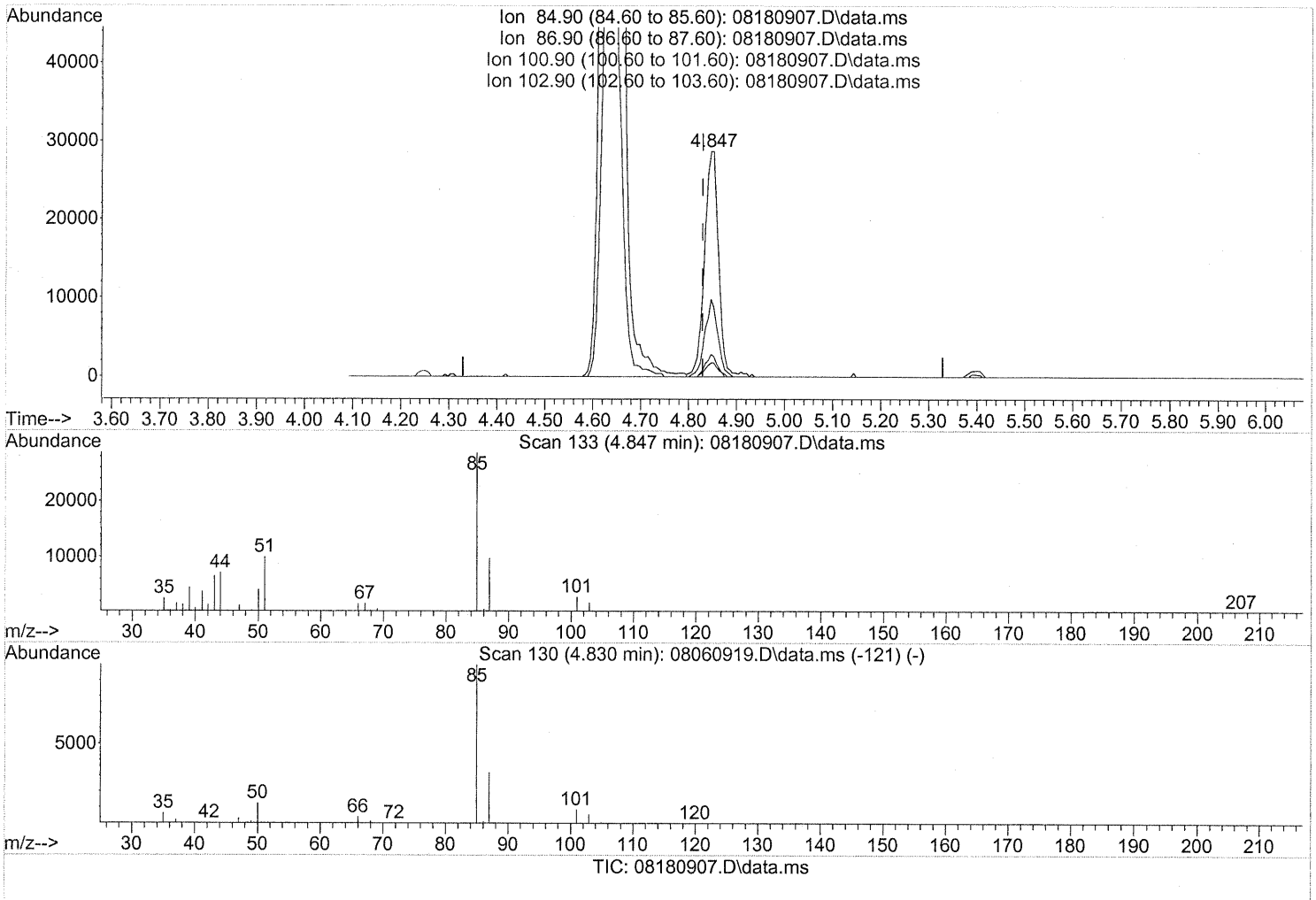
FP

8/22/09 8/25/09

14

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

4.847min (+0.017) 2.23ng

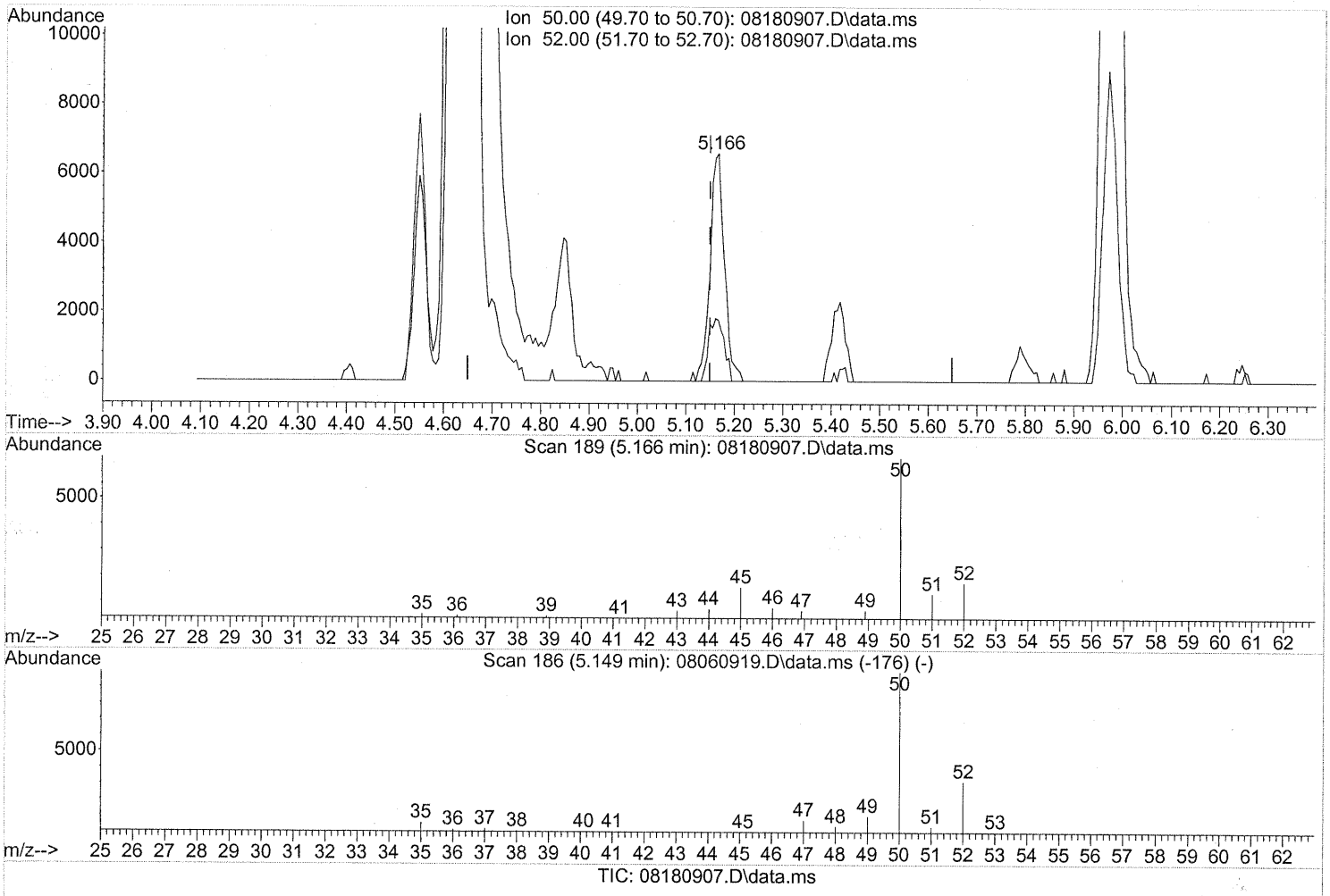
response 58470

| Ion | Exp% | Act% |
|---|---|---|
| 84.90 | 100 | 100 |
| 86.90 | 32.80 | 31.43 |
| 100.90 | 8.80 | 8.10 |
| 102.90 | 5.20 | 5.41 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(4) Chloromethane (T)

5.166min (+0.017) 0.78ng

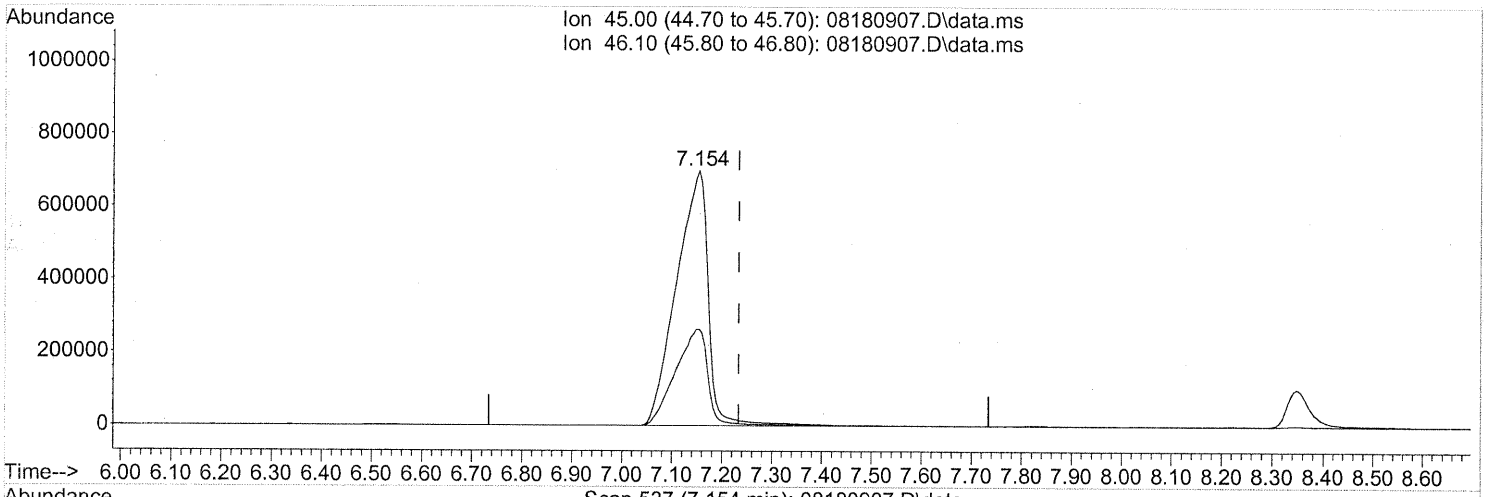
response 13678

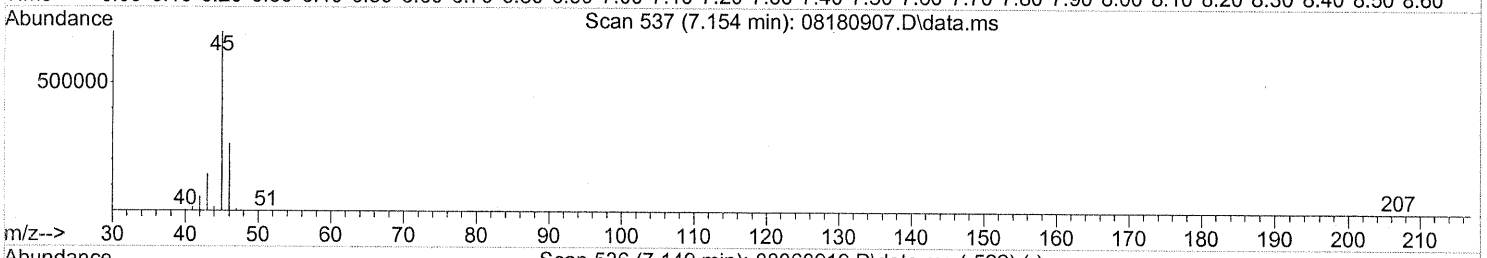
| Ion | Exp% | Act% |
|---|---|---|
| 50.00 | 100 | 100 |
| 52.00 | 31.60 | 29.44 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

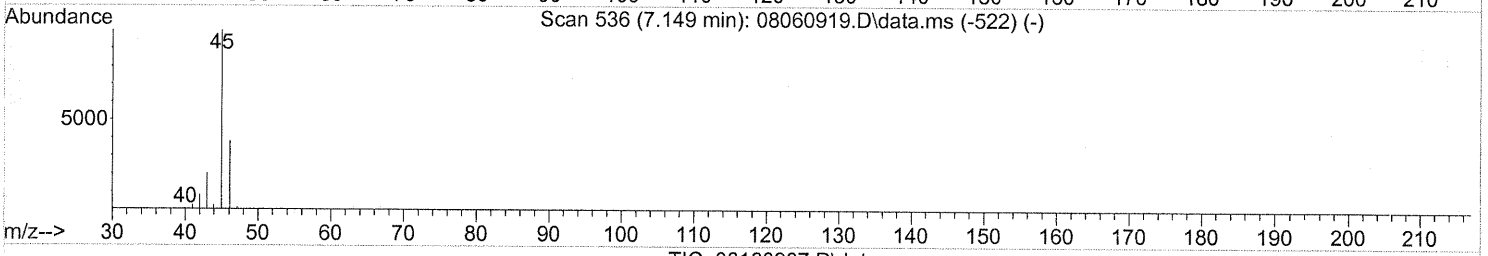
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(10) Ethanol (T)

7.154min (-0.080) 304.47ng

response 3101524

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.36 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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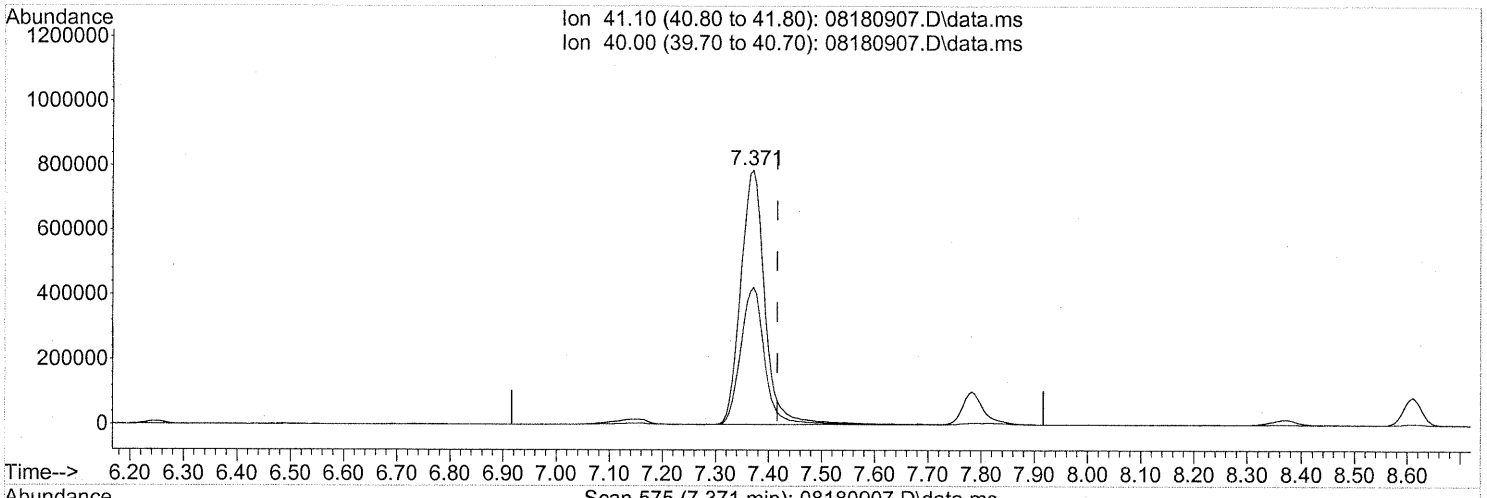
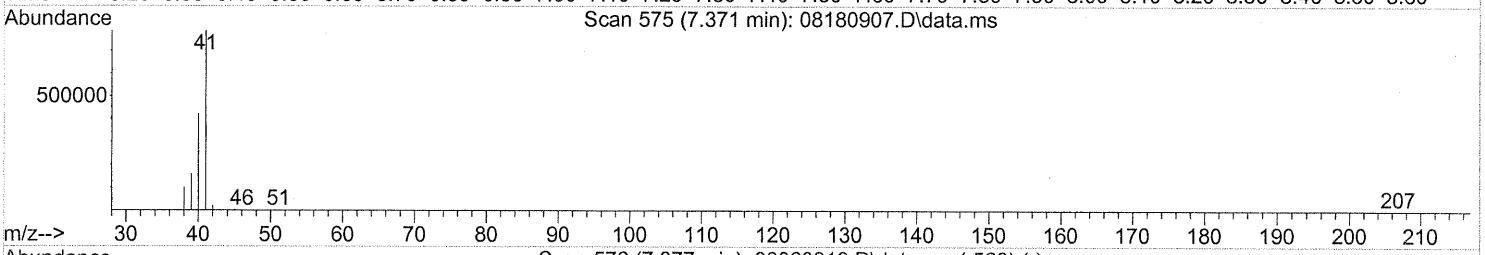
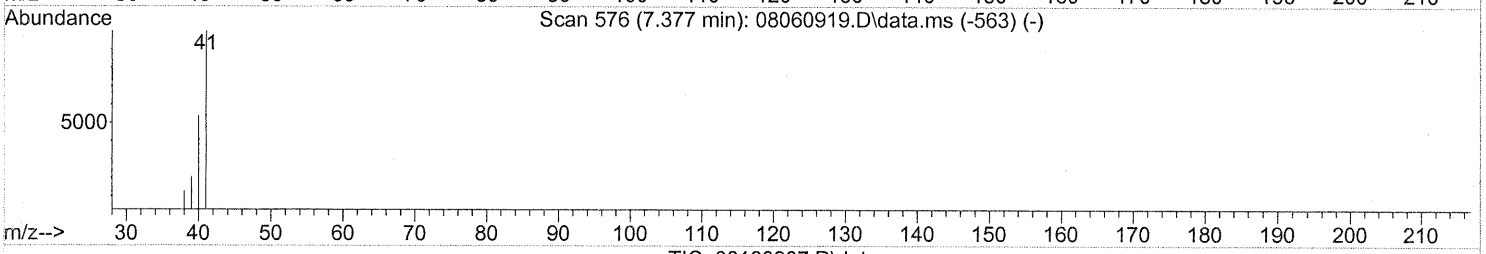
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(11) Acetonitrile (T)

7.371min (-0.046) 83.40ng

response 2487974

| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 40.00 | 53.70 | 53.83 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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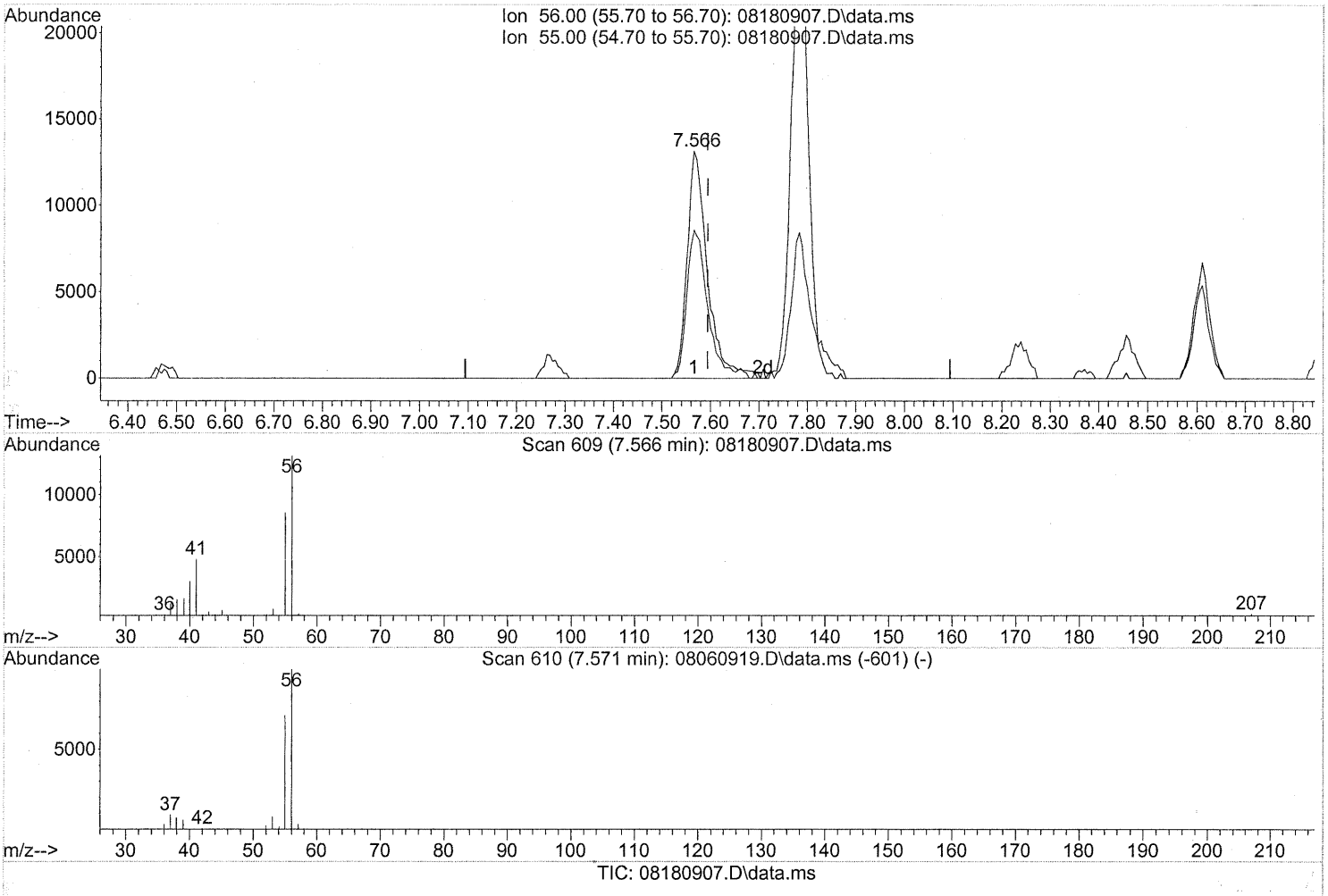
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(12) Acrolein (T)

7.566min (-0.029) 4.93ng

response 38195

| Ion | Exp% | Act% |
|---|---|---|
| 56.00 | 100 | 100 |
| 55.00 | 68.10 | 67.67 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
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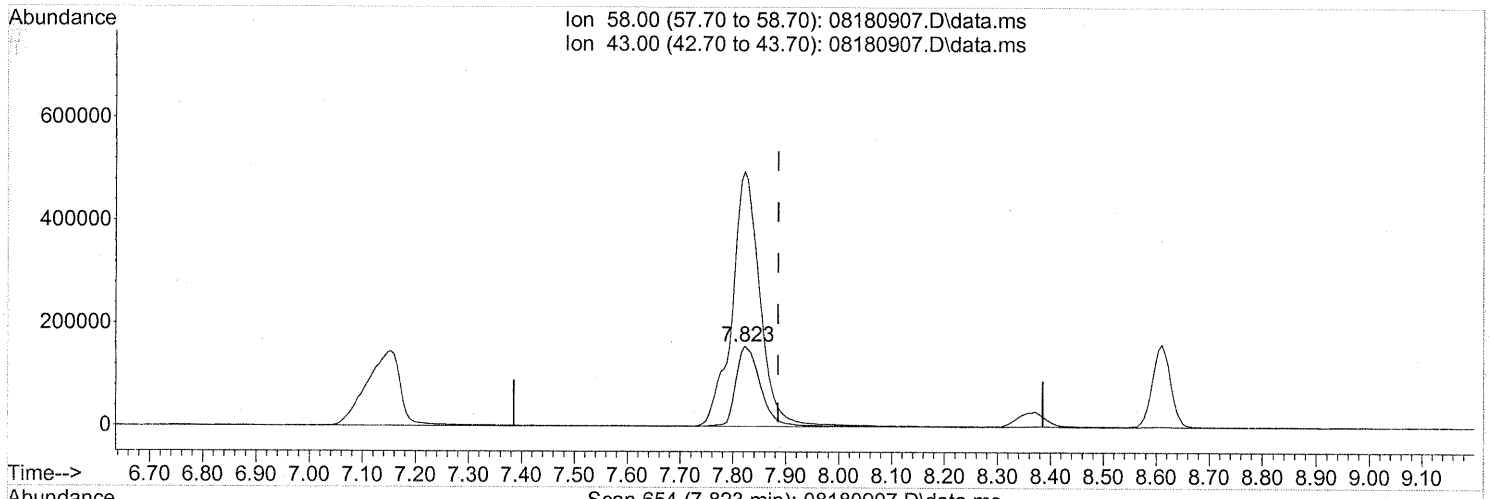
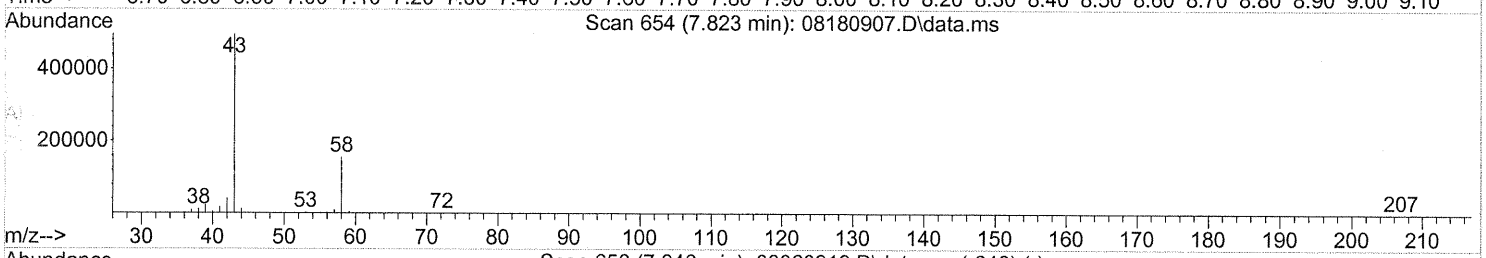
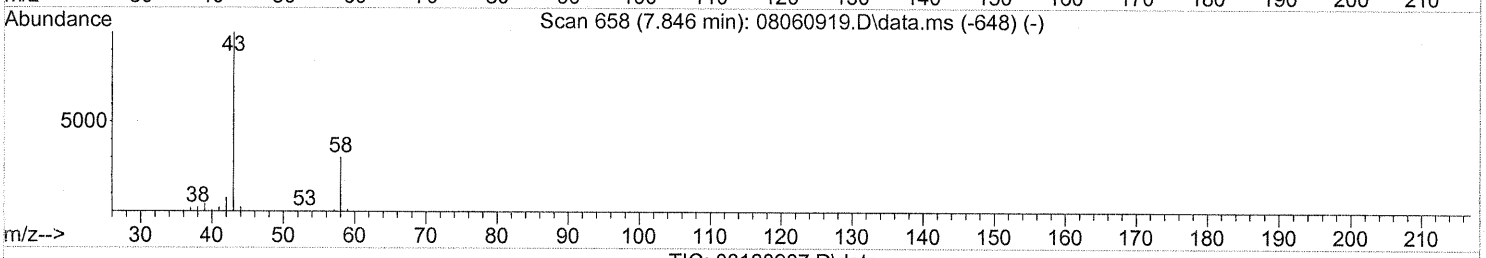
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(13) Acetone (T)

7.823min (-0.063) 52.70ng

response 506479

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 340.40 | 362.04 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
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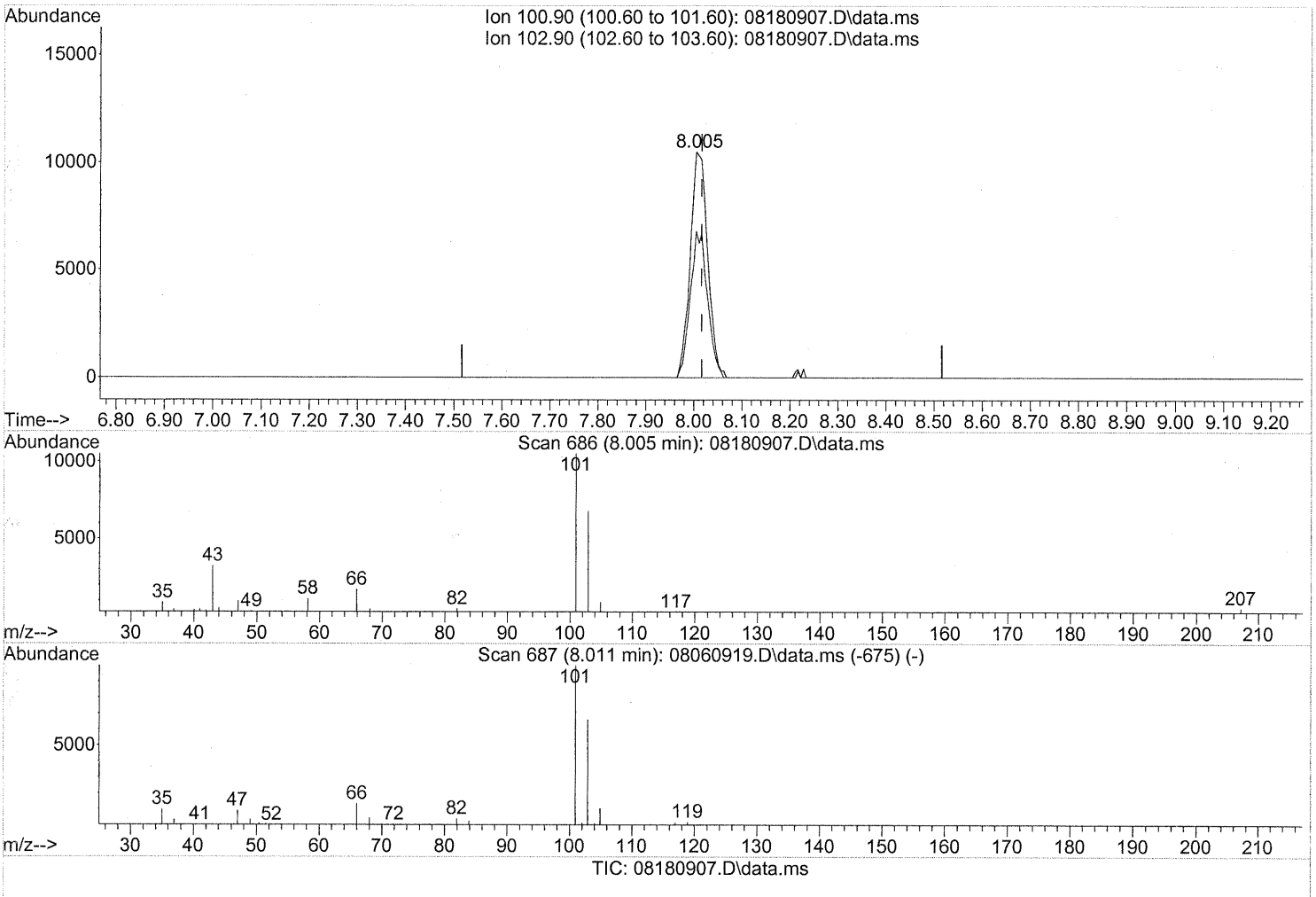
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(14) Trichlorofluoromethane (T)

8.005min (-0.011) 1.11ng

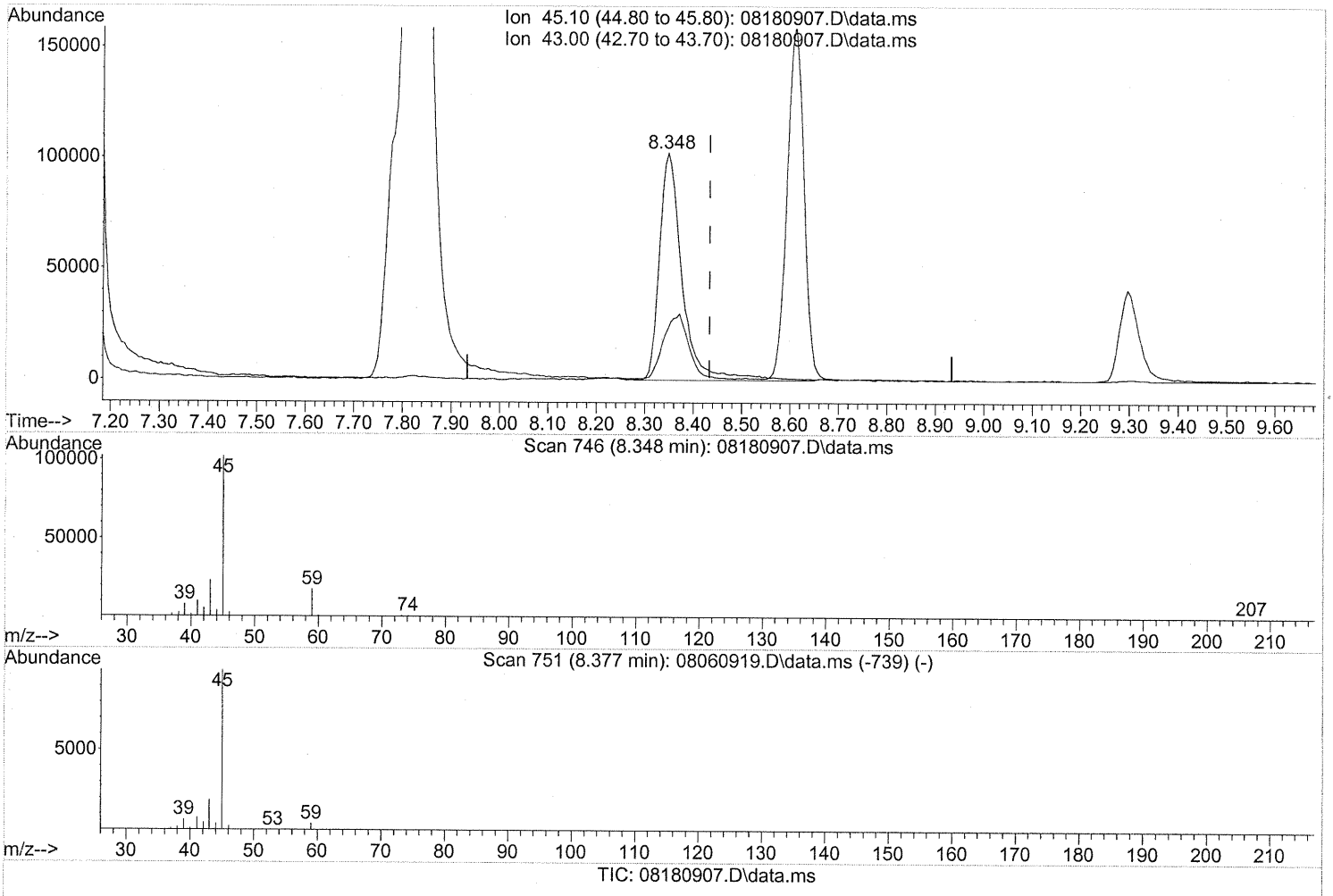
response 26253

| Ion | Exp% | Act% |
|---|---|---|
| 100.90 | 100 | 100 |
| 102.90 | 64.40 | 63.78 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




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

8.348min (-0.086) 8.86ng

response 334748

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
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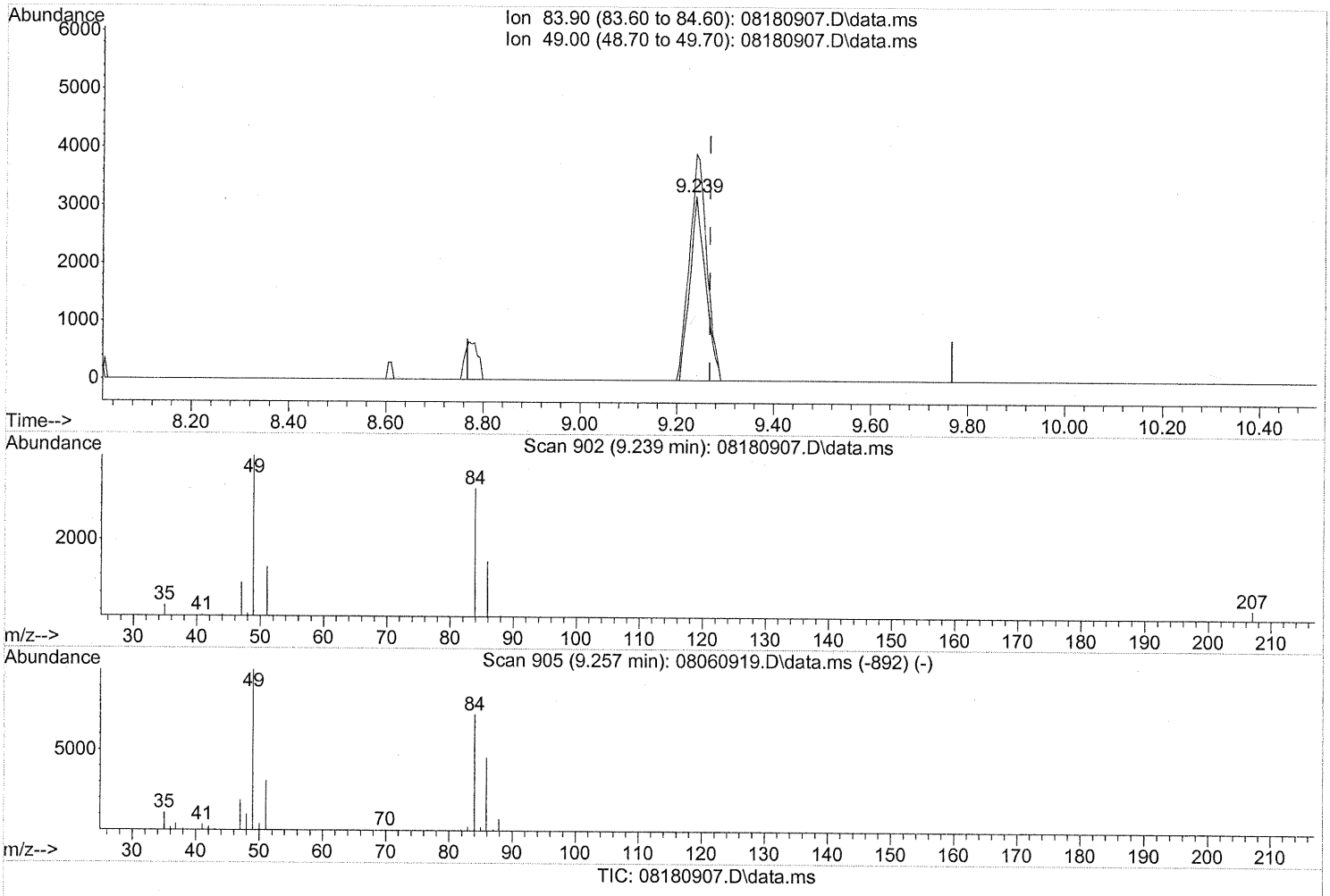
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(19) Methylene Chloride (T)

9.239min (-0.029) 0.56ng

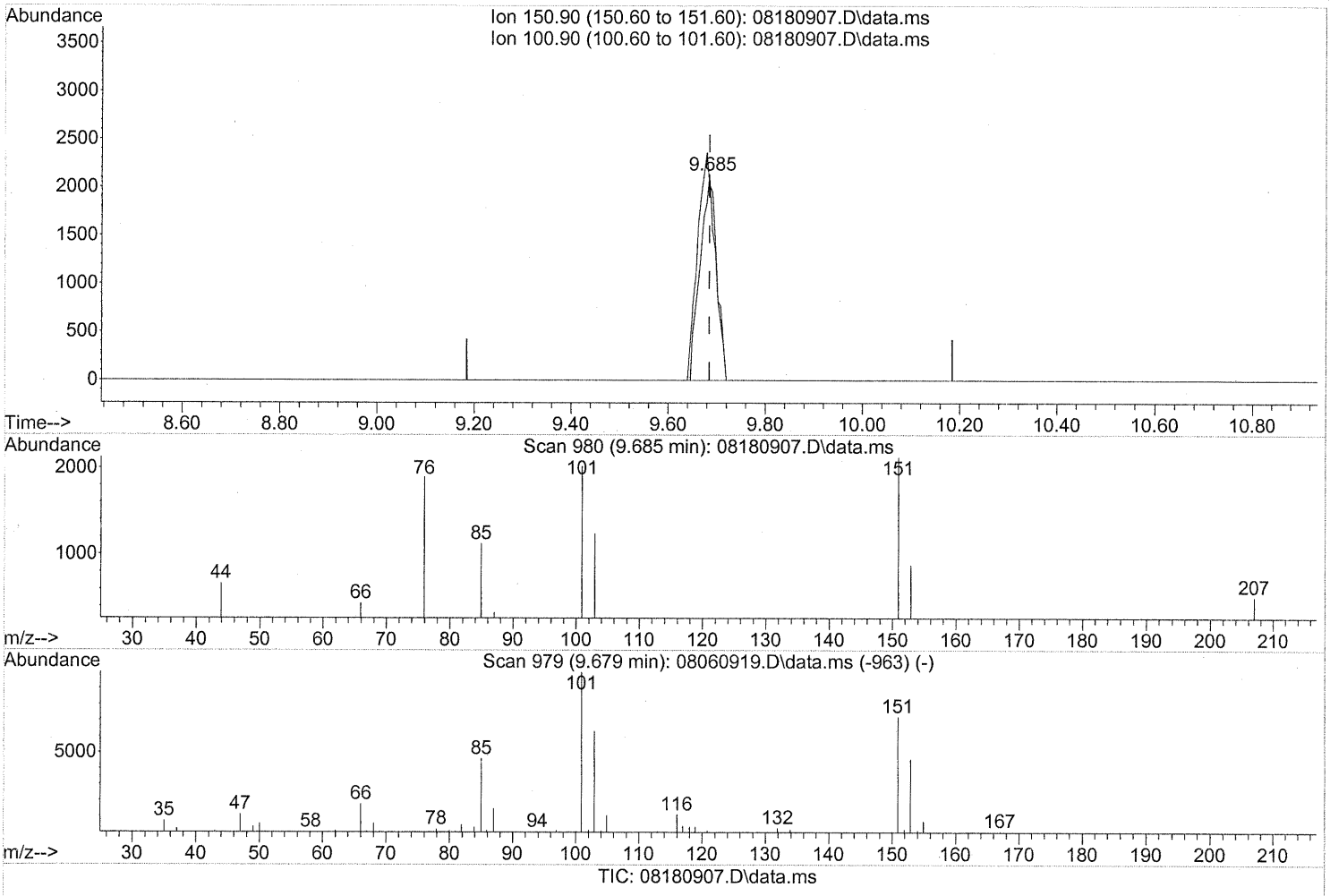
response 7211

| Ion | Exp% | Act% |
|---|---|---|
| 83.90 | 100 | 100 |
| 49.00 | 144.60 | 135.70 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.685min (-0.000) 0.56ng

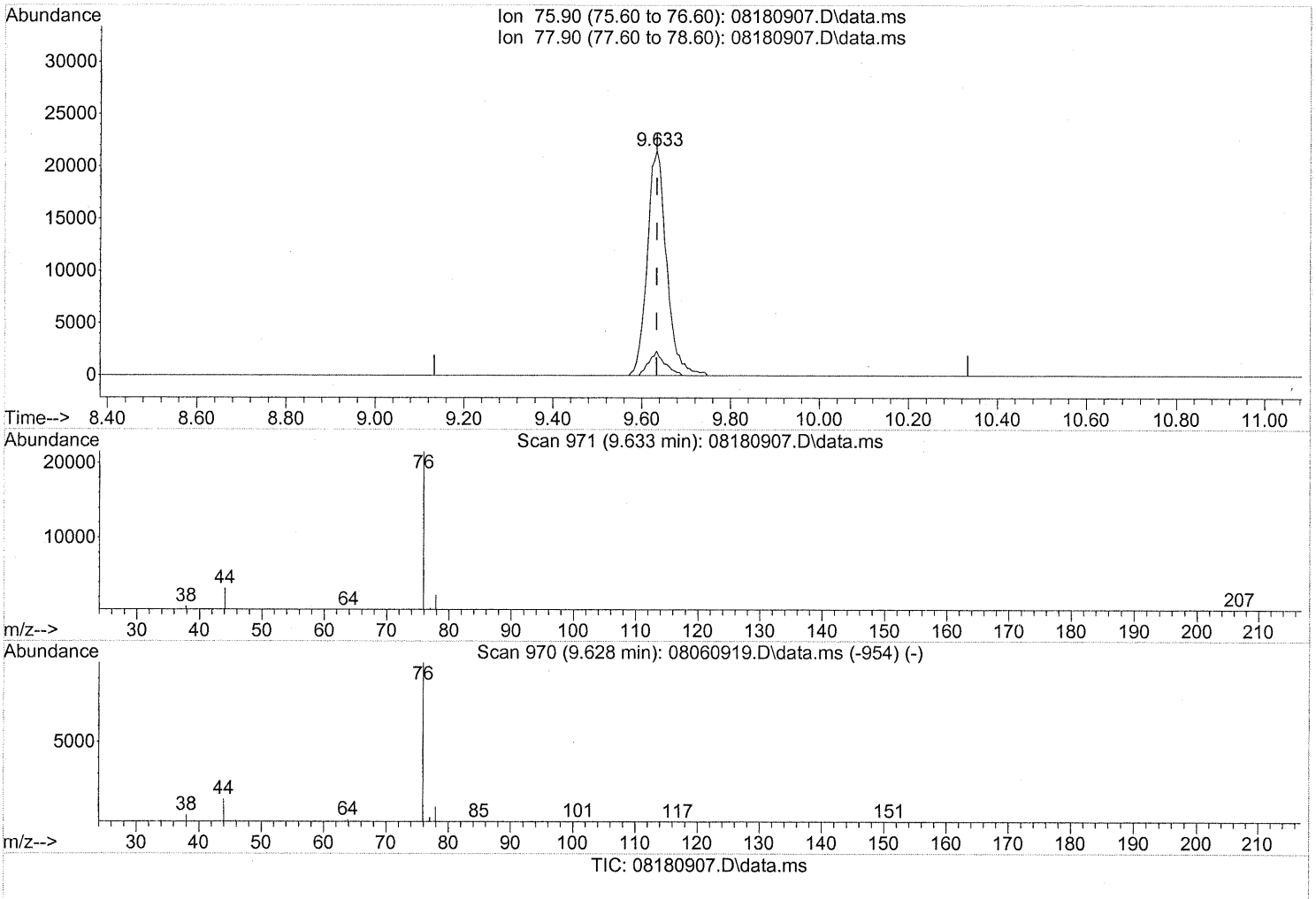
response 4805

| Ion | Exp% | Act% |
|---|---|---|
| 150.90 | 100 | 100 |
| 100.90 | 138.40 | 126.33 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(22) Carbon Disulfide (T)

9.633min (-0.000) 1.43ng

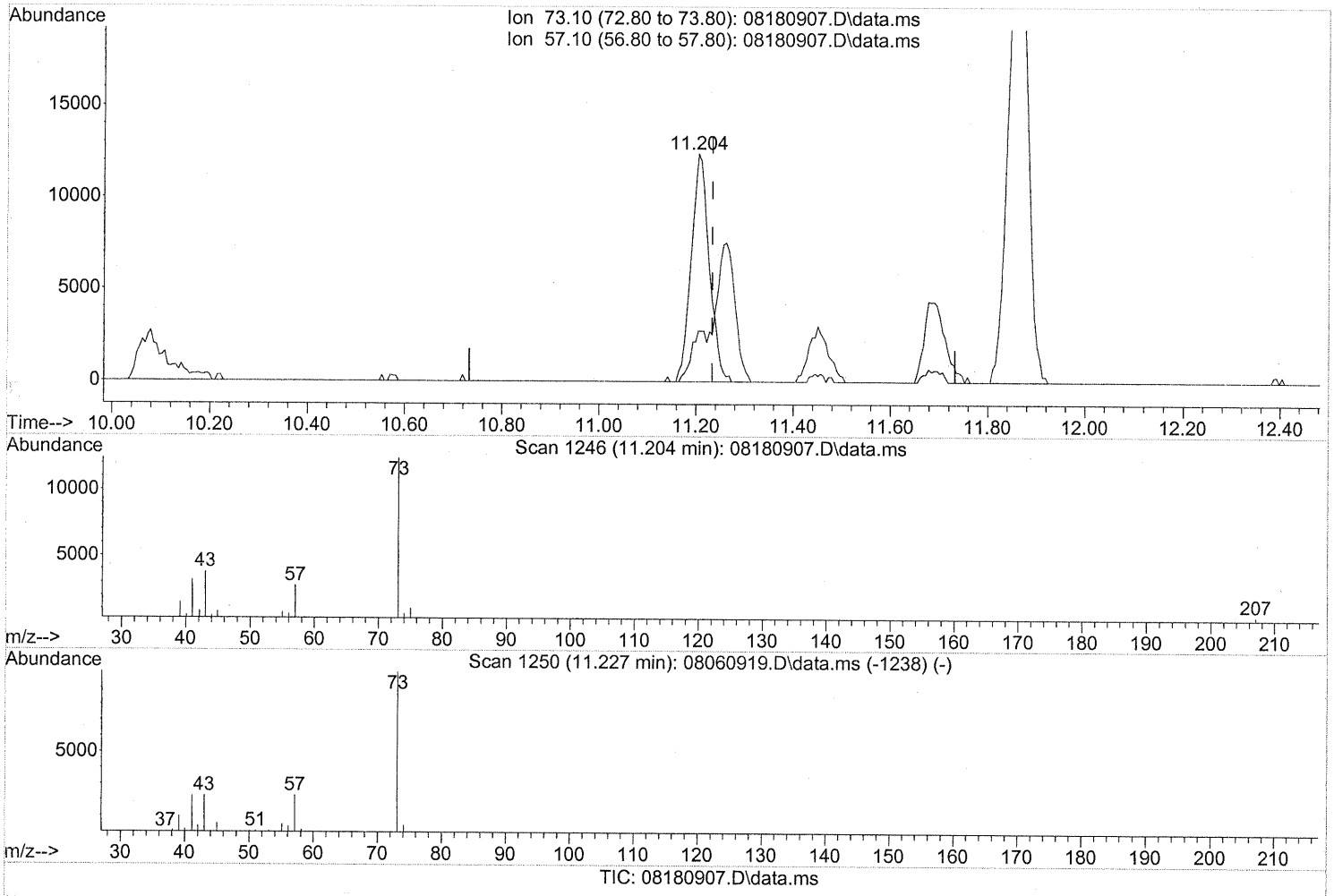
response 65127

| Ion | Exp% | Act% |
|---|---|---|
| 75.90 | 100 | 100 |
| 77.90 | 9.40 | 8.87 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(25) Methyl tert-Butyl Ether (T)

11.204min (-0.029) 0.88ng

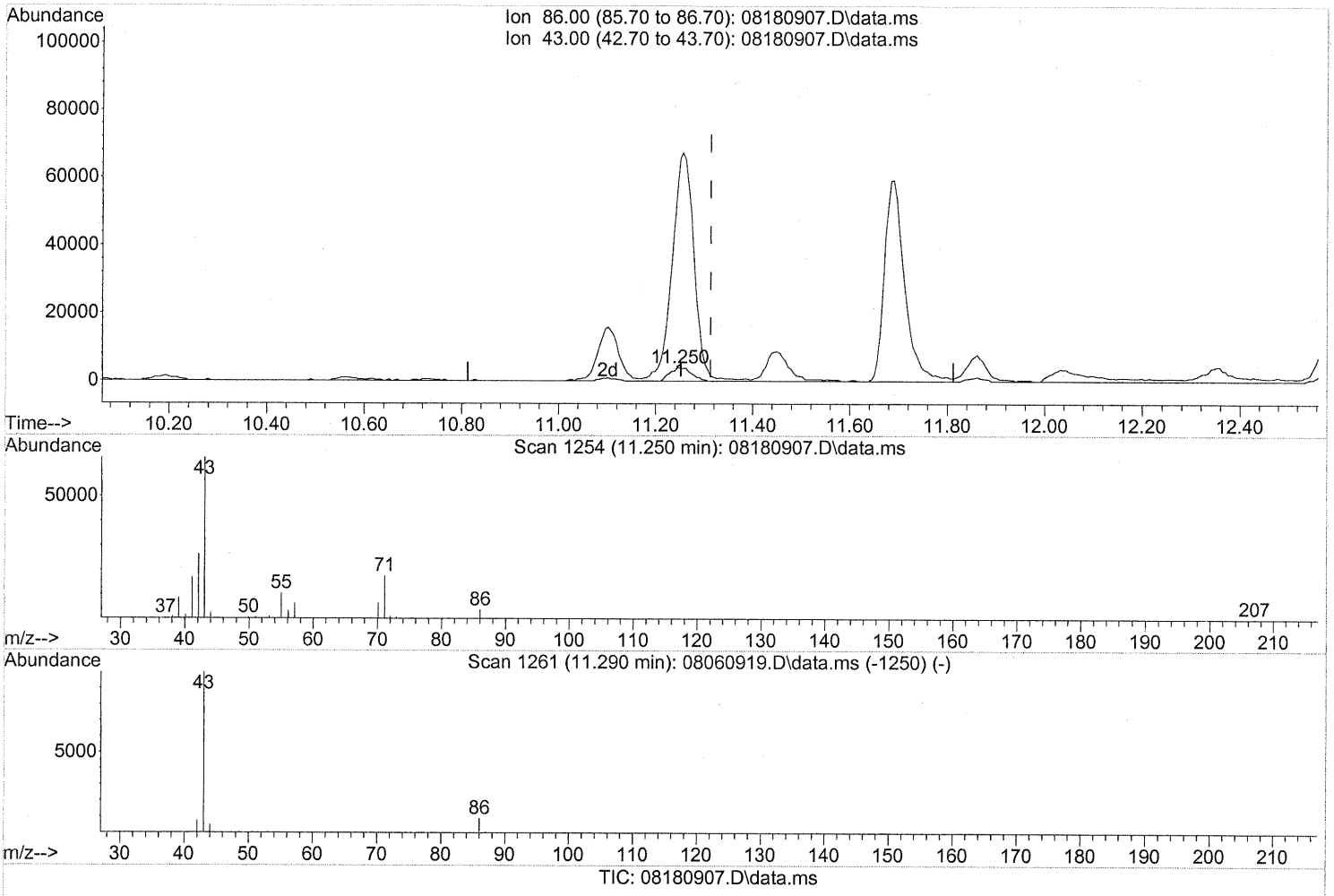
response 31876

| Ion | Exp% | Act% |
|---|---|---|
| 73.10 | 100 | 100 |
| 57.10 | 22.50 | 24.07 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(26) Vinyl Acetate (T)

11.250min (-0.063) 6.00ng

response 11727

| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 43.00 | 1210.70 | 1742.71# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

TP

BA 8/22/09 Tom 8/25/09

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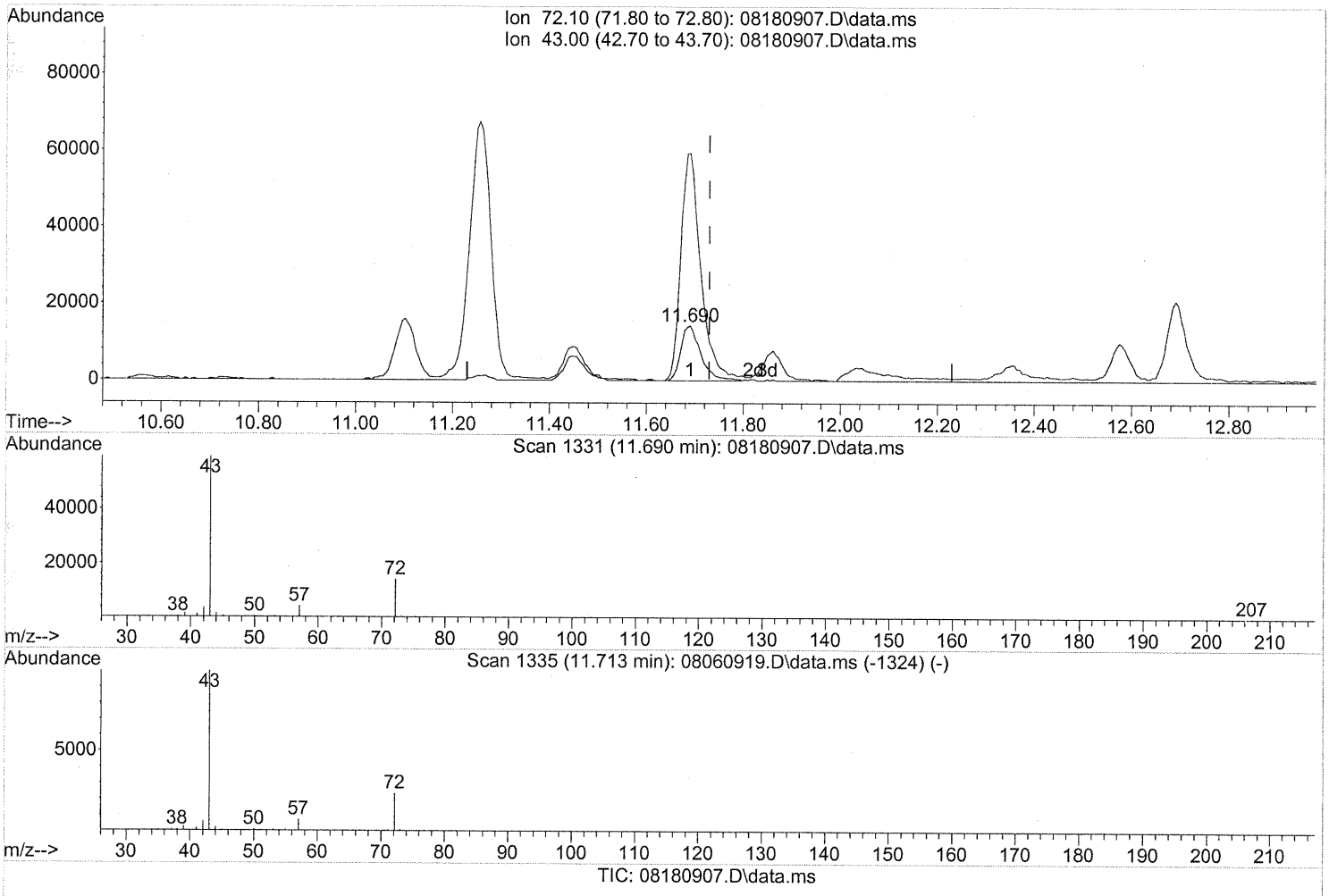
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(27) 2-Butanone (MEK) (T)

11.690min (-0.040) 4.73ng

response 41079

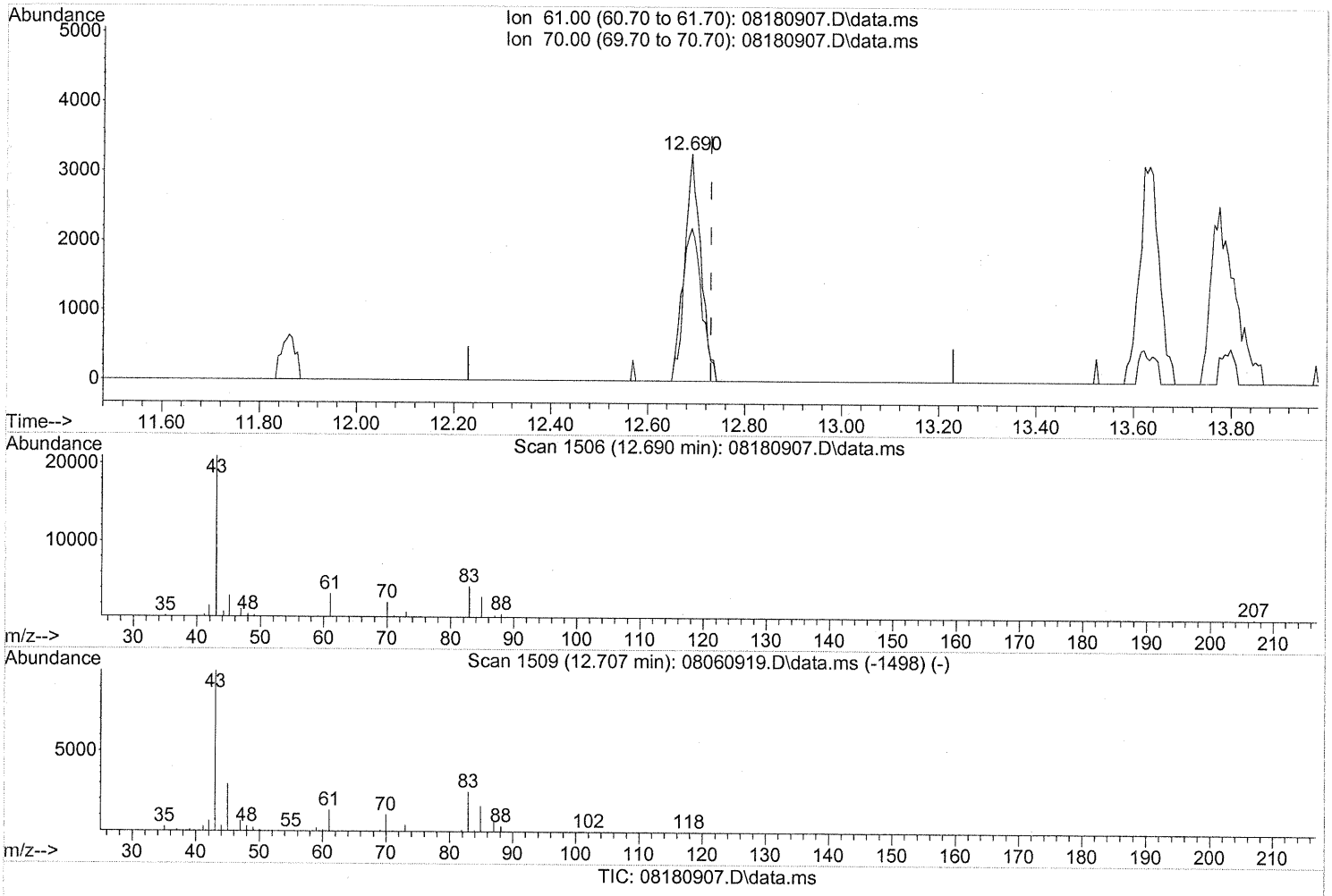
| Ion | Exp% | Act% |
|---|---|---|
| 72.10 | 100 | 100 |
| 43.00 | 437.40 | 418.38 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

28

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(30) Ethyl Acetate (T)

12.690min (-0.040) 1.70ng

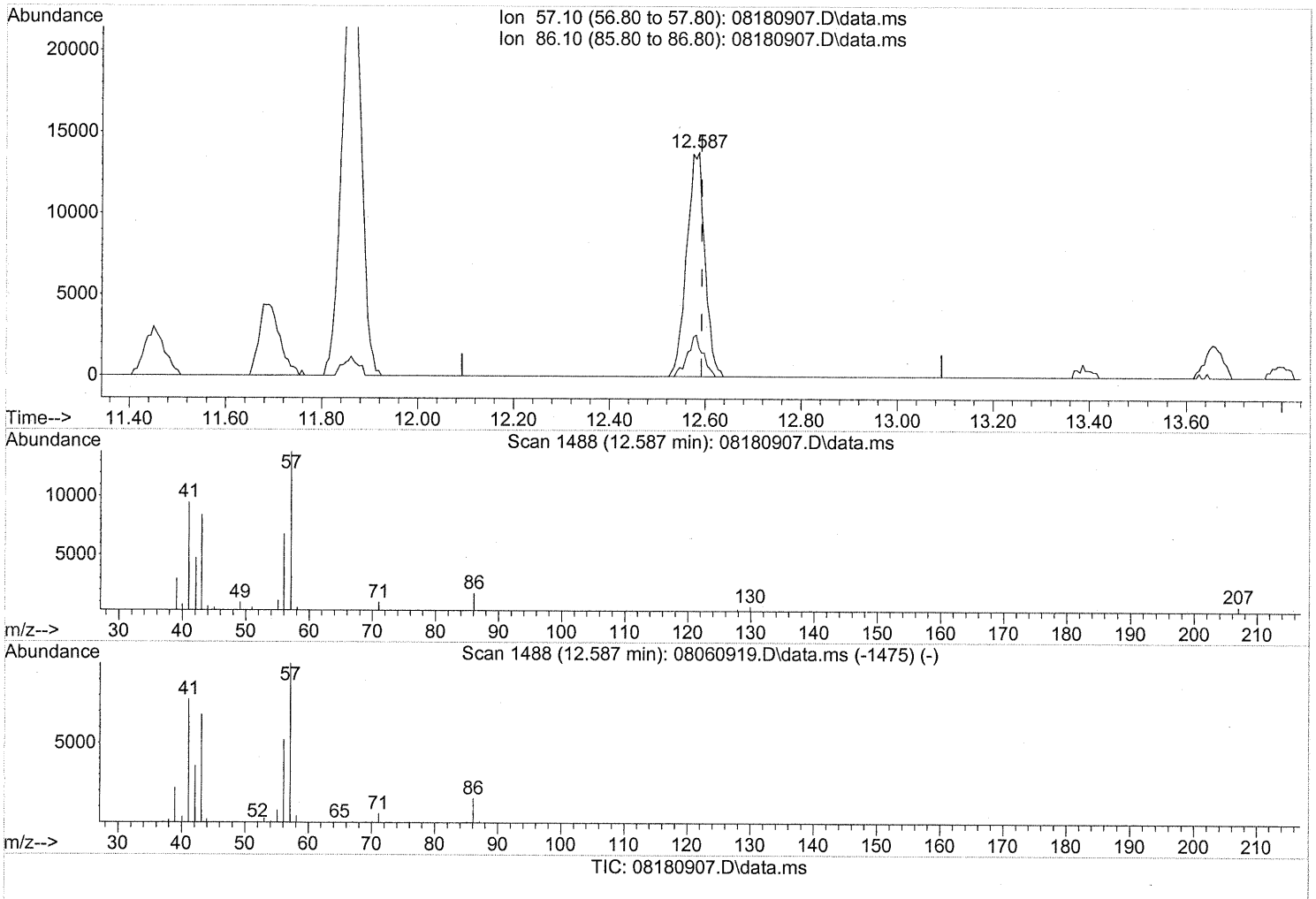
response 7696

| Ion | Exp% | Act% |
|---|---|---|
| 61.00 | 100 | 100 |
| 70.00 | 82.00 | 75.36 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(31) n-Hexane (T)

12.587min (-0.006) 1.58ng

response 36481

| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 86.10 | 15.70 | 15.44 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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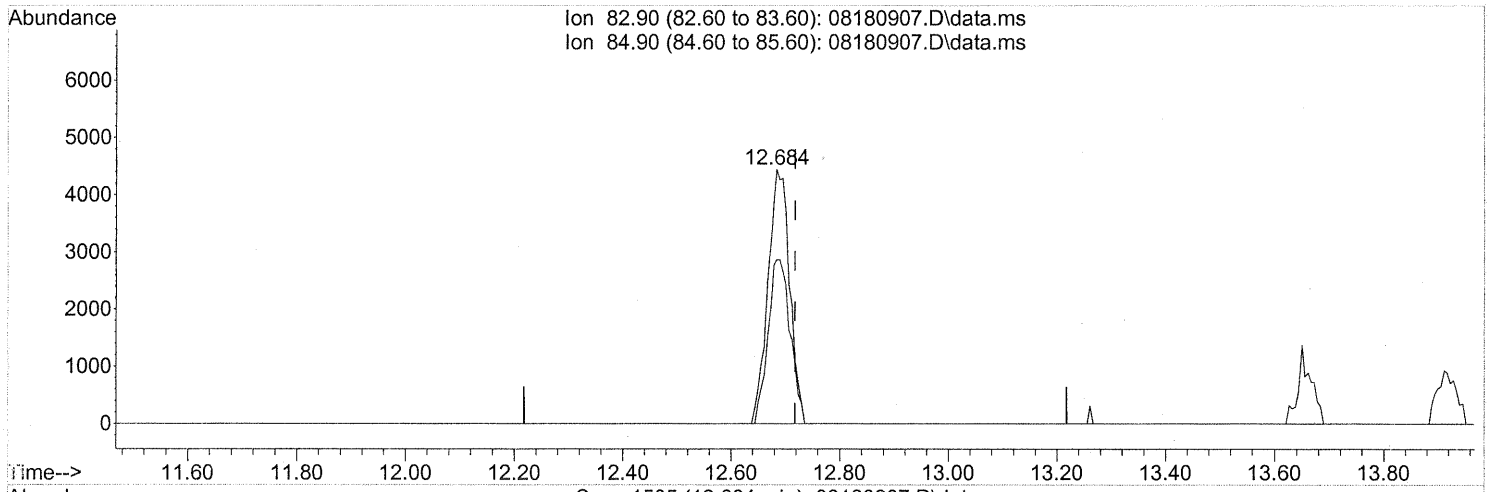
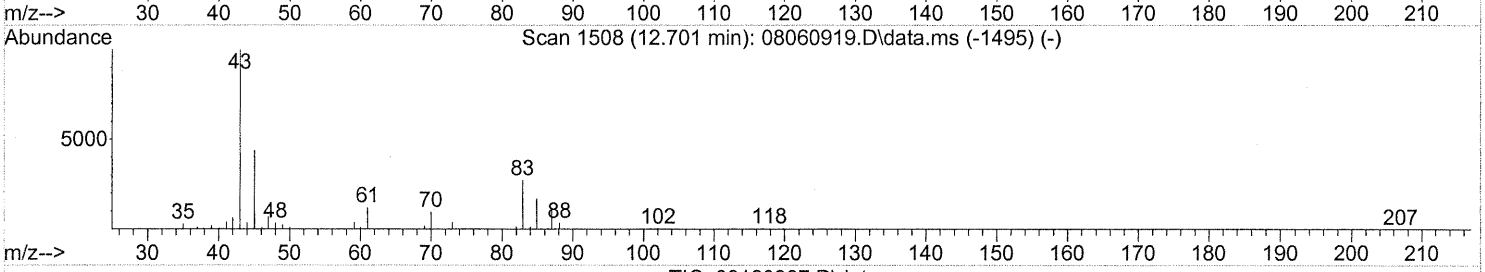
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(32) Chloroform (T)

12.684min (-0.034) 0.61ng

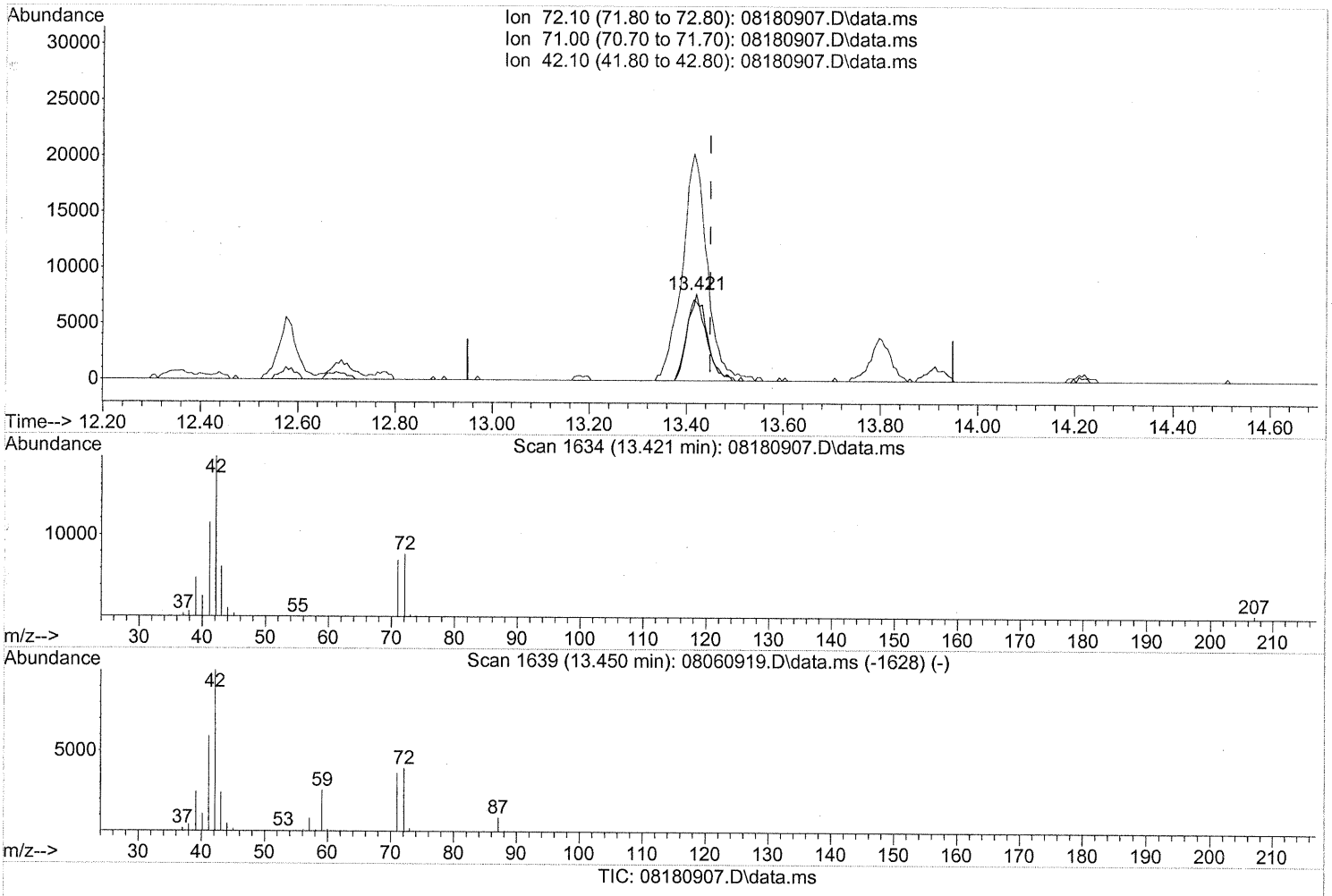
response 12349

| Ion | Exp% | Act% |
|---|---|---|
| 82.90 | 100 | 100 |
| 84.90 | 64.30 | 66.12 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(34) Tetrahydrofuran (THF) (T)

13.421min (-0.028) 2.38ng

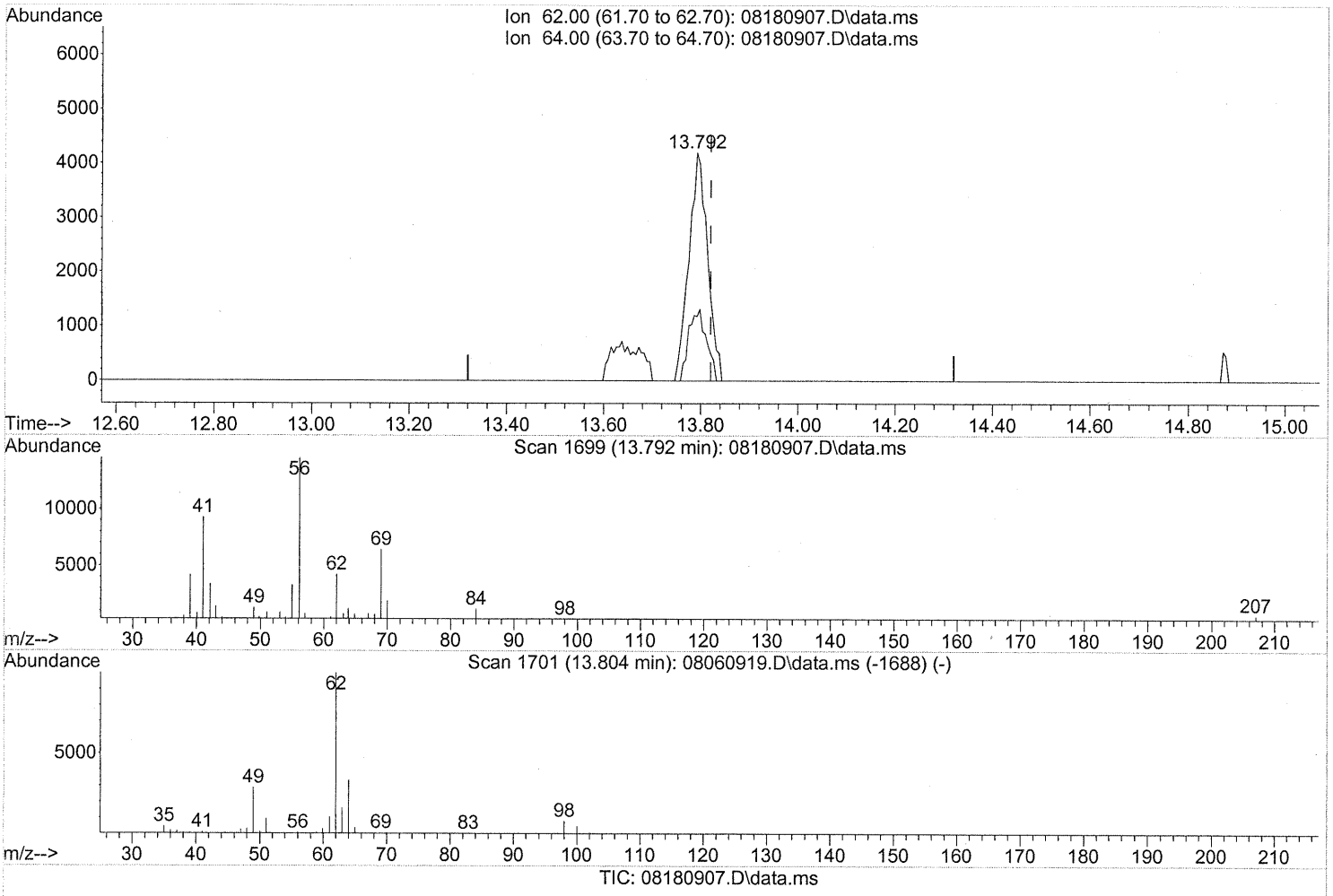
response 22060

| Ion | Exp% | Act% |
|---|---|---|
| 72.10 | 100 | 100 |
| 71.00 | 95.70 | 95.76 |
| 42.10 | 253.40 | 331.35# |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(36) 1,2-Dichloroethane (T)

13.792min (-0.029) 0.60ng

response 11213

| Ion | Exp% | Act% |
|---|---|---|
| 62.00 | 100 | 100 |
| 64.00 | 30.80 | 29.62 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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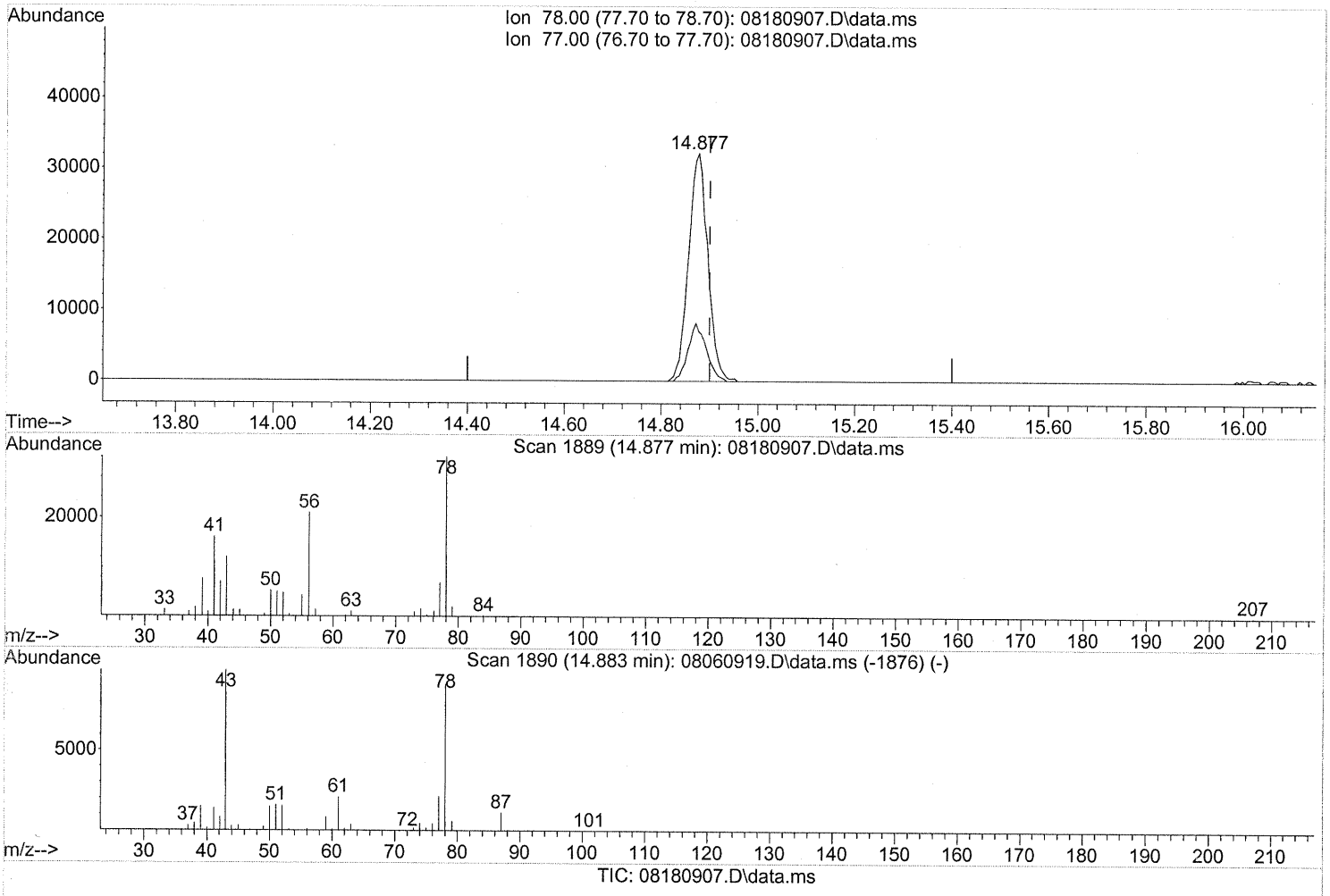
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(41) Benzene (T)

14.877min (-0.023) 1.69ng

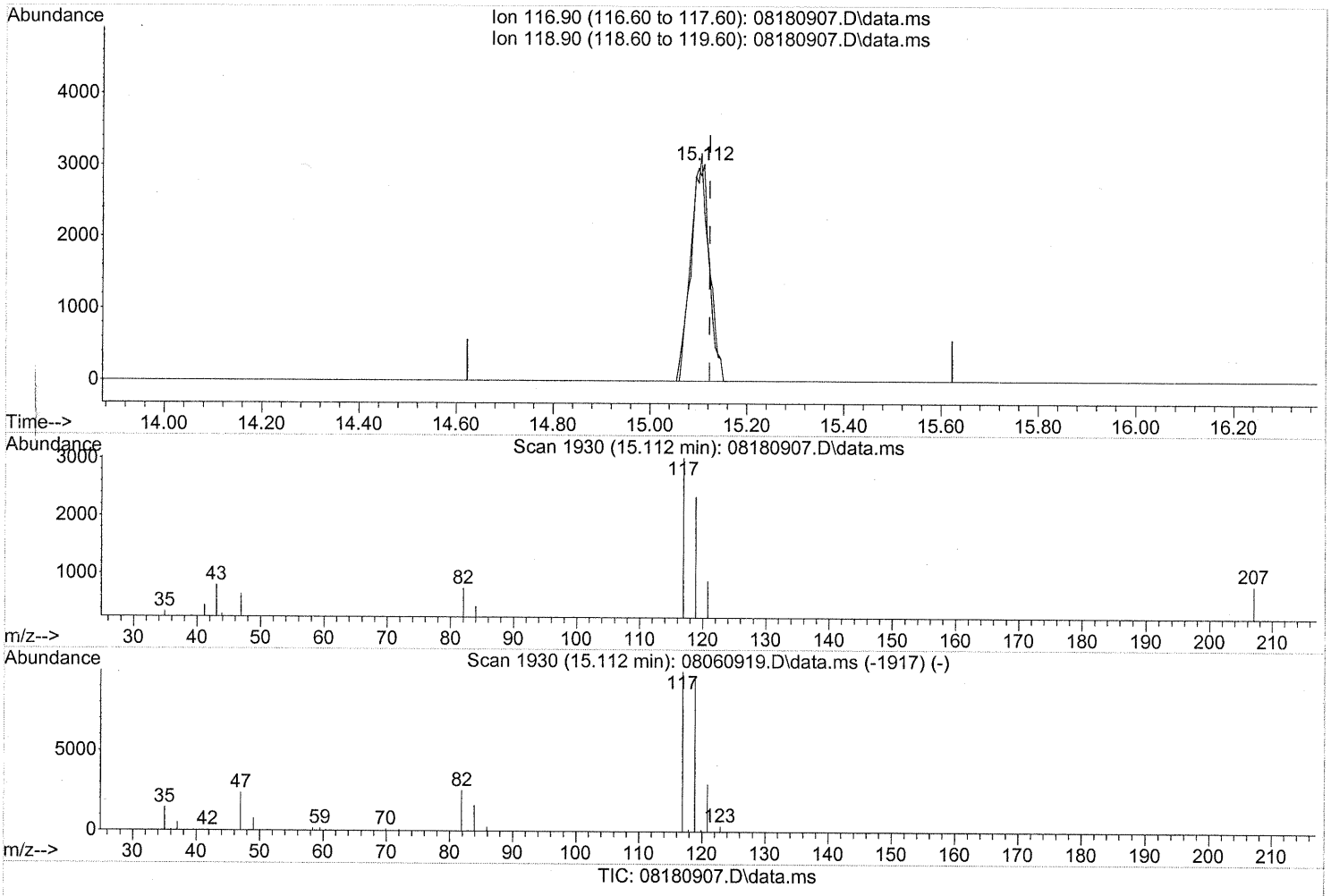
response 89171

| Ion | Exp% | Act% |
|---|---|---|
| 78.00 | 100 | 100 |
| 77.00 | 23.60 | 23.93 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(42) Carbon Tetrachloride (T)

15.112min (-0.011) 0.49ng

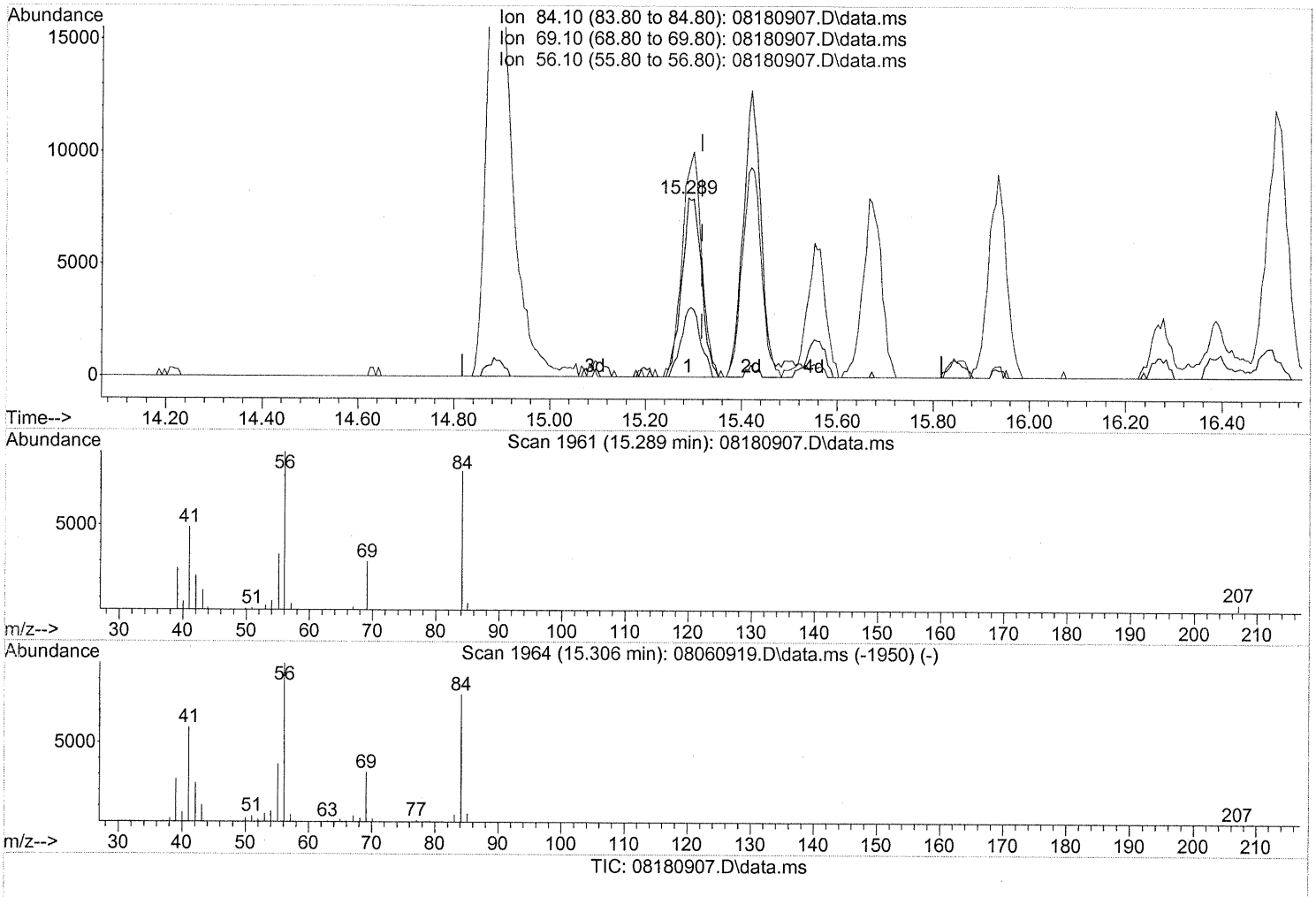
response 8297

| Ion | Exp% | Act% |
|---|---|---|
| 116.90 | 100 | 100 |
| 118.90 | 97.10 | 96.28 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(43) Cyclohexane (T)

15.289min (-0.029) 1.17ng

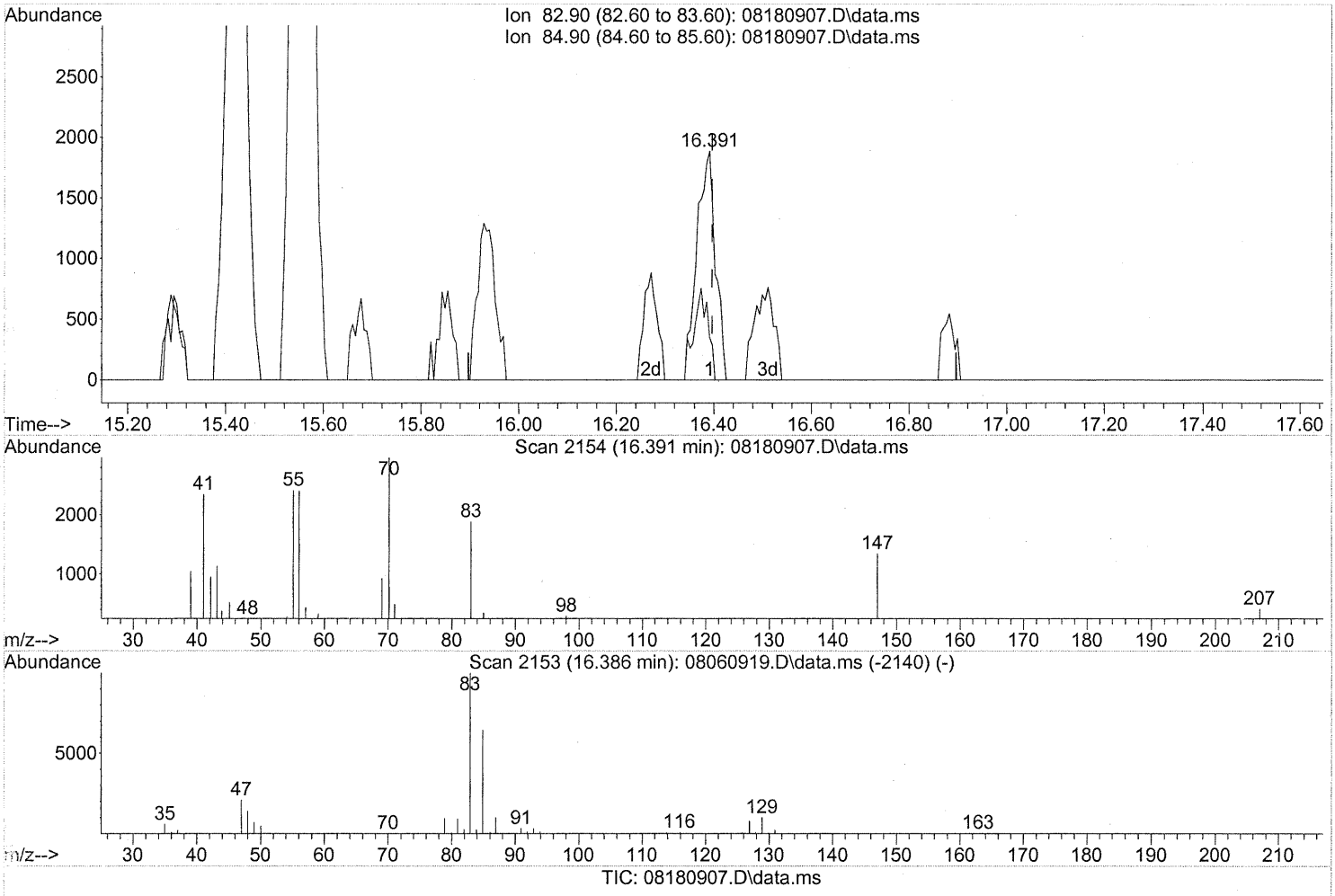
response 22628

| Ion | Exp% | Act% |
|---|---|---|
| 84.10 | 100 | 100 |
| 69.10 | 38.70 | 38.15 |
| 56.10 | 127.50 | 125.96 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(46) Bromodichloromethane (T)

16.391min (-0.006) 0.29ng

response 4998

| Ion | Exp% | Act% |
|---|---|---|
| 82.90 | 100 | 100 |
| 84.90 | 62.80 | 31.23# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

MM 8/22/09

Em 8/25/09

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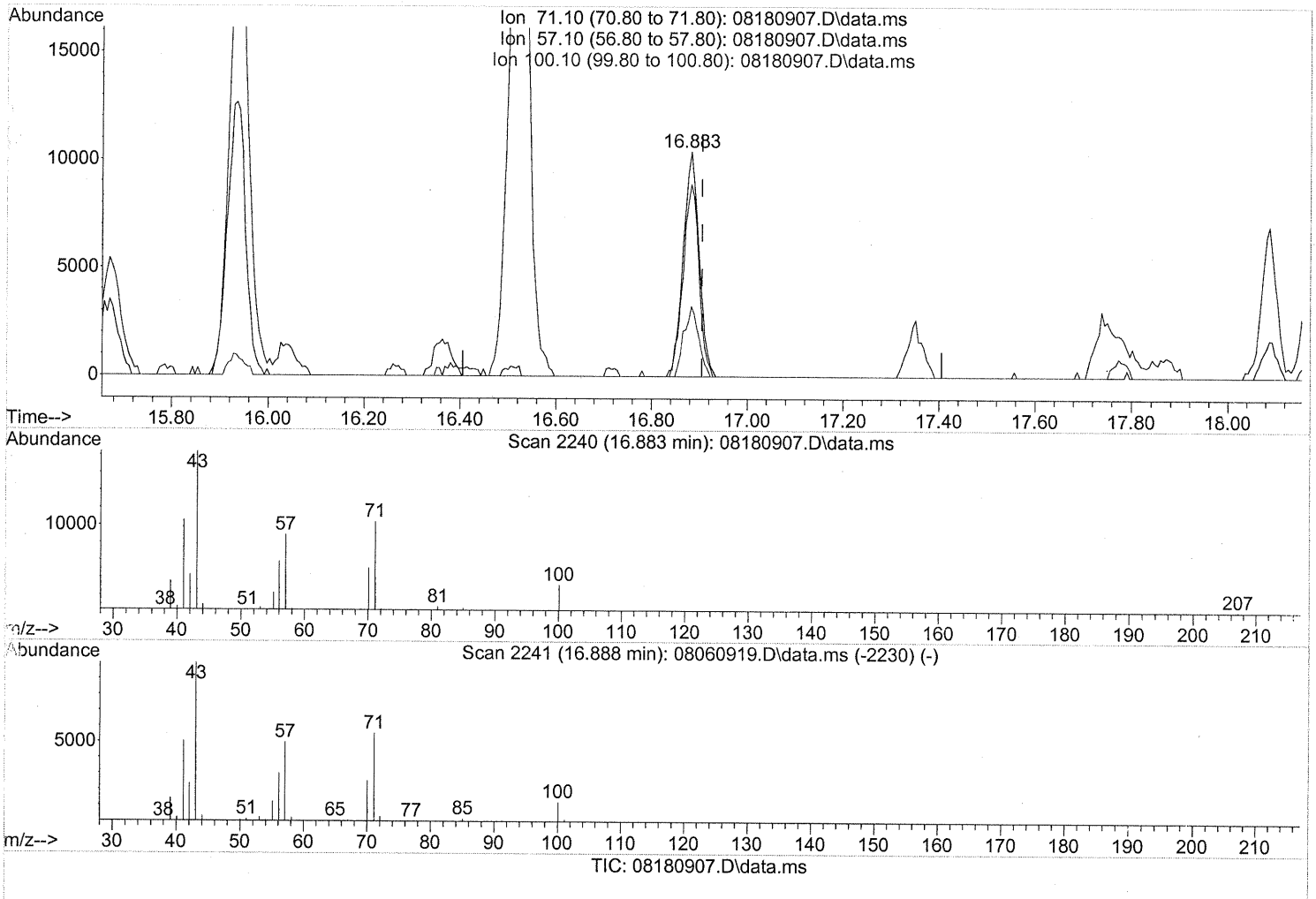
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(51) n-Heptane (T)

16.883min (-0.023) 1.71ng

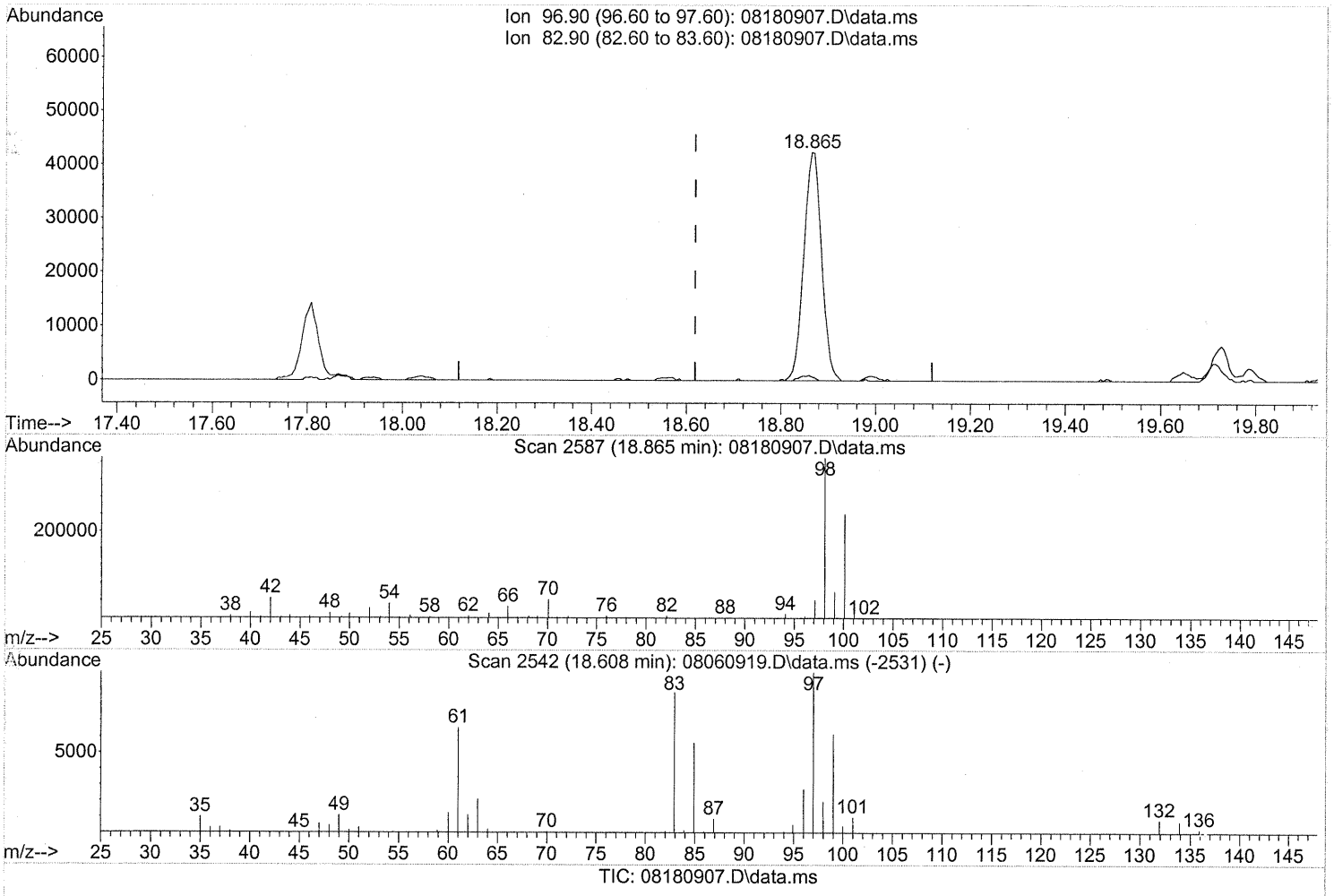
response 24123

| Ion | Exp% | Act% |
|---|---|---|
| 71.10 | 100 | 100 |
| 57.10 | 91.90 | 85.81 |
| 100.10 | 26.40 | 28.92 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(55) 1,1,2-Trichloroethane (T)

18.865min (+0.246) 9.60ng

response 110888

| Ion | Exp% | Act% |
|---|---|---|
| 96.90 | 100 | 100 |
| 82.90 | 90.30 | 1.68# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

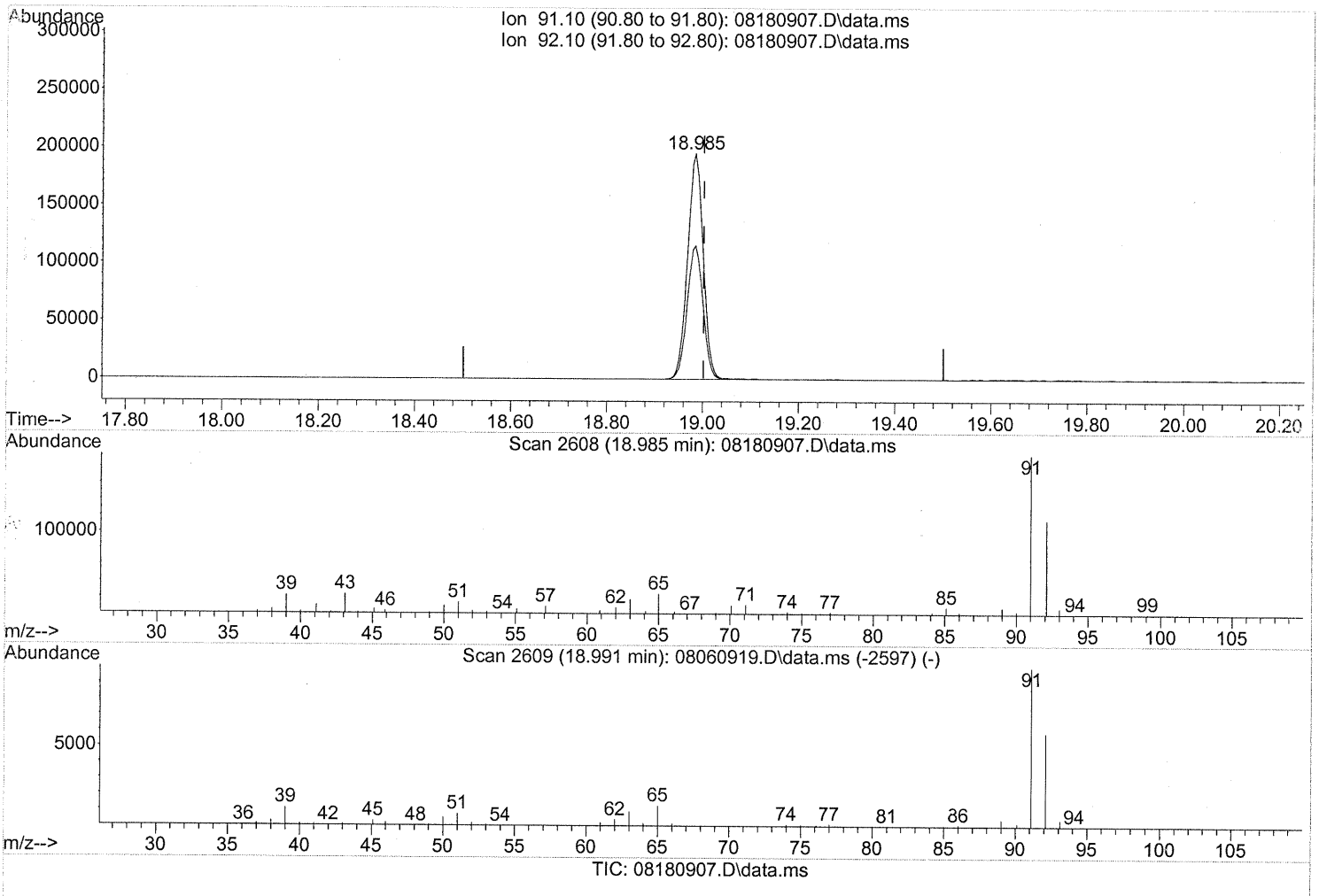
FP

DA 8/22/09 Em 8/25/09

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(58) Toluene (T)

18.985min (-0.017) 9.03ng

response 440701

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 92.10 | 58.60 | 60.18 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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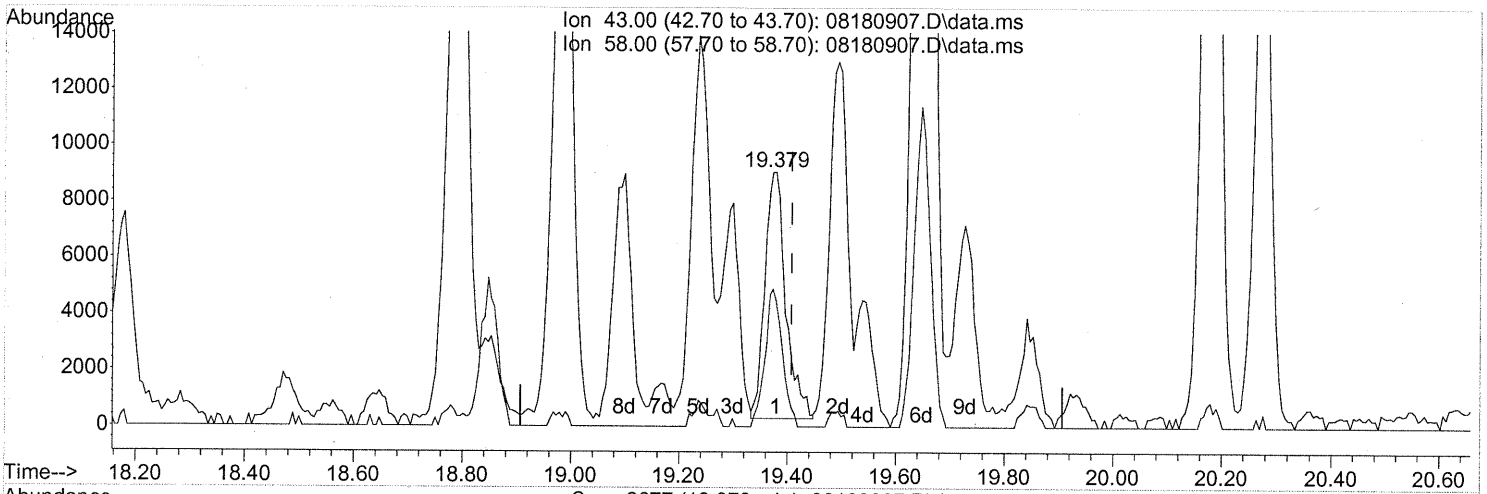
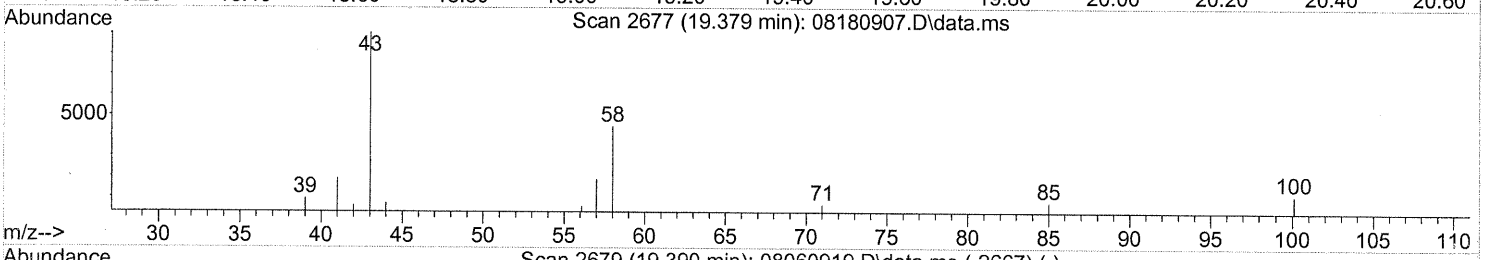
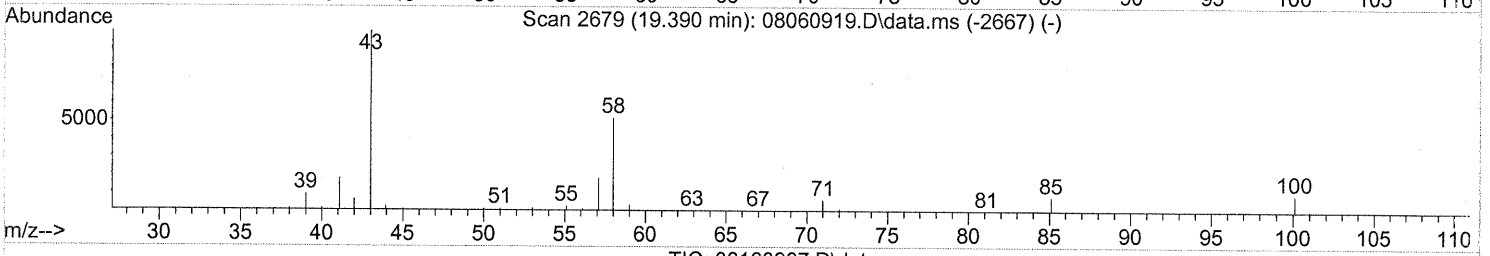
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(59) 2-Hexanone (T)

19.379min (-0.029) 0.72ng

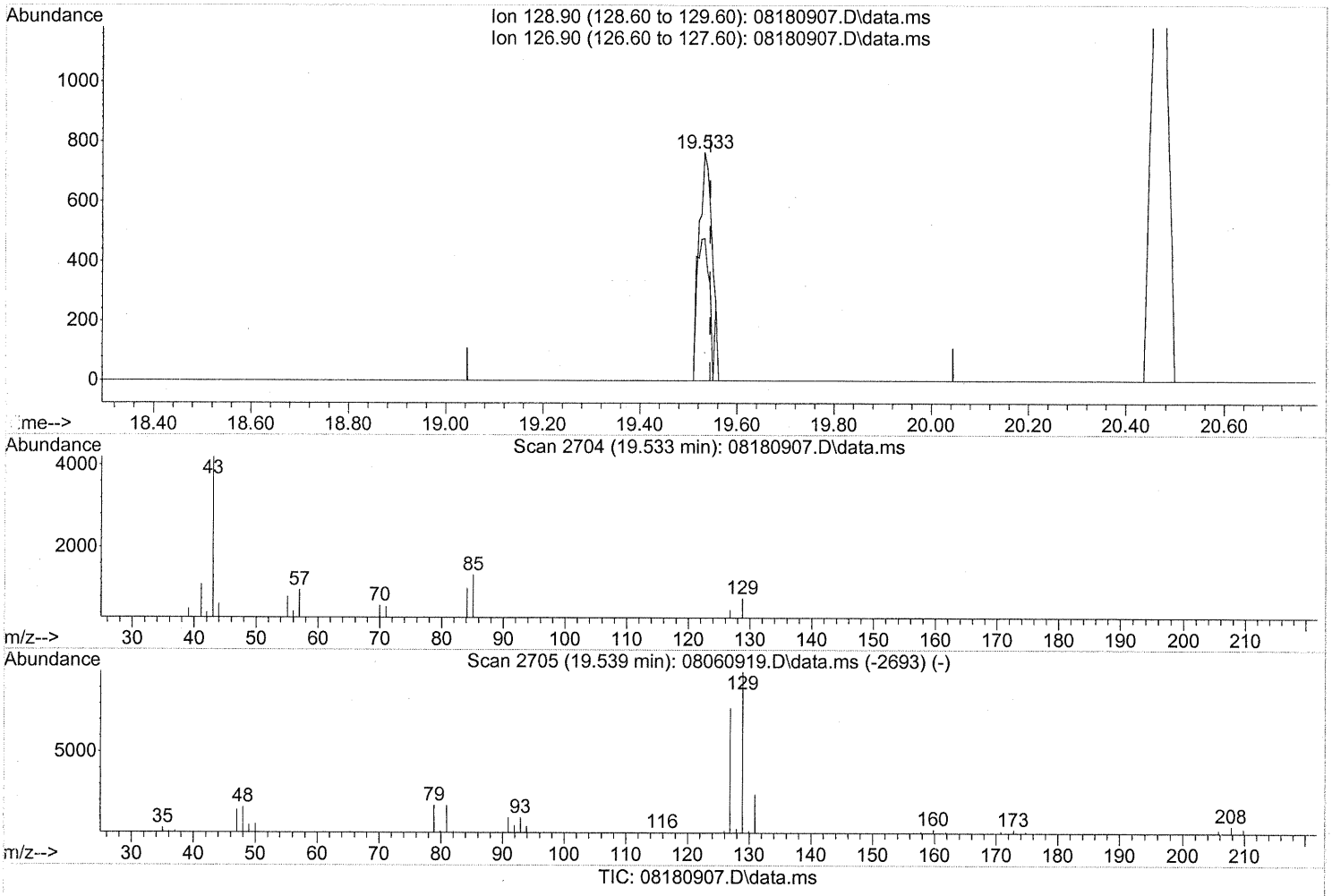
response 23529

| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 58.00 | 50.90 | 46.36 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(60) Dibromochloromethane (T)

19.533min (-0.011) 0.12ng

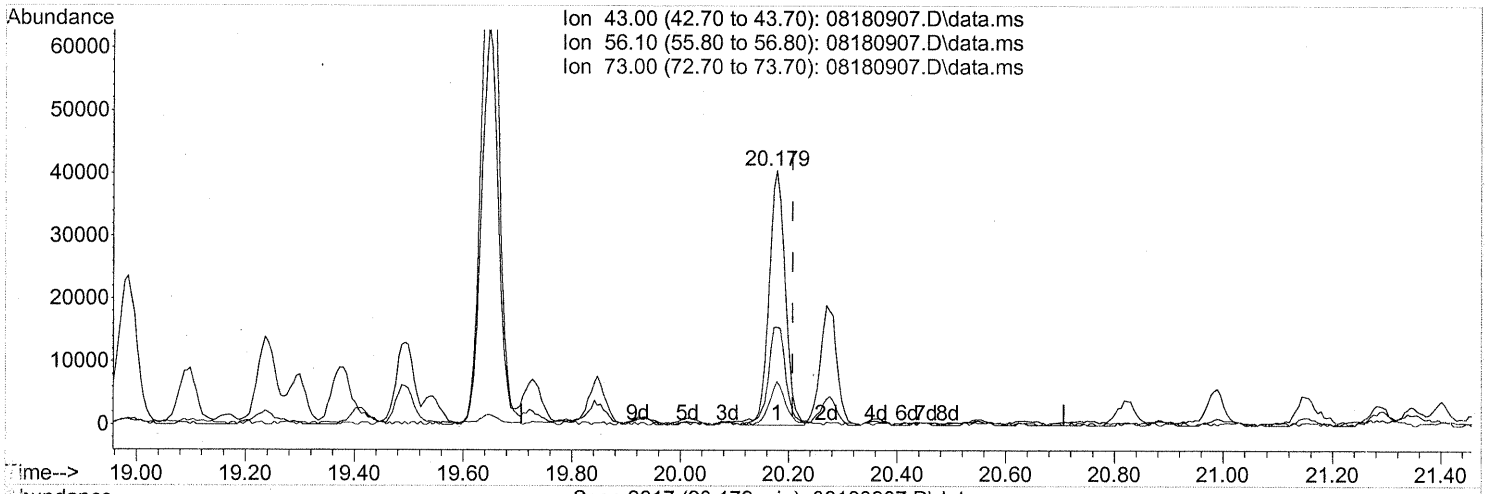
response 1403

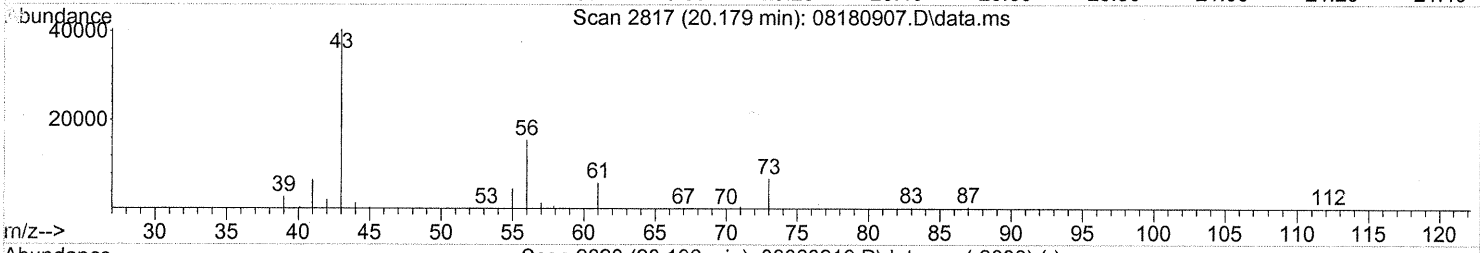
| Ion | Exp% | Act% |
|---|---|---|
| 128.90 | 100 | 100 |
| 126.90 | 76.40 | 66.64 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

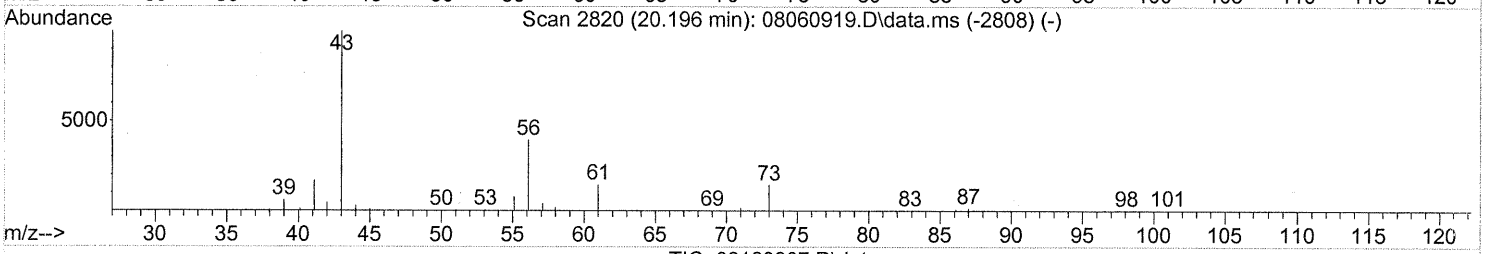
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(62) n-Butyl Acetate (T)

20.179min (-0.029) 2.21ng

response 84681

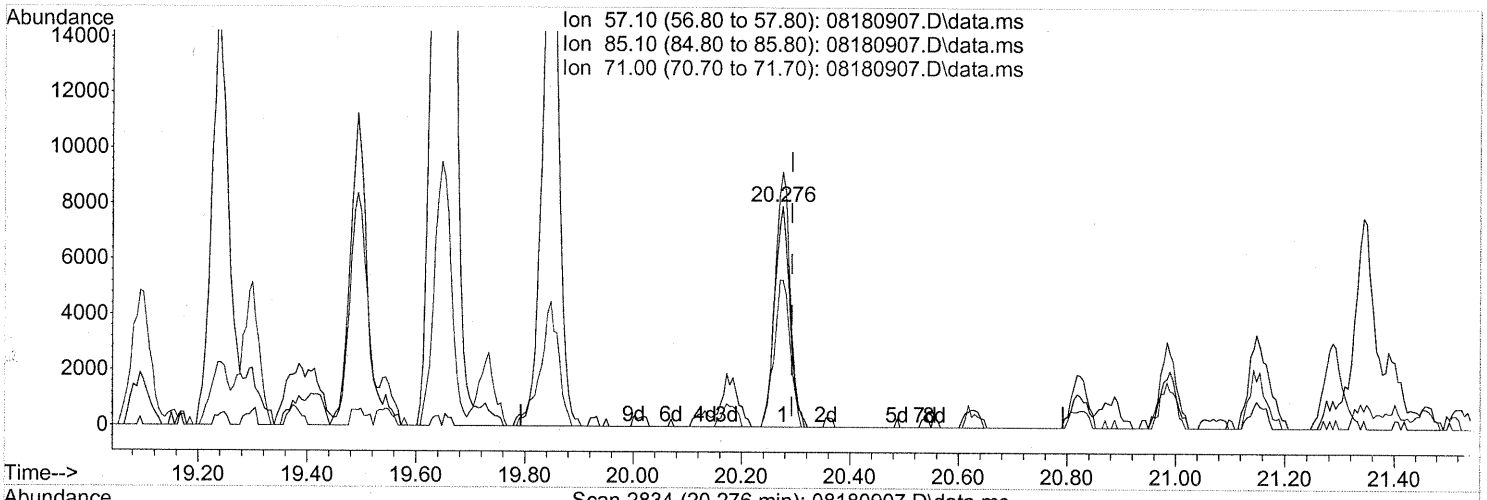
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 56.10 | 38.50 | 40.10 |
| 73.00 | 14.80 | 17.65 |
| 0.00 | 0.00 | 0.00 |

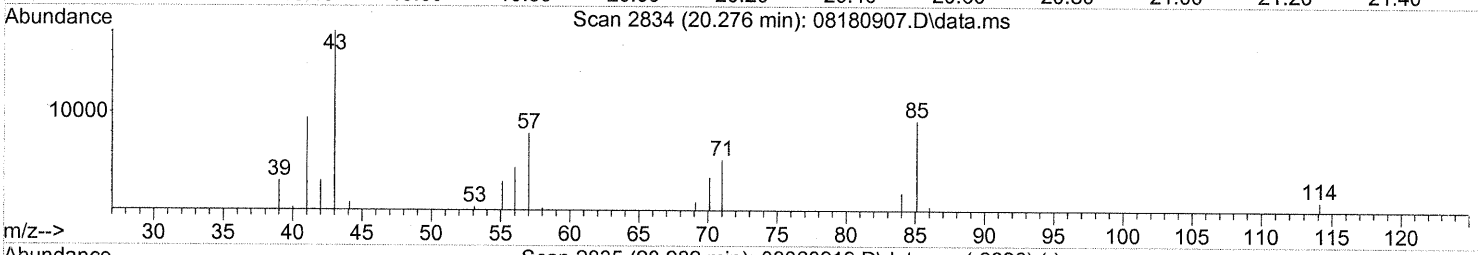
43

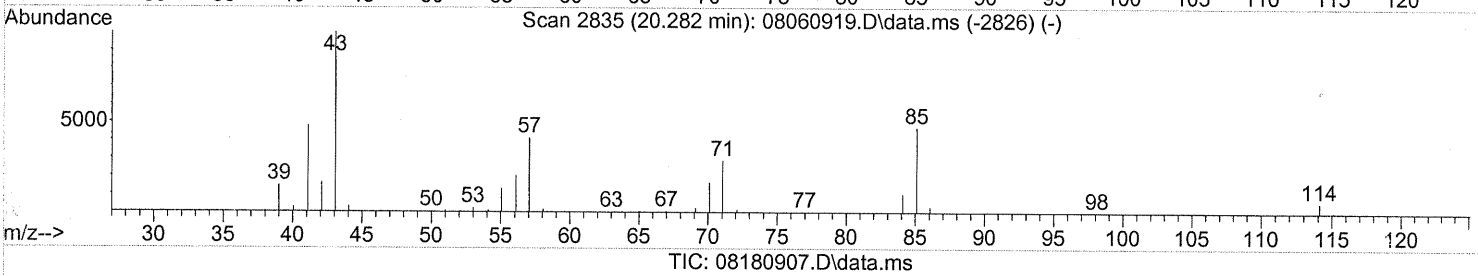
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(63) n-Octane (T)

20.276min (-0.017) 1.32ng

response 15578

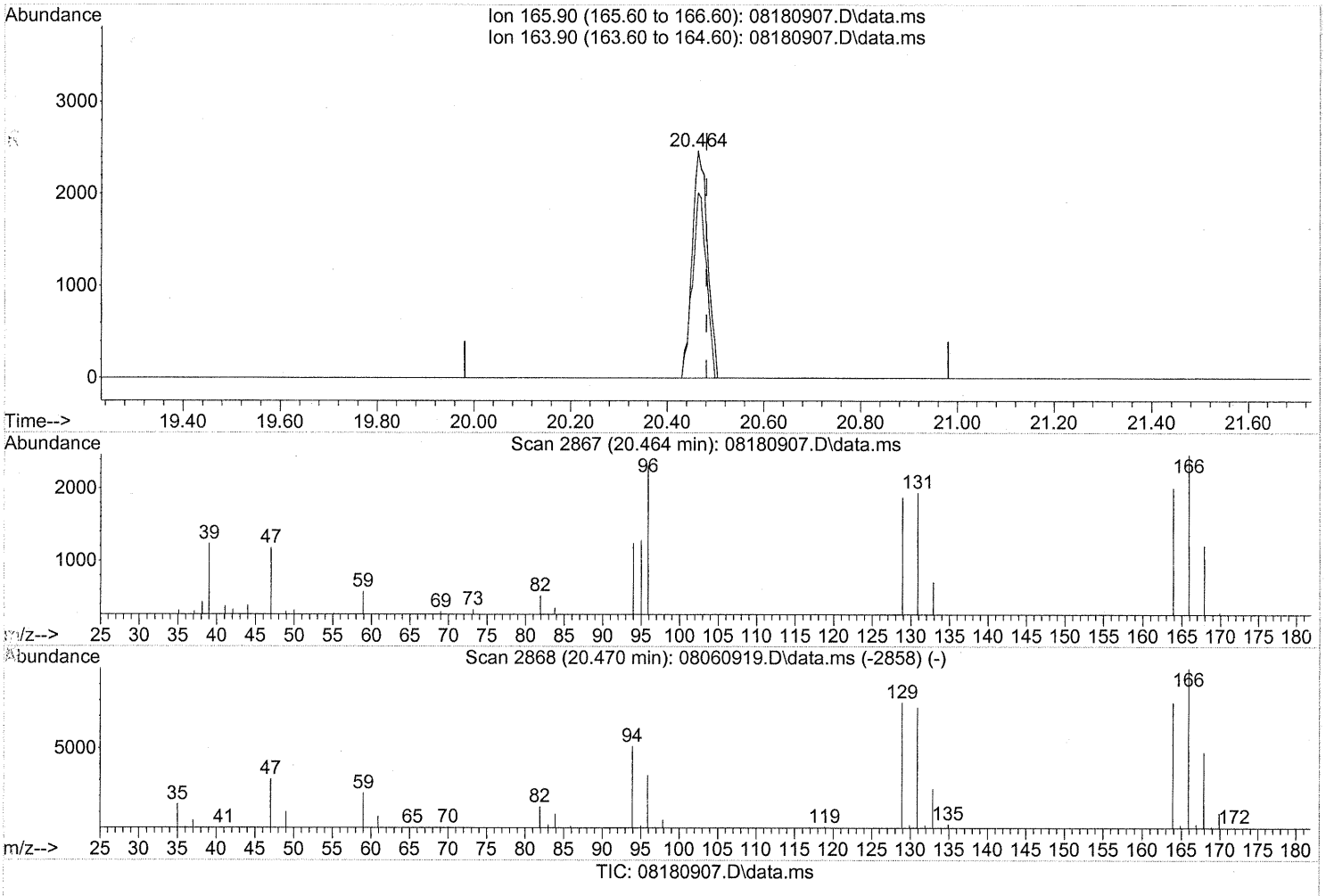
| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 85.10 | 107.00 | 114.19 |
| 71.00 | 68.10 | 69.55 |
| 0.00 | 0.00 | 0.00 |

44

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(64) Tetrachloroethene (T)

20.464min (-0.017) 0.48ng

response 5440

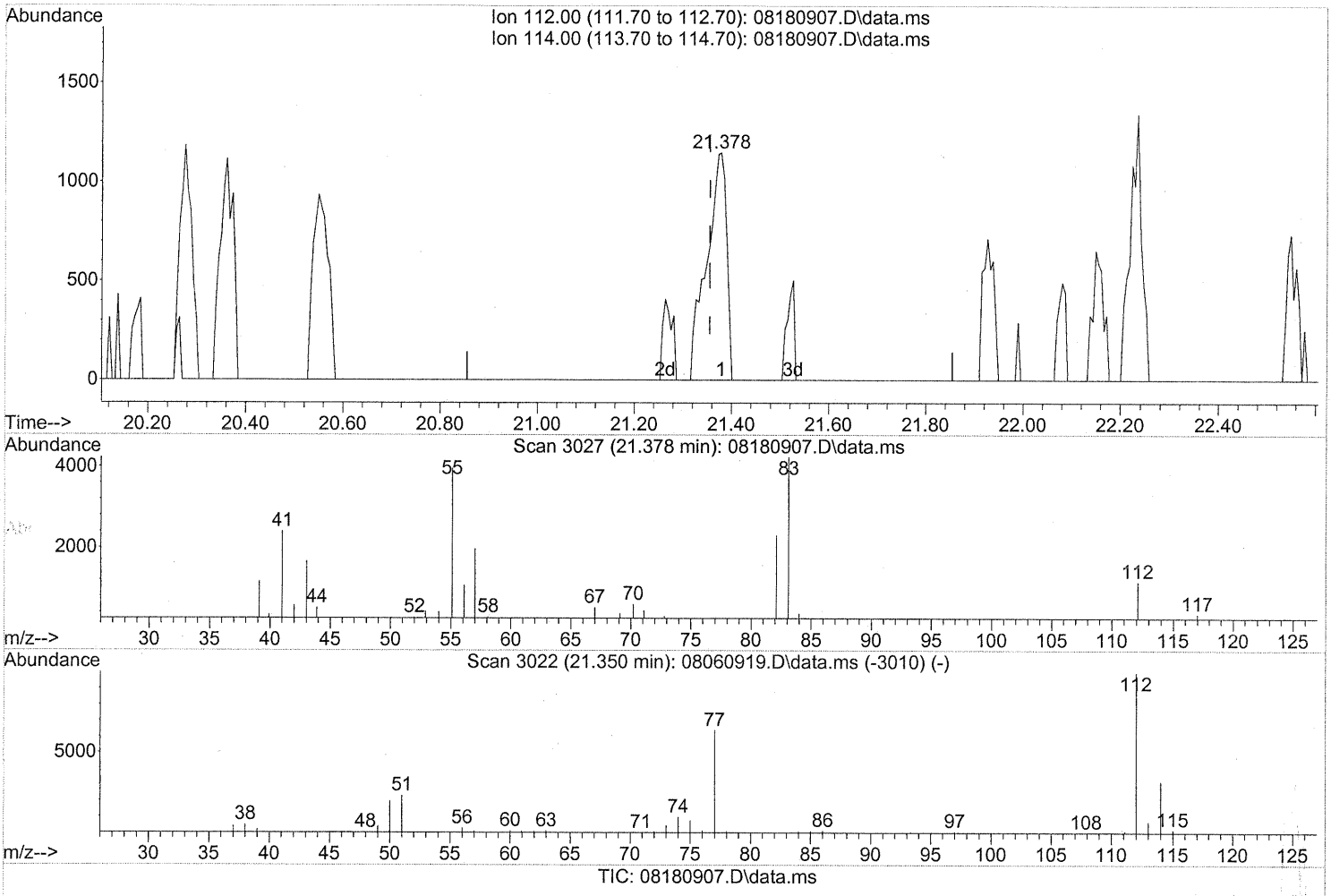
| Ion | Exp% | Act% |
|---|---|---|
| 165.90 | 100 | 100 |
| 163.90 | 77.80 | 74.26 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

45

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:25:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(65) Chlorobenzene (T)

21.378min (+0.023) 0.11ng

response 3256

| 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

DM 8/24/09

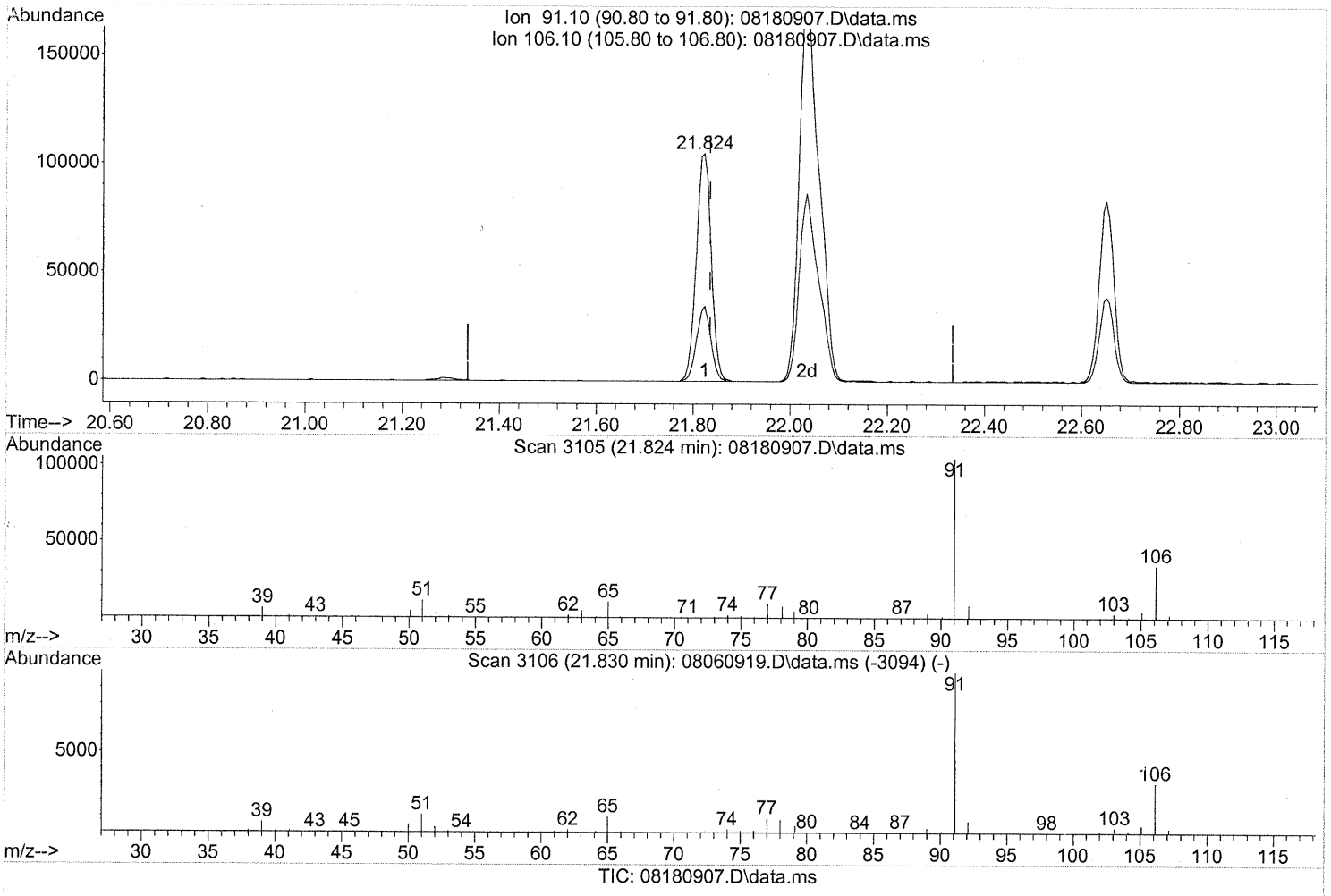
EM 8/25/09

46

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(66) Ethylbenzene (T)

21.824min (-0.011) 4.01ng

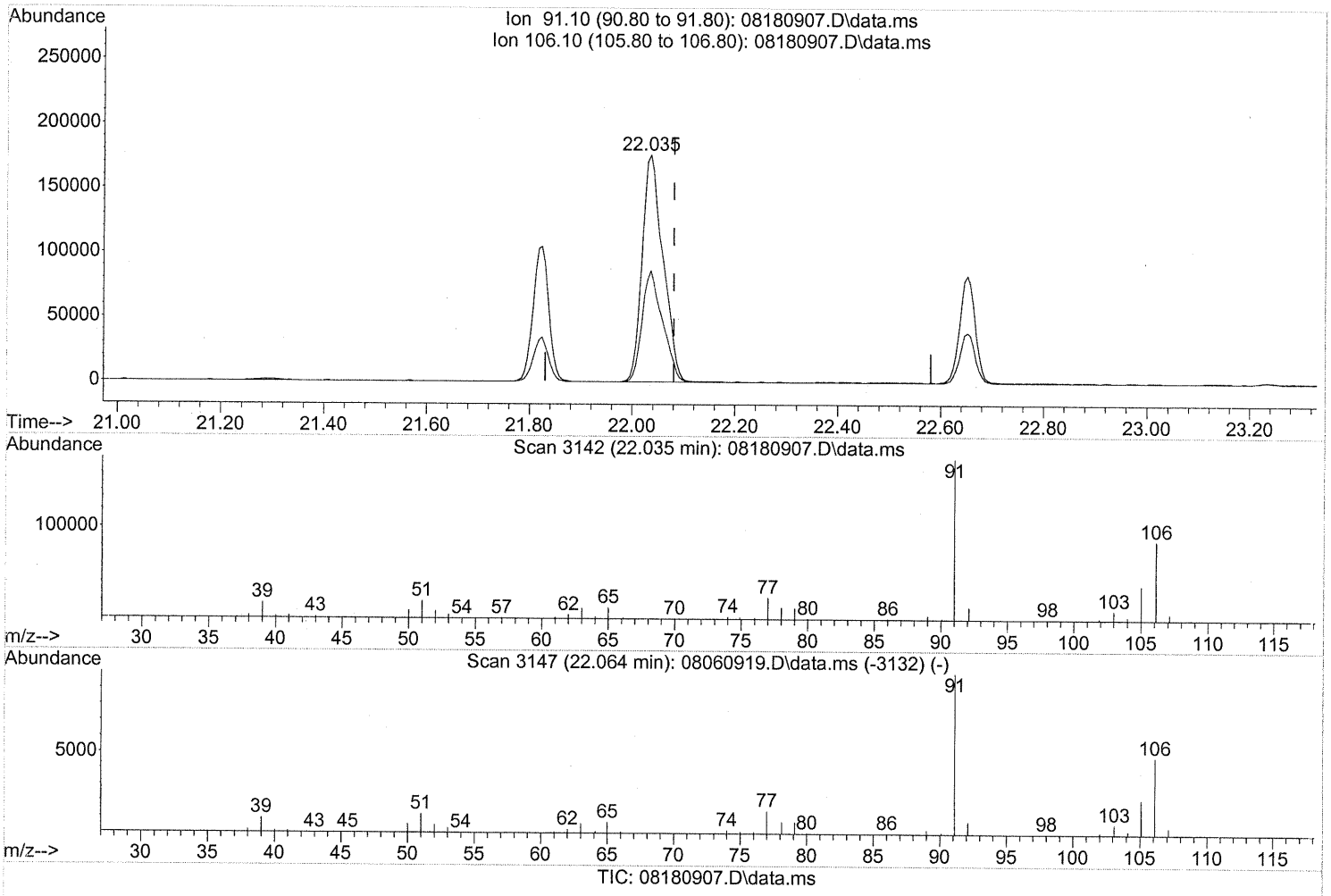
response 223900

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 30.10 | 31.31 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(67) m- & p-Xylenes (T)

22.035min (-0.046) 11.04ng

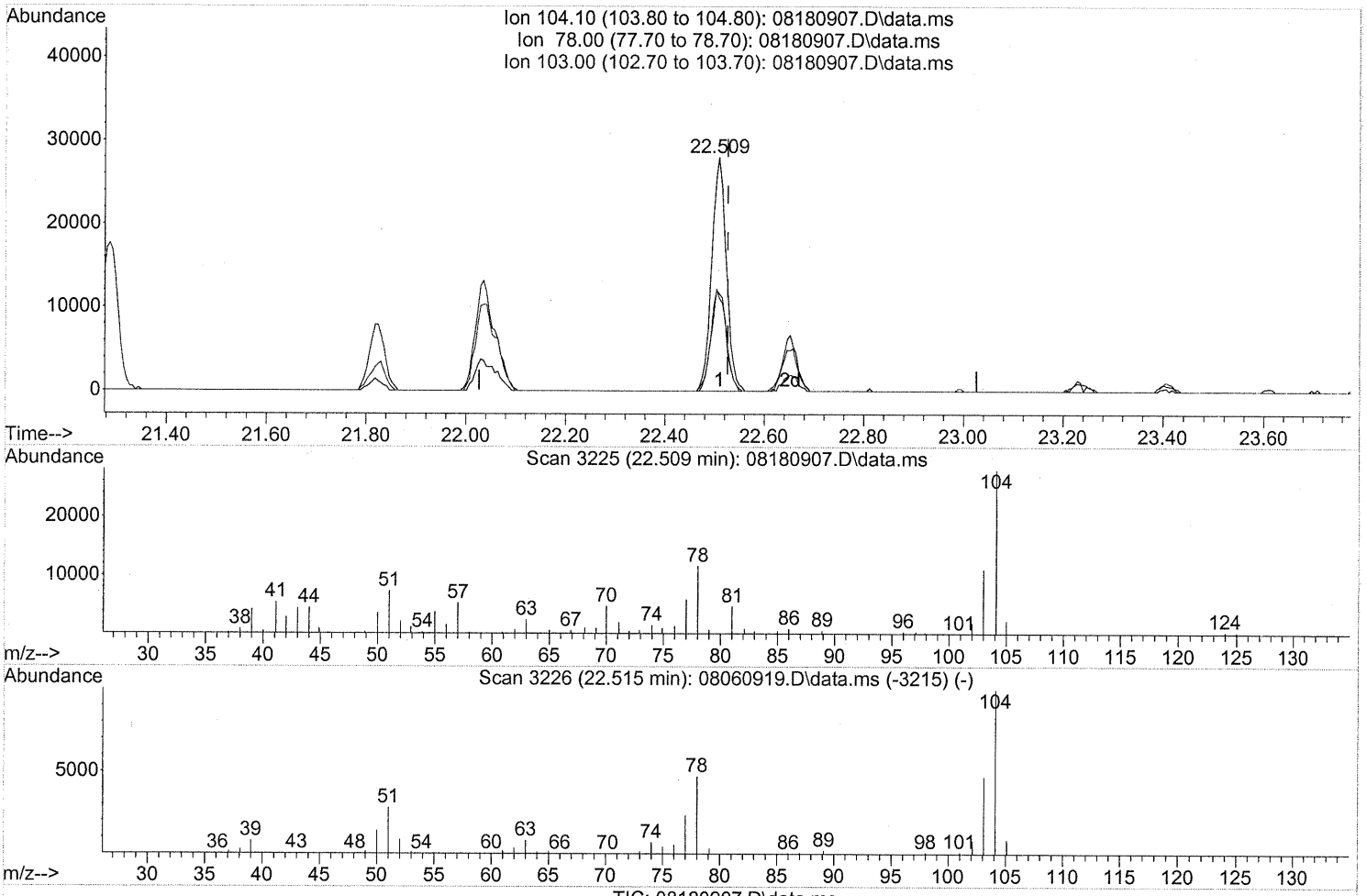
response 498455

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 46.90 | 47.87 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(69) Styrene (T)

22.509min (-0.017) 1.75ng

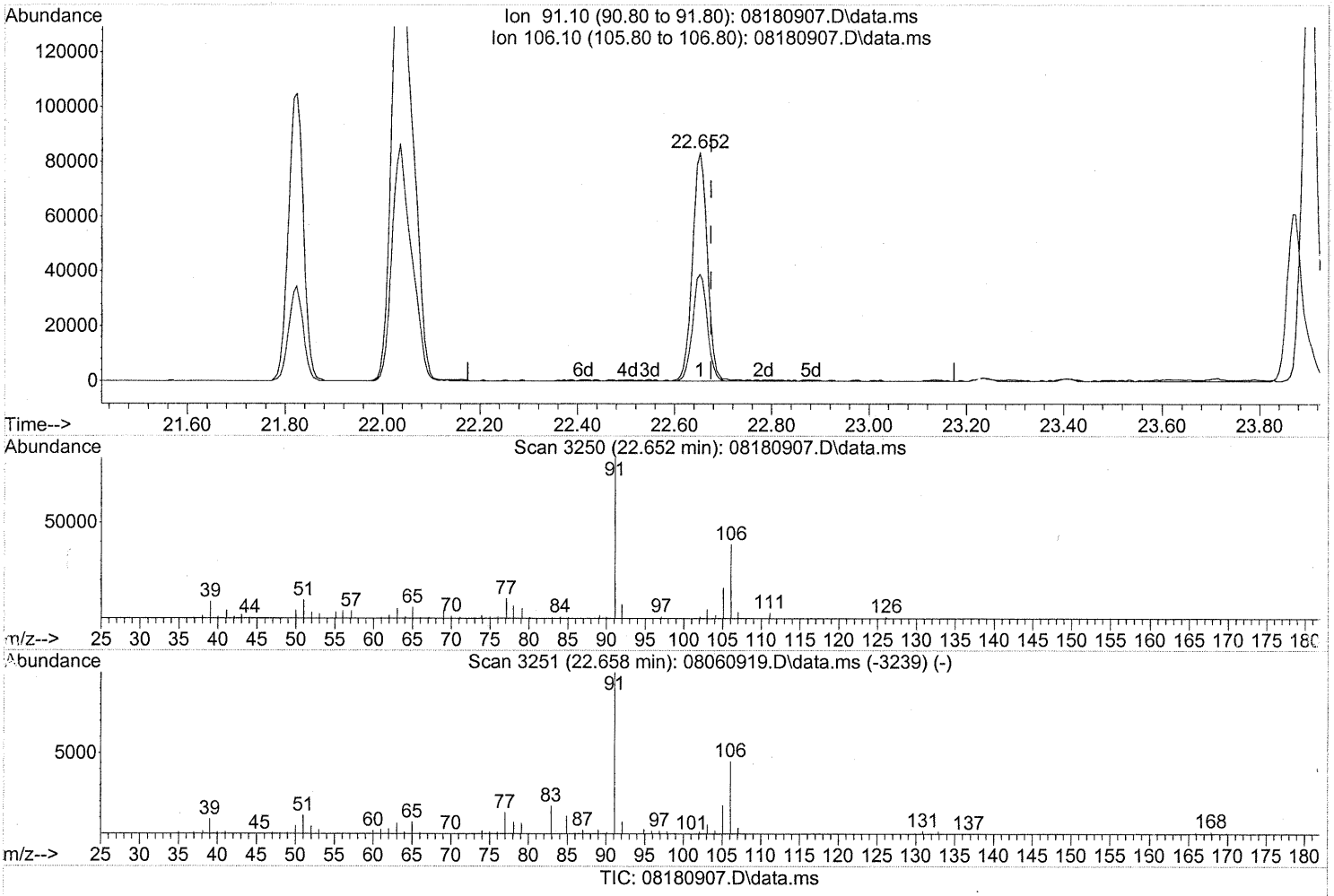
response 56990

| Ion | Exp% | Act% |
|---|---|---|
| 104.10 | 100 | 100 |
| 78.00 | 47.10 | 45.07 |
| 103.00 | 46.20 | 44.79 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(70) o-Xylene (T)

22.652min (-0.023) 3.92ng

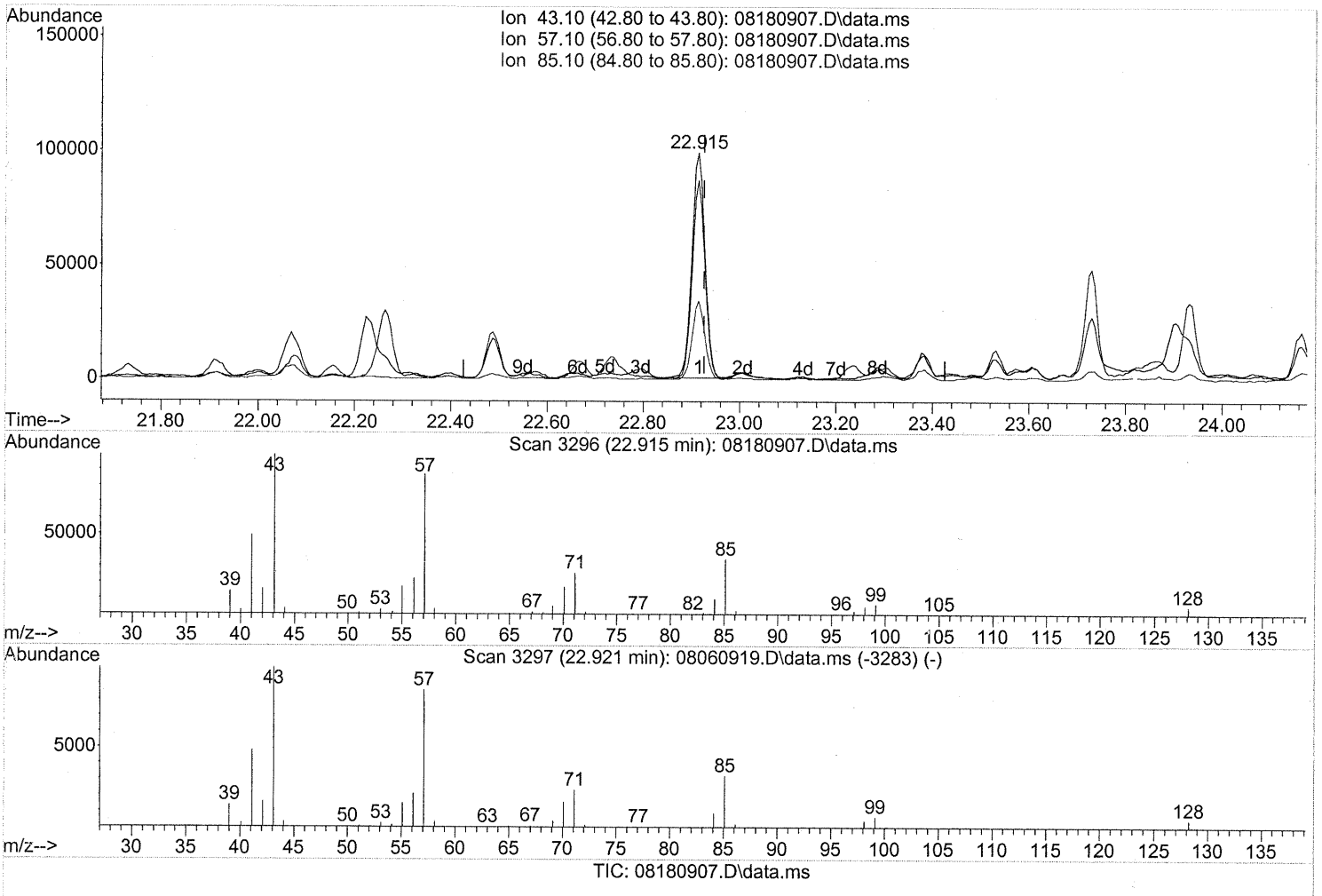
response 177450

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 44.10 | 45.73 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(71) n-Nonane (T)

22.915min (-0.011) 6.21ng

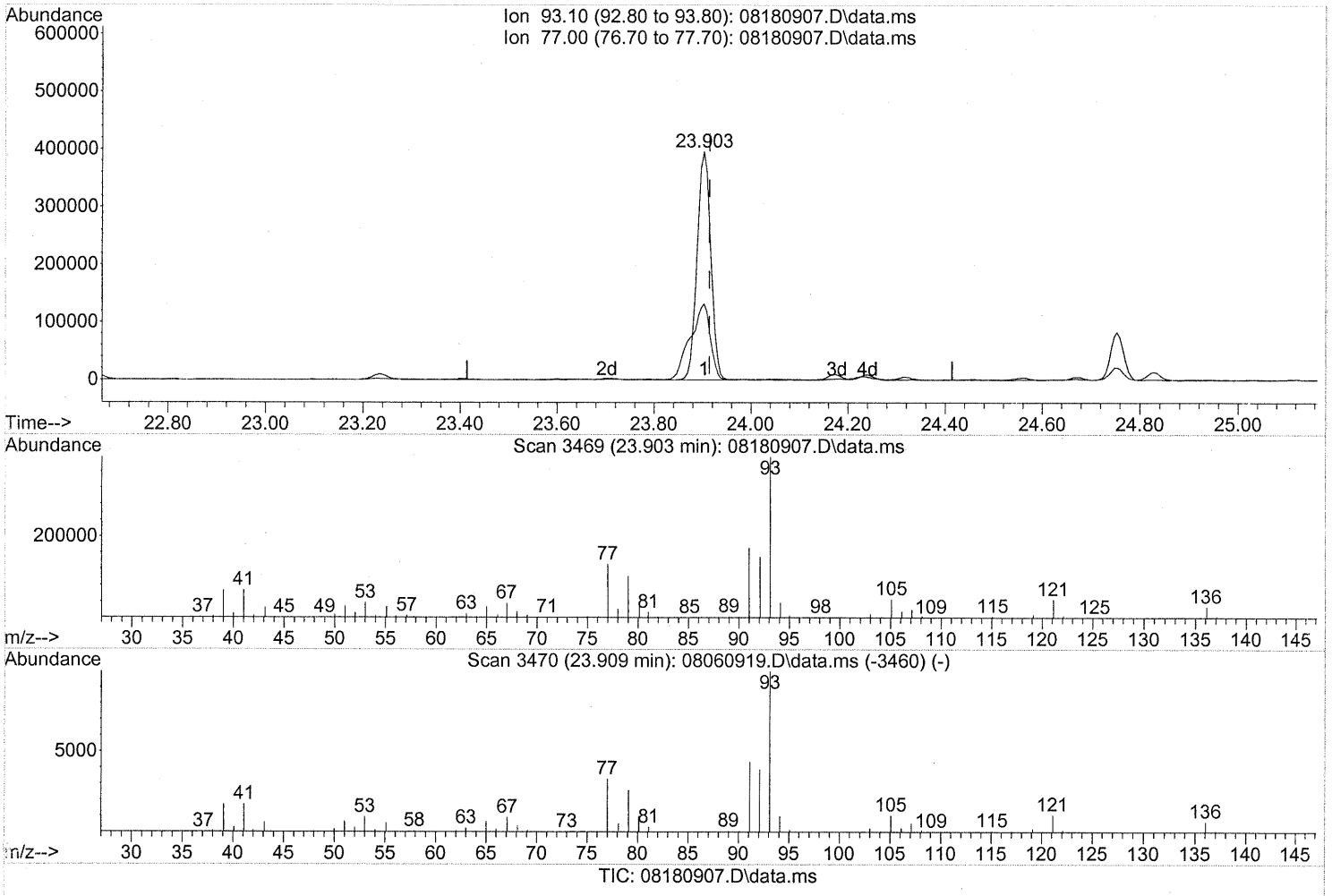
response 186896

| Ion | Exp% | Act% |
|---|---|---|
| 43.10 | 100 | 100 |
| 57.10 | 84.90 | 87.55 |
| 85.10 | 30.40 | 33.49 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(75) alpha-Pinene (T)

23.903min (-0.011) 26.52ng

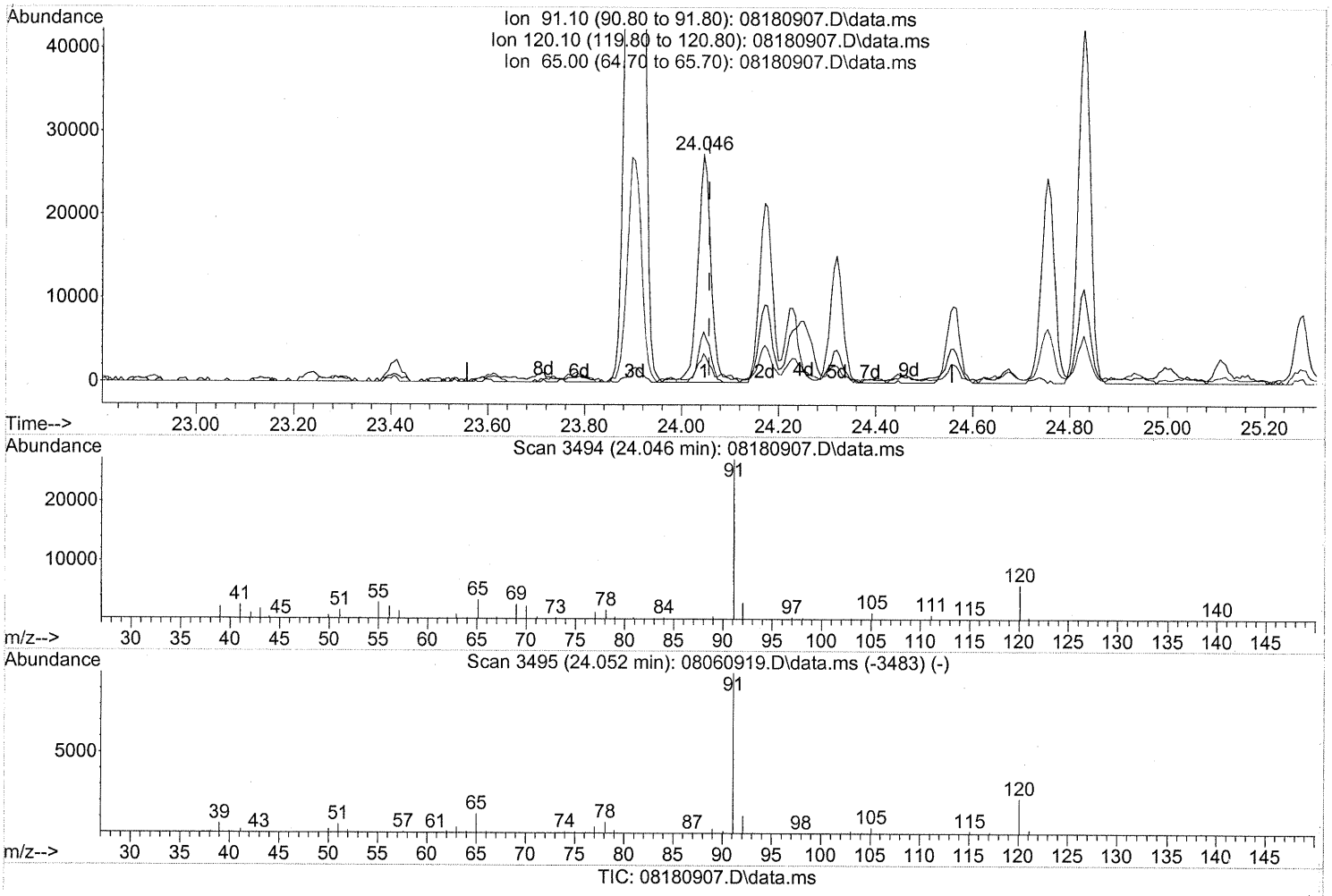
response 777153

| Ion | Exp% | Act% |
|---|---|---|
| 93.10 | 100 | 100 |
| 77.00 | 32.40 | 48.72 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

52

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(76) n-Propylbenzene (T)

24.046min (-0.011) 0.72ng

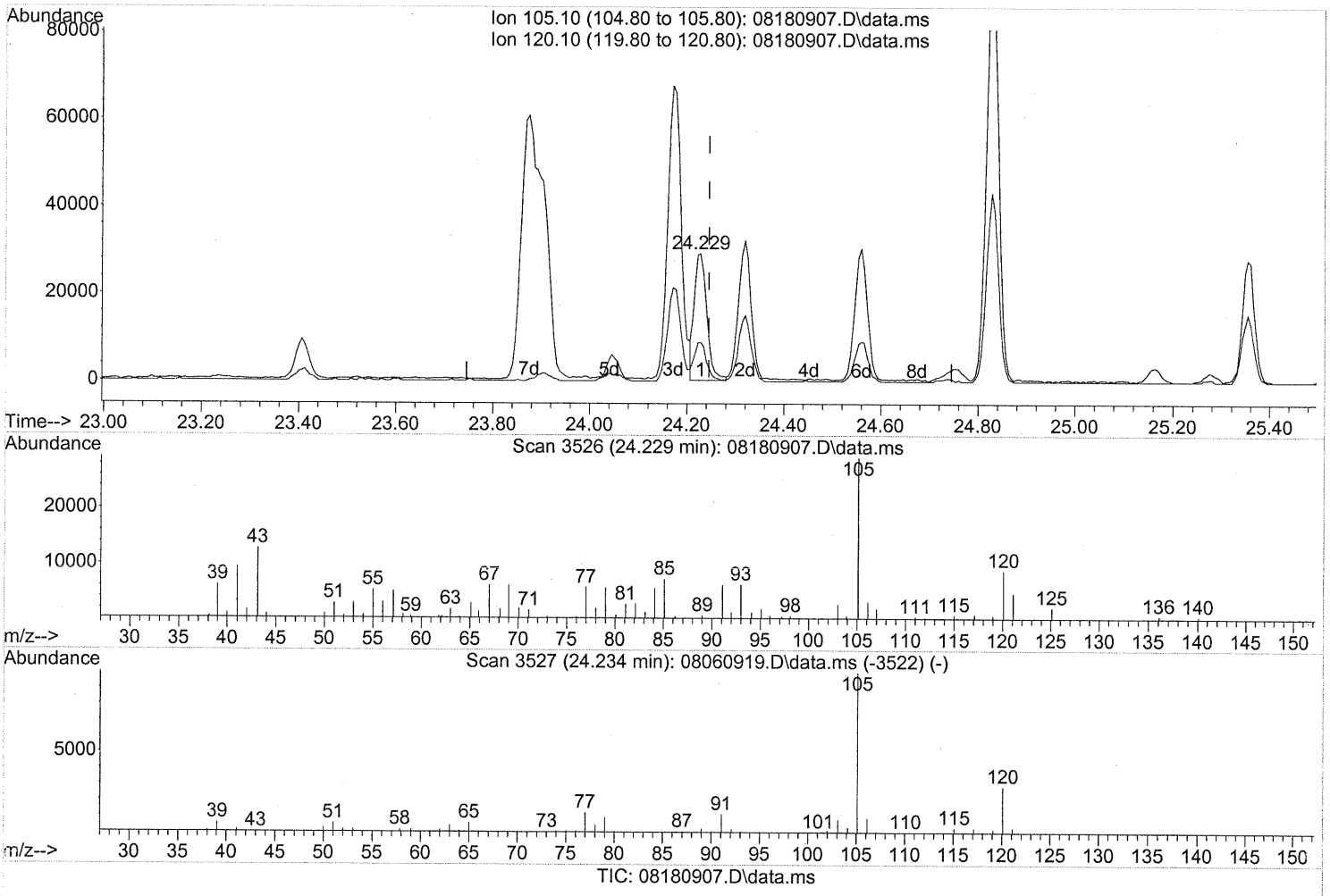
response 51522

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 120.10 | 21.60 | 20.52 |
| 65.00 | 12.00 | 11.14 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(78) 4-Ethyltoluene (T)

24.229min (-0.017) 1.00ng

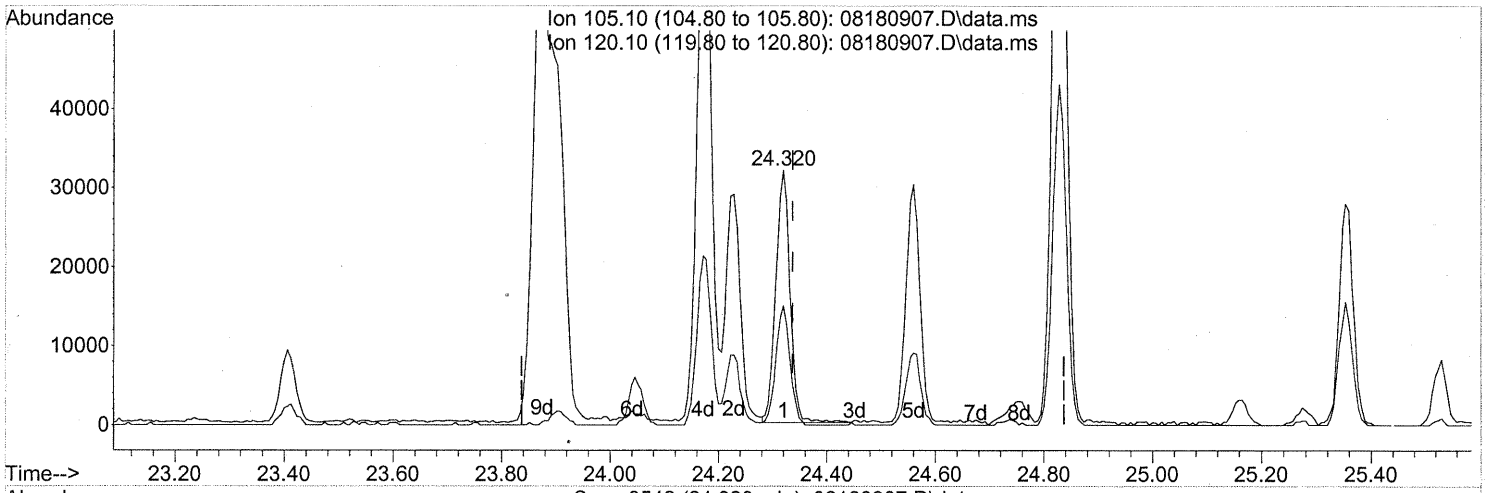
response 52997

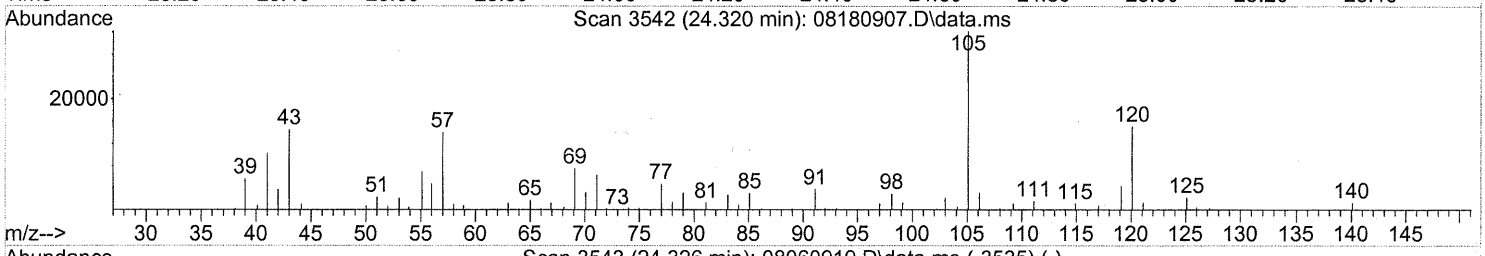
| Ion | Exp% | Act% |
|---|---|---|
| 105.10 | 100 | 100 |
| 120.10 | 28.40 | 30.40 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

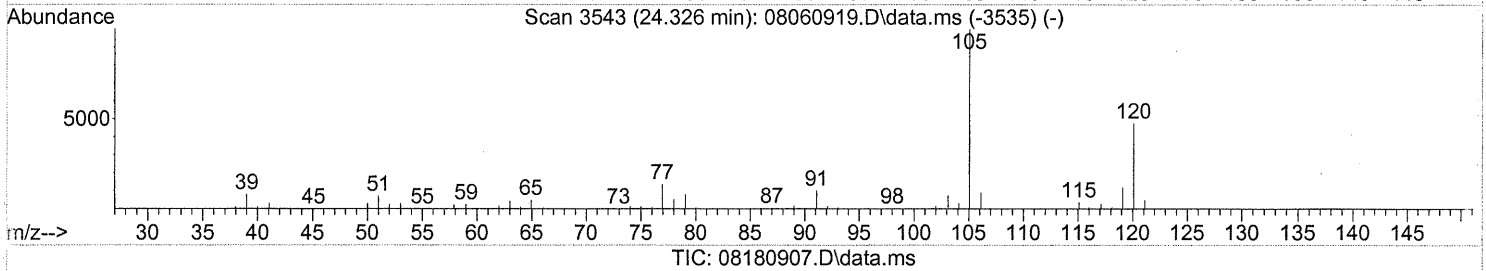
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(79) 1,3,5-Trimethylbenzene (T)

24.320min (-0.017) 1.31ng

response 58497

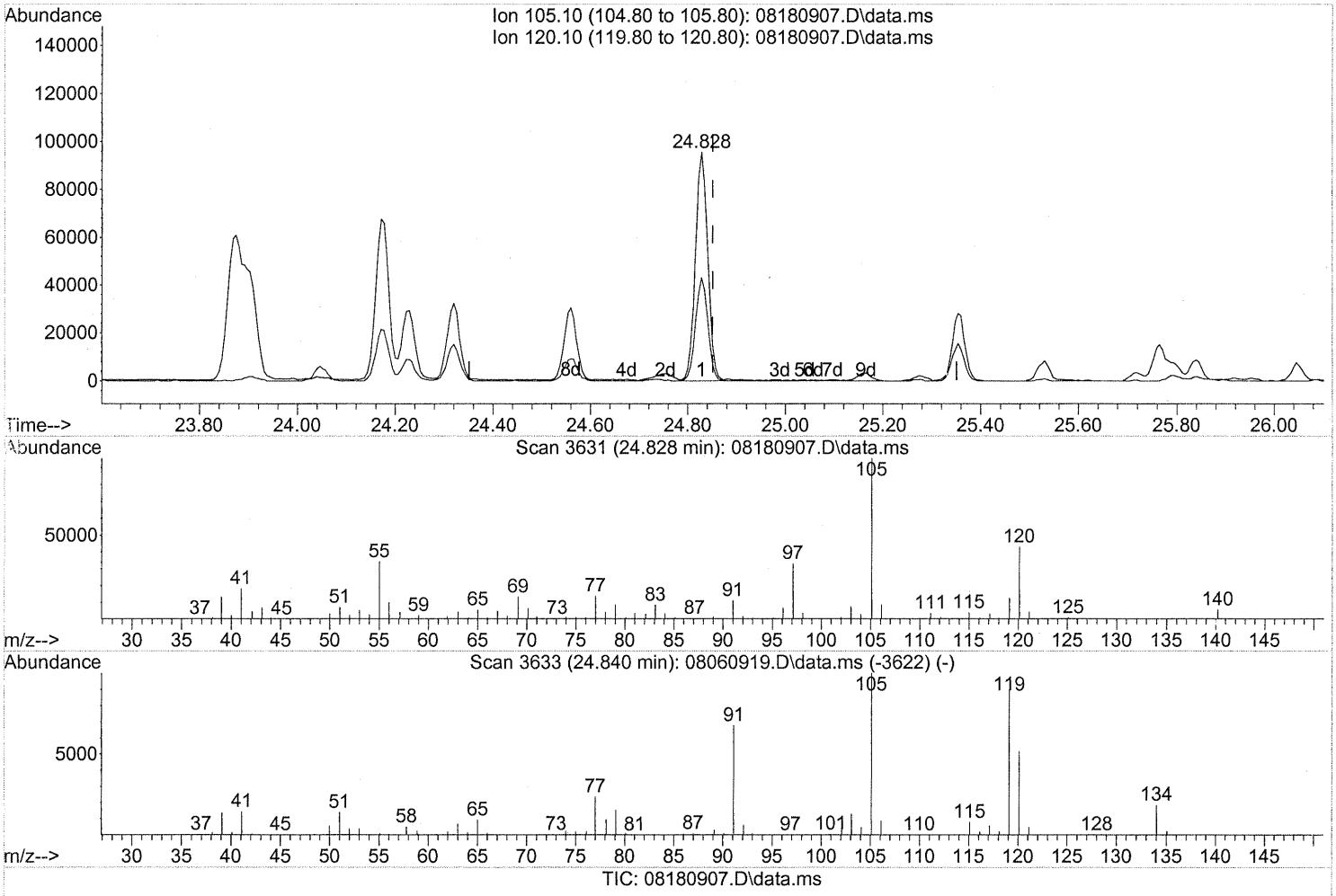
| Ion | Exp% | Act% |
|---|---|---|
| 105.10 | 100 | 100 |
| 120.10 | 46.80 | 46.98 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

55

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(82) 1,2,4-Trimethylbenzene (T)

24.828min (-0.023) 3.72ng

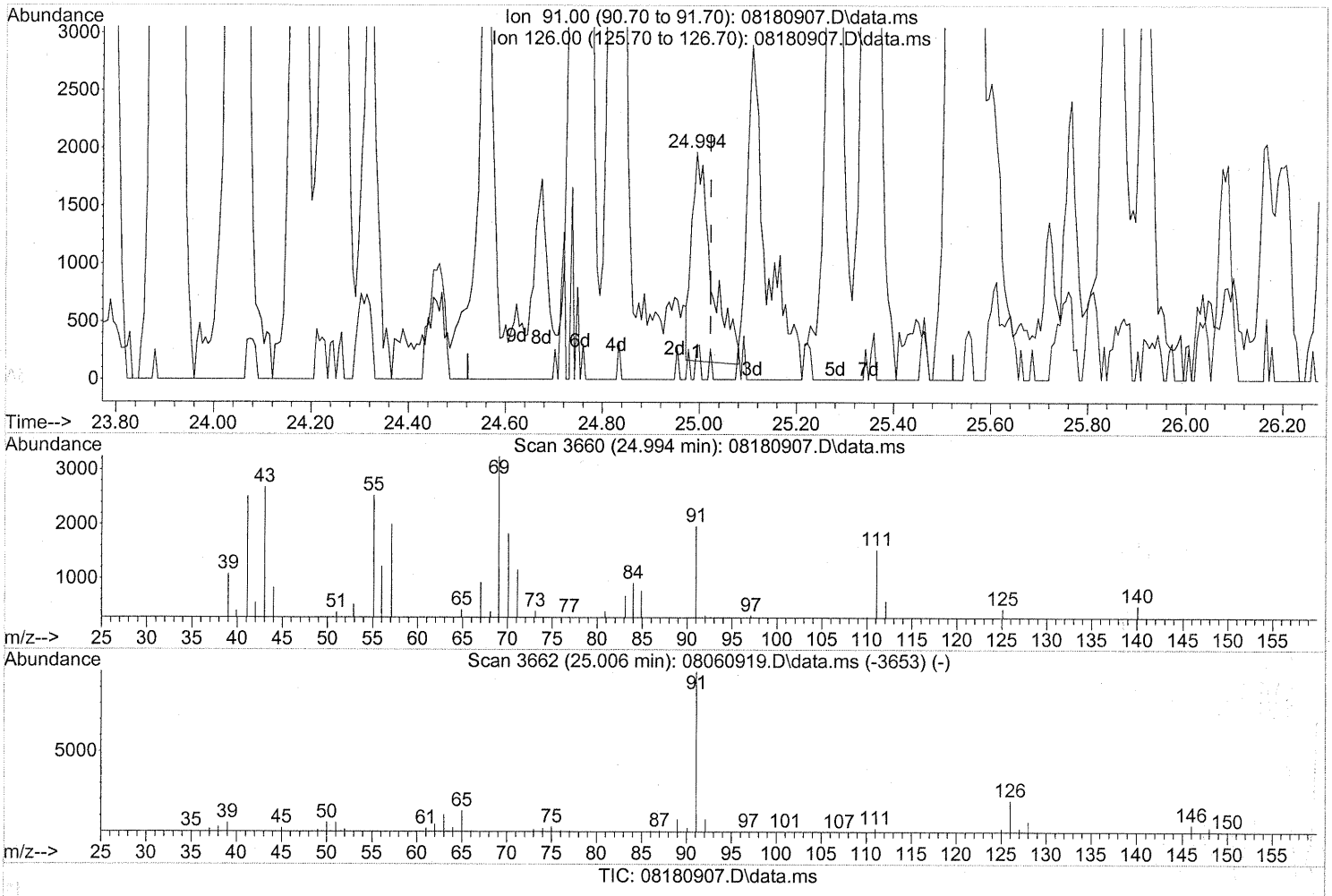
response 169251

| Ion | Exp% | Act% |
|---|---|---|
| 105.10 | 100 | 100 |
| 120.10 | 52.60 | 44.43 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:25:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(84) Benzyl Chloride (T)

24.994min (-0.029) 0.12ng

response 5195

| Ion | Exp% | Act% |
|---|---|---|
| 91.00 | 100 | 100 |
| 126.00 | 19.50 | 3.85 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

8/24/09

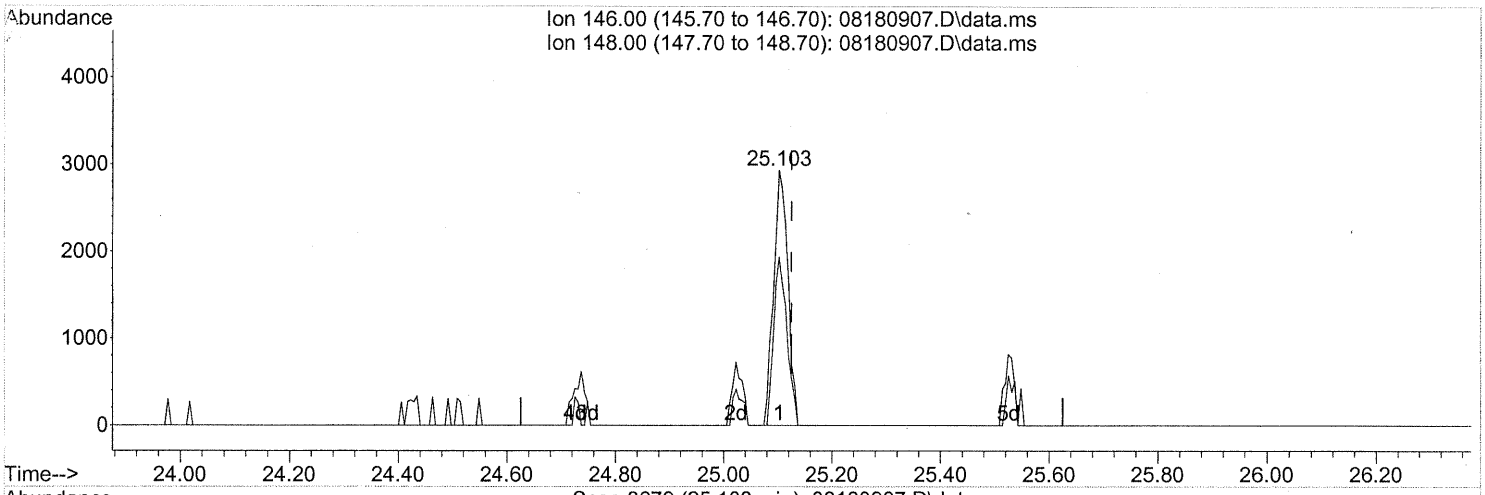
8/25/09

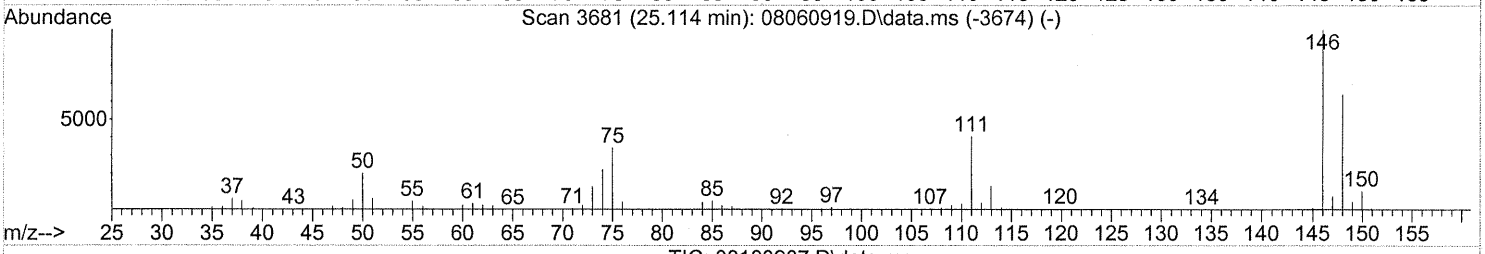
57

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.103min (-0.023) 0.22ng

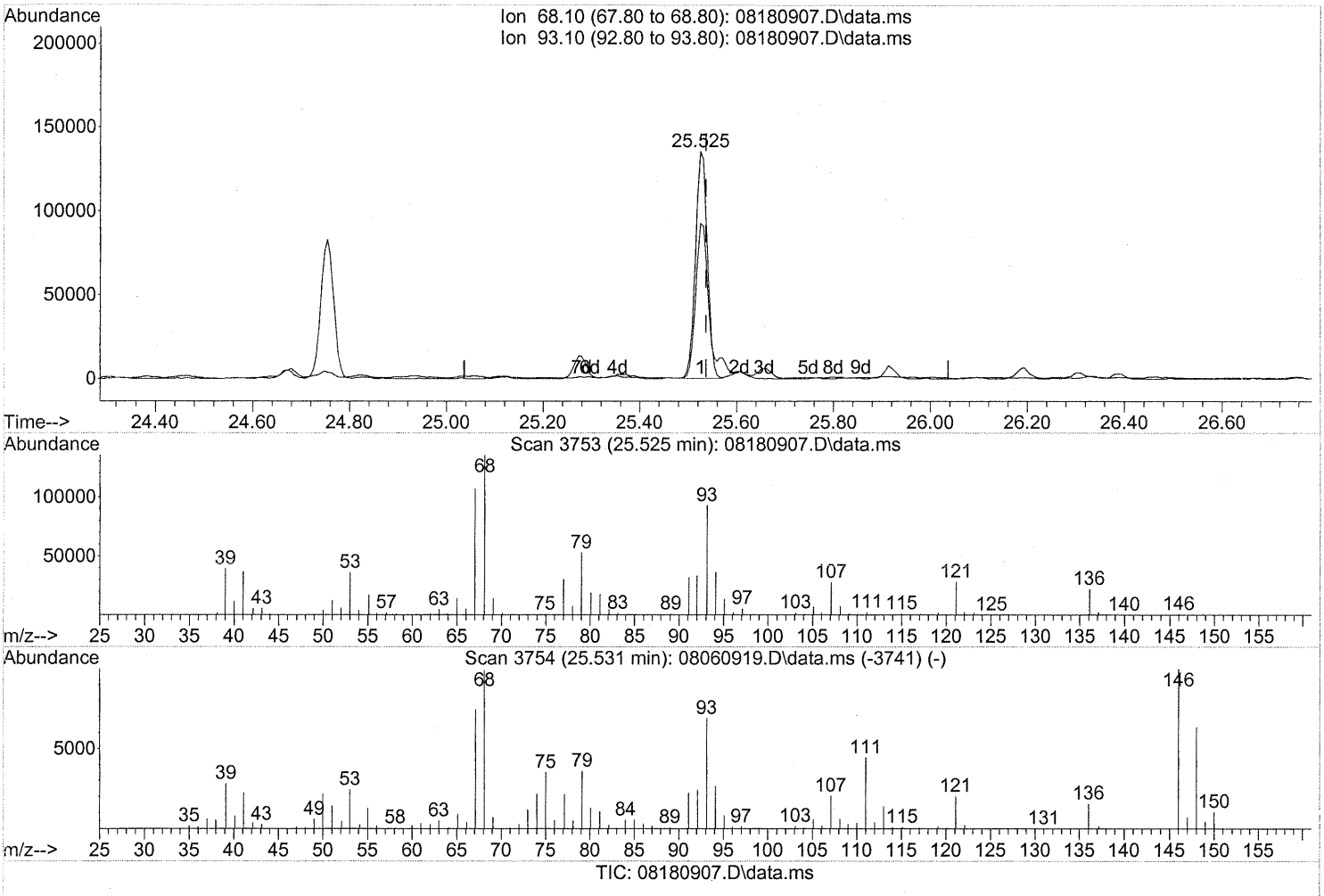
response 5329

| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 62.20 | 60.95 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(91) d-Limonene (T)

25.525min (-0.011) 11.89ng

response 230185

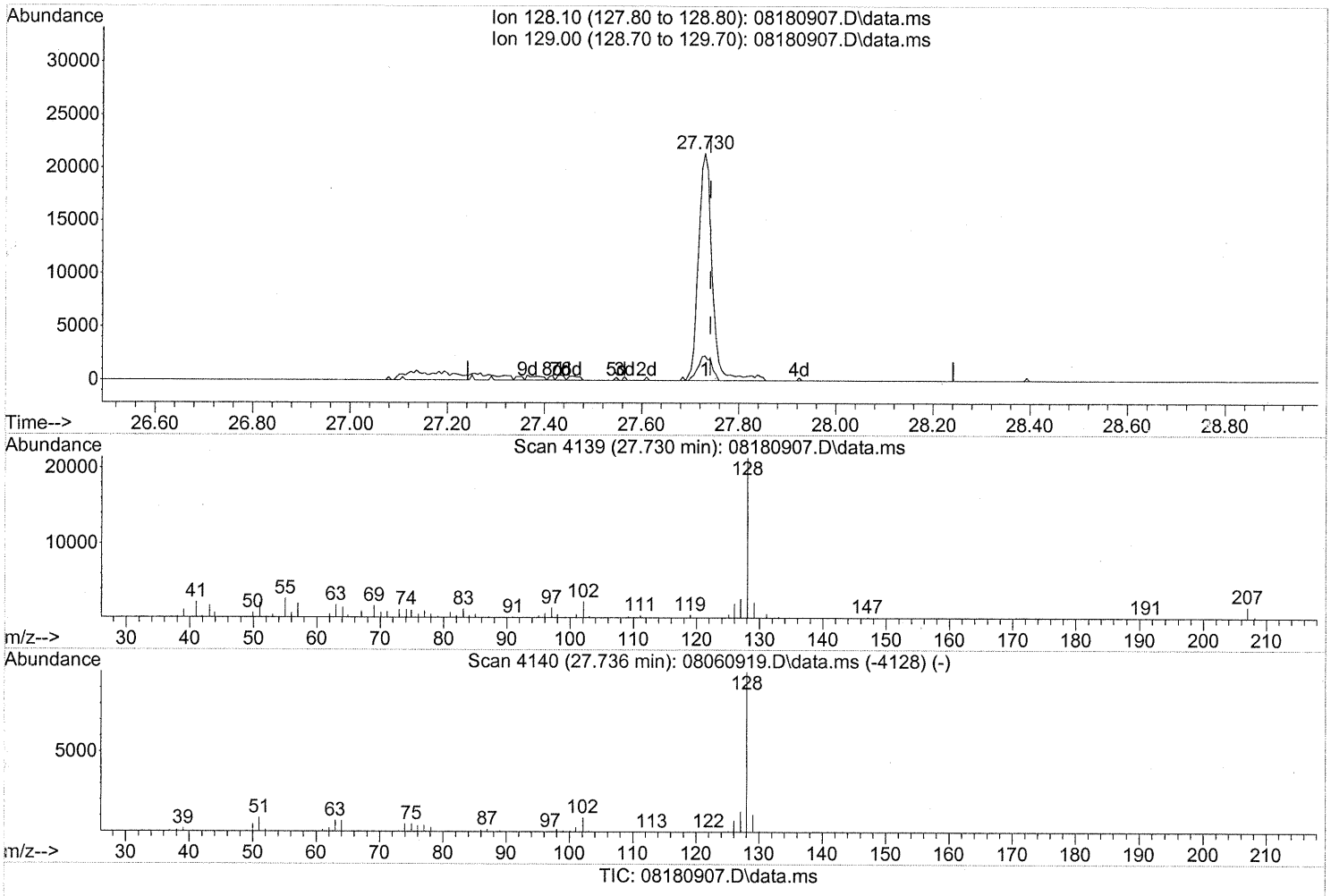
| Ion | Exp% | Act% |
|---|---|---|
| 68.10 | 100 | 100 |
| 93.10 | 67.90 | 81.92 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

59

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180907.D
Acq On : 18 Aug 2009 18:43
Operator : WA
Sample : P0902766-001 (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:07:11 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180907.D\data.ms

(95) Naphthalene (T)

27.730min (-0.011) 0.68ng

response 42285

| Ion | Exp% | Act% |
|---|---|---|
| 128.10 | 100 | 100 |
| 129.00 | 10.90 | 10.61 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101161**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00989

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/18/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.6 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.29

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | **Propene** | **0.74** | 0.65 | **0.43** | 0.37 | |
| 75-71-8 | Dichlorodifluoromethane (CFC 12) | ND | 0.65 | ND | 0.13 | |
| 74-87-3 | **Chloromethane** | **0.22** | 0.13 | **0.11** | 0.062 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.65 | ND | 0.092 | |
| 75-01-4 | Vinyl Chloride | ND | 0.13 | ND | 0.050 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.13 | ND | 0.058 | |
| 74-83-9 | Bromomethane | ND | 0.13 | ND | 0.033 | |
| 75-00-3 | Chloroethane | ND | 0.13 | ND | 0.049 | |
| 64-17-5 | **Ethanol** | **41** | 6.5 | **22** | 3.4 | |
| 75-05-8 | **Acetonitrile** | **11** | 0.65 | **6.5** | 0.38 | |
| 107-02-8 | Acrolein | ND | 0.65 | ND | 0.28 | |
| 67-64-1 | Acetone | ND | 6.5 | ND | 2.7 | |
| 75-69-4 | Trichlorofluoromethane | ND | 0.13 | ND | 0.023 | |
| 67-63-0 | **2-Propanol (Isopropyl Alcohol)** | **1.3** | 0.65 | **0.55** | 0.26 | |
| 107-13-1 | Acrylonitrile | ND | 0.65 | ND | 0.30 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.13 | ND | 0.033 | |
| 75-09-2 | Methylene Chloride | ND | 0.65 | ND | 0.19 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.13 | ND | 0.041 | |
| 76-13-1 | Trichlorotrifluoroethane | ND | 0.13 | ND | 0.017 | |
| 75-15-0 | Carbon Disulfide | ND | 0.65 | ND | 0.21 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.13 | ND | 0.033 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.13 | ND | 0.032 | |
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 0.13 | ND | 0.036 | |
| 108-05-4 | Vinyl Acetate | ND | 6.5 | ND | 1.8 | |
| 78-93-3 | 2-Butanone (MEK) | ND | 0.65 | ND | 0.22 | |

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: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101161**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00989

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/18/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.6 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.29

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.13 | ND | 0.033 | |
| 141-78-6 | Ethyl Acetate | ND | 0.65 | ND | 0.18 | |
| 110-54-3 | n-Hexane | ND | 0.65 | ND | 0.18 | |
| 67-66-3 | Chloroform | ND | 0.13 | ND | 0.026 | |
| 109-99-9 | Tetrahydrofuran (THF) | ND | 0.65 | ND | 0.22 | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.13 | ND | 0.032 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.13 | ND | 0.024 | |
| 71-43-2 | **Benzene** | **0.23** | 0.13 | **0.072** | 0.040 | |
| 56-23-5 | Carbon Tetrachloride | ND | 0.13 | ND | 0.021 | |
| 110-82-7 | Cyclohexane | ND | 0.65 | ND | 0.19 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.13 | ND | 0.028 | |
| 75-27-4 | Bromodichloromethane | ND | 0.13 | ND | 0.019 | |
| 79-01-6 | Trichloroethene | ND | 0.13 | ND | 0.024 | |
| 123-91-1 | 1,4-Dioxane | ND | 0.65 | ND | 0.18 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.65 | ND | 0.16 | |
| 142-82-5 | n-Heptane | ND | 0.65 | ND | 0.16 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.65 | ND | 0.14 | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.65 | ND | 0.16 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.65 | ND | 0.14 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.13 | ND | 0.024 | |
| 108-88-3 | **Toluene** | **1.1** | 0.65 | **0.30** | 0.17 | |
| 591-78-6 | 2-Hexanone | ND | 0.65 | ND | 0.16 | |
| 124-48-1 | Dibromochloromethane | ND | 0.13 | ND | 0.015 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.13 | ND | 0.017 | |
| 123-86-4 | n-Butyl Acetate | ND | 0.65 | ND | 0.14 | |

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: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101161**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-002

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00989

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/18/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.6 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.29

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | n-Octane | ND | 0.65 | ND | 0.14 | |
| 127-18-4 | Tetrachloroethene | ND | 0.13 | ND | 0.019 | |
| 108-90-7 | Chlorobenzene | ND | 0.13 | ND | 0.028 | |
| 100-41-4 | Ethylbenzene | ND | 0.65 | ND | 0.15 | |
| 179601-23-1 | **m,p-Xylenes** | **1.4** | 0.65 | **0.32** | 0.15 | |
| 75-25-2 | Bromoform | ND | 0.65 | ND | 0.062 | |
| 100-42-5 | Styrene | ND | 0.65 | ND | 0.15 | |
| 95-47-6 | o-Xylene | ND | 0.65 | ND | 0.15 | |
| 111-84-2 | **n-Nonane** | **0.81** | 0.65 | **0.15** | 0.12 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.13 | ND | 0.019 | |
| 98-82-8 | Cumene | ND | 0.65 | ND | 0.13 | |
| 80-56-8 | **alpha-Pinene** | **3.3** | 0.65 | **0.60** | 0.12 | |
| 103-65-1 | n-Propylbenzene | ND | 0.65 | ND | 0.13 | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.65 | ND | 0.13 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.65 | ND | 0.13 | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 0.65 | ND | 0.13 | |
| 100-44-7 | Benzyl Chloride | ND | 0.13 | ND | 0.025 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.13 | ND | 0.021 | |
| 106-46-7 | 1,4-Dichlorobenzene | ND | 0.13 | ND | 0.021 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.13 | ND | 0.021 | |
| 5989-27-5 | **d-Limonene** | **1.4** | 0.65 | **0.25** | 0.12 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.65 | ND | 0.067 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.65 | ND | 0.087 | |
| 91-20-3 | Naphthalene | ND | 0.65 | ND | 0.12 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.65 | ND | 0.060 | |

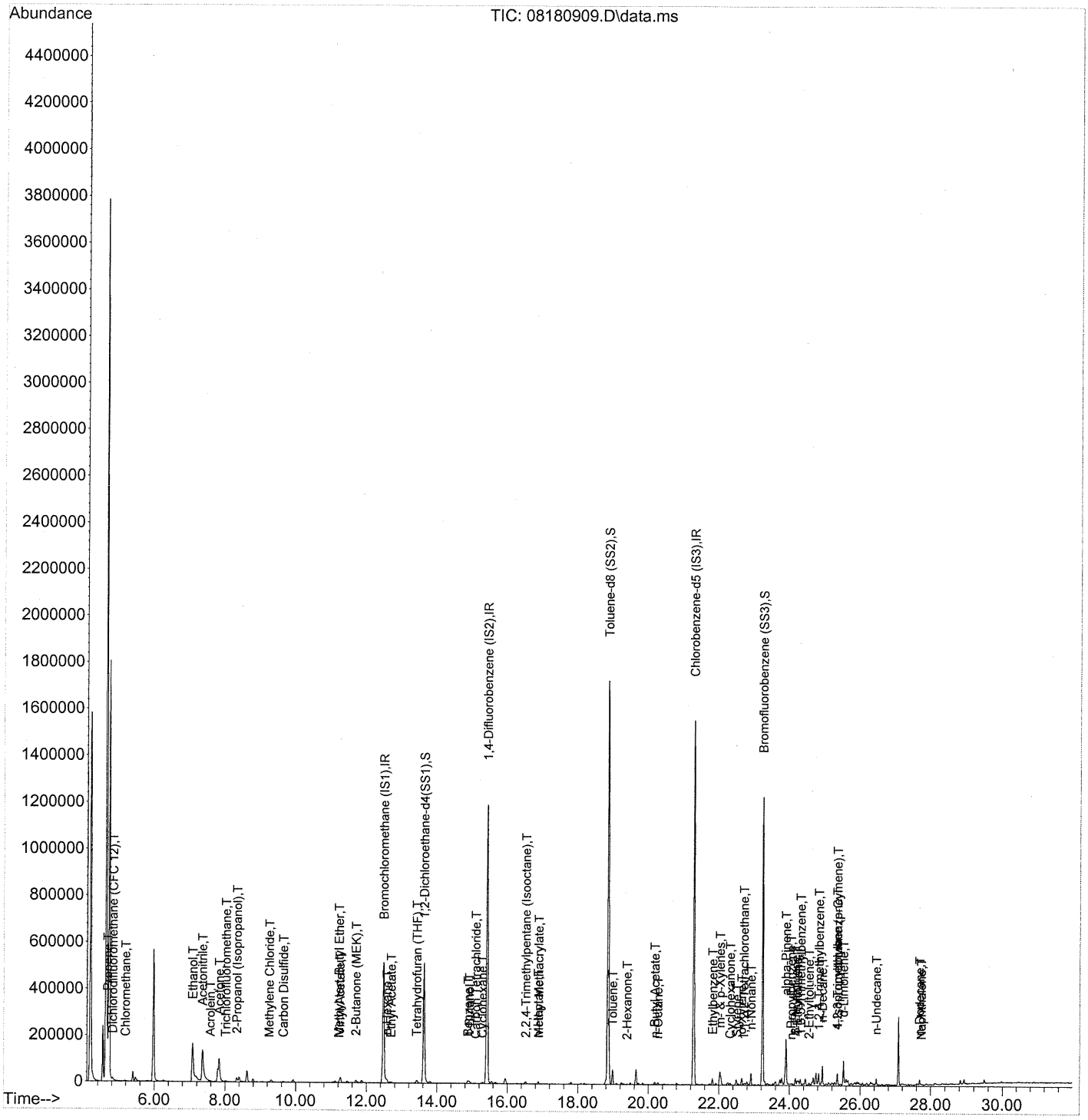
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 8/25/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 21 16:36:28 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 21 16:36:28 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 267621 | 25.000 | ng | | -0.03 |
| 37) 1,4-Difluorobenzene (IS2) | 15.42 | 114 | 1361699 | 25.000 | ng | | -0.02 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 650680 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 541166 | 23.265 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery = 93.08% | | | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1484559 | 26.111 | ng | | -0.02 |
| Spiked Amount 25.000 | | | Recovery = 104.44% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.23 | 174 | 388515 | 25.912 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = 103.64% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.68 | 42 | 10484m | 0.571 | ng | | |
| 3) Dichlorodifluoromethan... | 4.83 | 85 | 6818 | 0.227 | ng | | 92 |
| 4) Chloromethane | 5.19 | 50 | 3455 | 0.171 | ng | | 76 |
| 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. | d | | |
| 8) Bromomethane | 0.00 | 94 | 0 | N.D. | | | |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | | | |
| 10) Ethanol | 7.08 | 45 | 373522 | 32.087 | ng | | 99 |
| 11) Acetonitrile | 7.35 | 41 | 288758 | 8.470 | ng | | 99 |
| 12) Acrolein | 7.58 | 56 | 3530 | 0.398 | ng | | 91 |
| 13) Acetone | 7.83 | 58 | 51756 | 4.712 | ng | # | 76 |
| 14) Trichlorofluoromethane | 8.02 | 101 | 2646 | 0.098 | ng | | 95 |
| 15) 2-Propanol (Isopropanol) | 8.33 | 45 | 45016 | 1.043 | ng | | 90 |
| 16) Acrylonitrile | 8.63 | 53 | 609 | N.D. | | | |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.39 | 59 | 104 | N.D. | | | |
| 19) Methylene Chloride | 9.25 | 84 | 975 | 0.066 | ng | | 84 |
| 20) 3-Chloro-1-propene (Al... | 9.34 | 41 | 1124 | N.D. | | | |
| 21) Trichlorotrifluoroethane | 0.00 | 151 | 0 | N.D. | | | |
| 22) Carbon Disulfide | 9.65 | 76 | 6971 | 0.134 | ng | | 78 |
| 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 | 11.22 | 73 | 3441 | 0.083 | ng | # | 53 |
| 26) Vinyl Acetate | 11.24 | 86 | 1254 | 0.561 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.70 | 72 | 4207 | 0.424 | 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 | 12.70 | 61 | 466 | 0.090 | ng | | 79 |
| 31) n-Hexane | 12.58 | 57 | 3942 | 0.149 | ng | | 69 |



8/22/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 21 16:36:28 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.68 | 83 | 1102 | N.D. | | | |
| 34) Tetrahydrofuran (THF) | 13.42 | 72 | 3552 | 0.336 | ng | # | 72 |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | | |
| 36) 1,2-Dichloroethane | 13.79 | 62 | 895 | 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 | 14.92 | 56 | 9279 | 0.525 | ng | | 88 |
| 41) Benzene | 14.88 | 78 | 10598 | 0.177 | ng | | 96 |
| 42) Carbon Tetrachloride | 15.10 | 117 | 1048 | 0.055 | ng | # | 79 |
| 43) Cyclohexane | 15.29 | 84 | 2710 | 0.124 | ng | # | 82 |
| 44) tert-Amyl Methyl Ether | 15.81 | 73 | 86 | 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... | 16.52 | 57 | 9494 | 0.135 | ng | | 90 |
| 50) Methyl Methacrylate | 16.89 | 100 | 336 | 0.061 | ng | # | 1 |
| 51) n-Heptane | 16.88 | 71 | 2449 | 0.152 | ng | | 94 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | | |
| 53) 4-Methyl-2-pentanone | 17.79 | 58 | 340 | N.D. | | | |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | d | | |
| 58) Toluene | 18.98 | 91 | 49093 | 0.879 | ng | | 96 |
| 59) 2-Hexanone | 19.39 | 43 | 2225 | 0.060 | ng | # | 58 |
| 60) Dibromochloromethane | 0.00 | 129 | 0 | N.D. | | | |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | | |
| 62) n-Butyl Acetate | 20.18 | 43 | 9428 | 0.215 | ng | | 91 |
| 63) n-Octane | 20.26 | 57 | 1764 | 0.131 | ng | | 93 |
| 64) Tetrachloroethene | 20.46 | 166 | 128 | N.D. | | | |
| 65) Chlorobenzene | 0.00 | 112 | 0 | N.D. | | | |
| 66) Ethylbenzene | 21.82 | 91 | 24904 | 0.390 | ng | | 99 |
| 67) m- & p-Xylenes | 22.04 | 91 | 55805 | 1.080 | ng | | 98 |
| 68) Bromoform | 0.00 | 173 | 0 | N.D. | | | |
| 69) Styrene | 22.51 | 104 | 5333 | 0.143 | ng | | 96 |
| 70) o-Xylene | 22.65 | 91 | 19997 | 0.386 | ng | | 98 |
| 71) n-Nonane | 22.91 | 43 | 21577 | 0.627 | ng | | 95 |
| 72) 1,1,2,2-Tetrachloroethane | 22.71 | 83 | 1157 | 0.050 | ng | # | 18 |
| 74) Cumene | 23.41 | 105 | 1840 | N.D. | | | |
| 75) alpha-Pinene | 23.90 | 93 | 86574 | 2.581 | ng | | 76 |
| 76) n-Propylbenzene | 24.05 | 91 | 5807 | 0.071 | ng | | 86 |
| 77) 3-Ethyltoluene | 24.17 | 105 | 14762 | 0.236 | ng | | 96 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 6126 | 0.101 | ng | | 100 |
| 79) 1,3,5-Trimethylbenzene | 24.31 | 105 | 6711 | 0.131 | ng | | 96 |

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 21 16:36:28 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

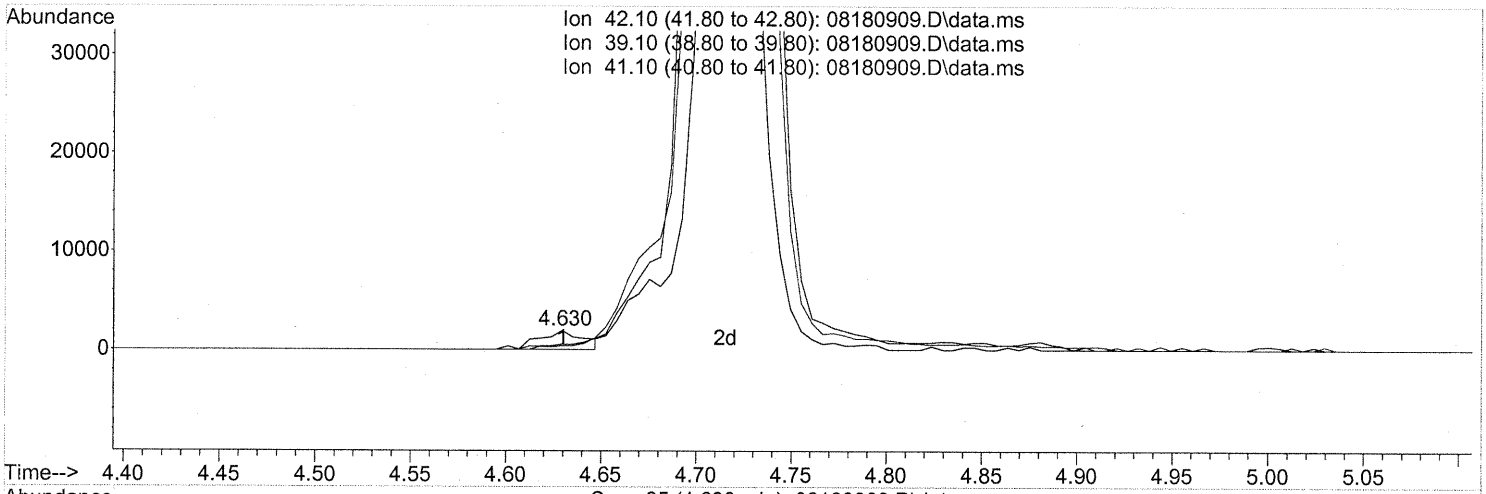
| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 0.00 | 118 | 0 | N.D. | |
| 81) 2-Ethyltoluene | 24.55 | 105 | 6159 | 0.098 ng | 98 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 18393 | 0.353 ng | 90 |
| 83) n-Decane | 24.93 | 57 | 29034 | 0.857 ng | 100 |
| 84) Benzyl Chloride | 25.01 | 91 | 95 | N.D. | |
| 85) 1,3-Dichlorobenzene | 25.10 | 146 | 556 | N.D. | |
| 86) 1,4-Dichlorobenzene | 25.10 | 146 | 556 | N.D. | |
| 87) sec-Butylbenzene | 25.16 | 105 | 653 | N.D. | |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 8230 | 0.131 ng | 97 |
| 89) 1,2,3-Trimethylbenzene | 25.35 | 105 | 5256 | 0.099 ng | 93 |
| 90) 1,2-Dichlorobenzene | 25.10 | 146 | 556 | N.D. | |
| 91) d-Limonene | 25.53 | 68 | 24082 | 1.087 ng | 92 |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | |
| 93) n-Undecane | 26.46 | 57 | 9719 | 0.270 ng | 98 |
| 94) 1,2,4-Trichlorobenzene | 27.60 | 180 | 91 | N.D. | |
| 95) Naphthalene | 27.74 | 128 | 4387 | 0.062 ng | 84 |
| 96) n-Dodecane | 27.69 | 57 | 7554 | 0.180 ng | 97 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | |
| 98) Cyclohexanone | 22.32 | 55 | 4861 | 0.210 ng | 89 |
| 99) tert-Butylbenzene | 24.83 | 119 | 2126 | N.D. | |
| 100) n-Butylbenzene | 25.91 | 91 | 1105 | N.D. | |

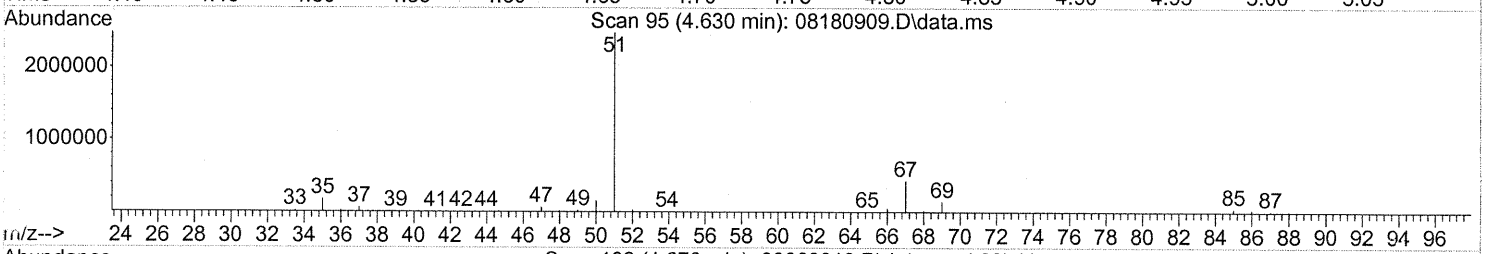
(#) = qualifier out of range (m) = manual integration (+) = signals summed

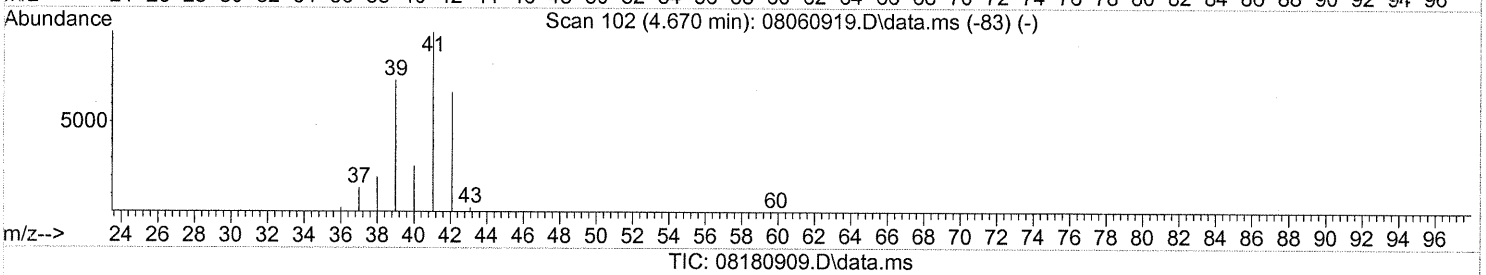
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(2) Propene (T)

4.630min (-0.034) 0.17ng

response 3109

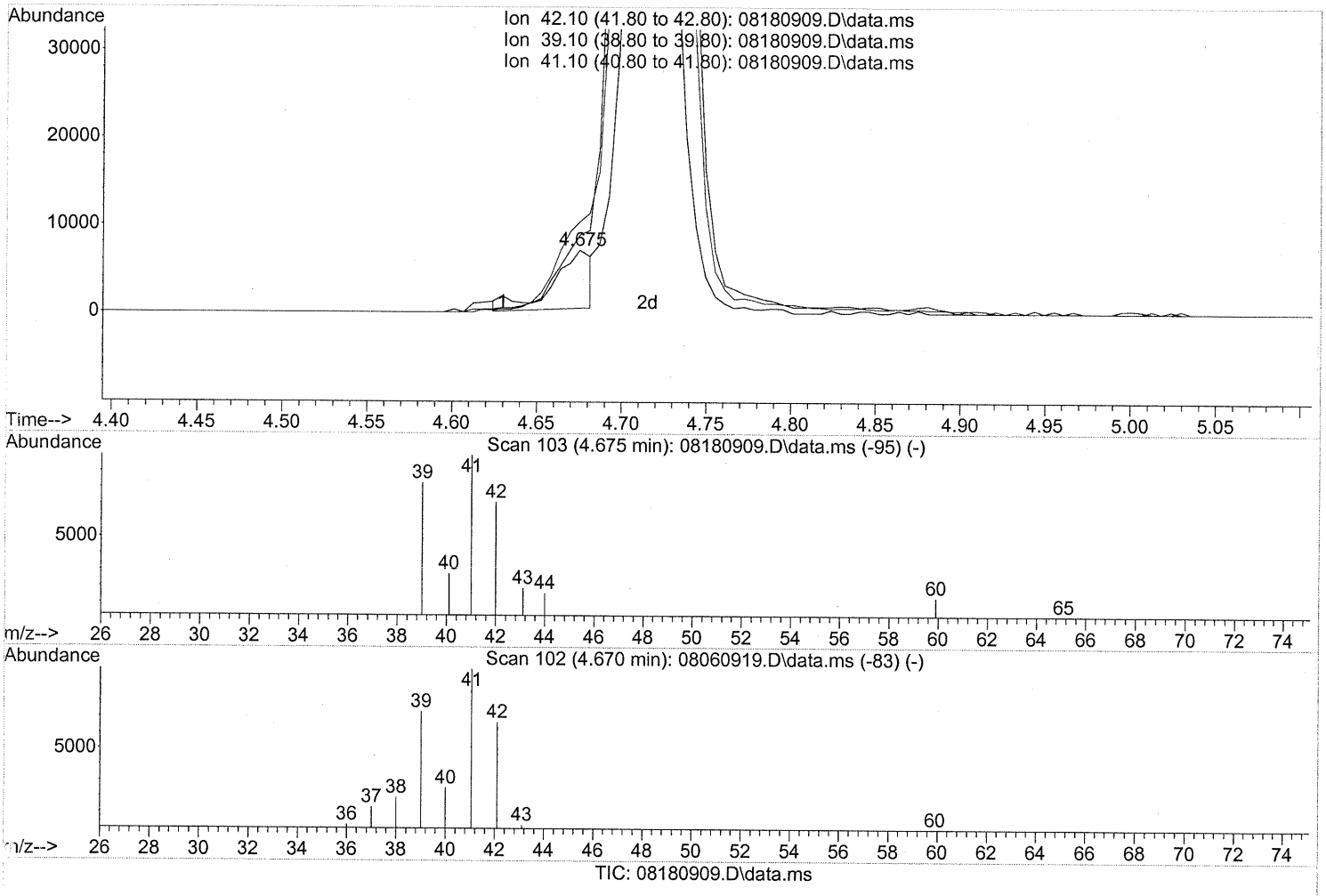
| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 111.90 | 0.00# |
| 41.10 | 150.20 | 0.00# |
| 0.00 | 0.00 | 0.00 |

SH

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(2) Propene (T)

4.675min (+0.012) 0.57ng m

response 10484

| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 111.90 | 0.00# |
| 41.10 | 150.20 | 0.00# |
| 0.00 | 0.00 | 0.00 |

SH → IC and substr.

8/22/09

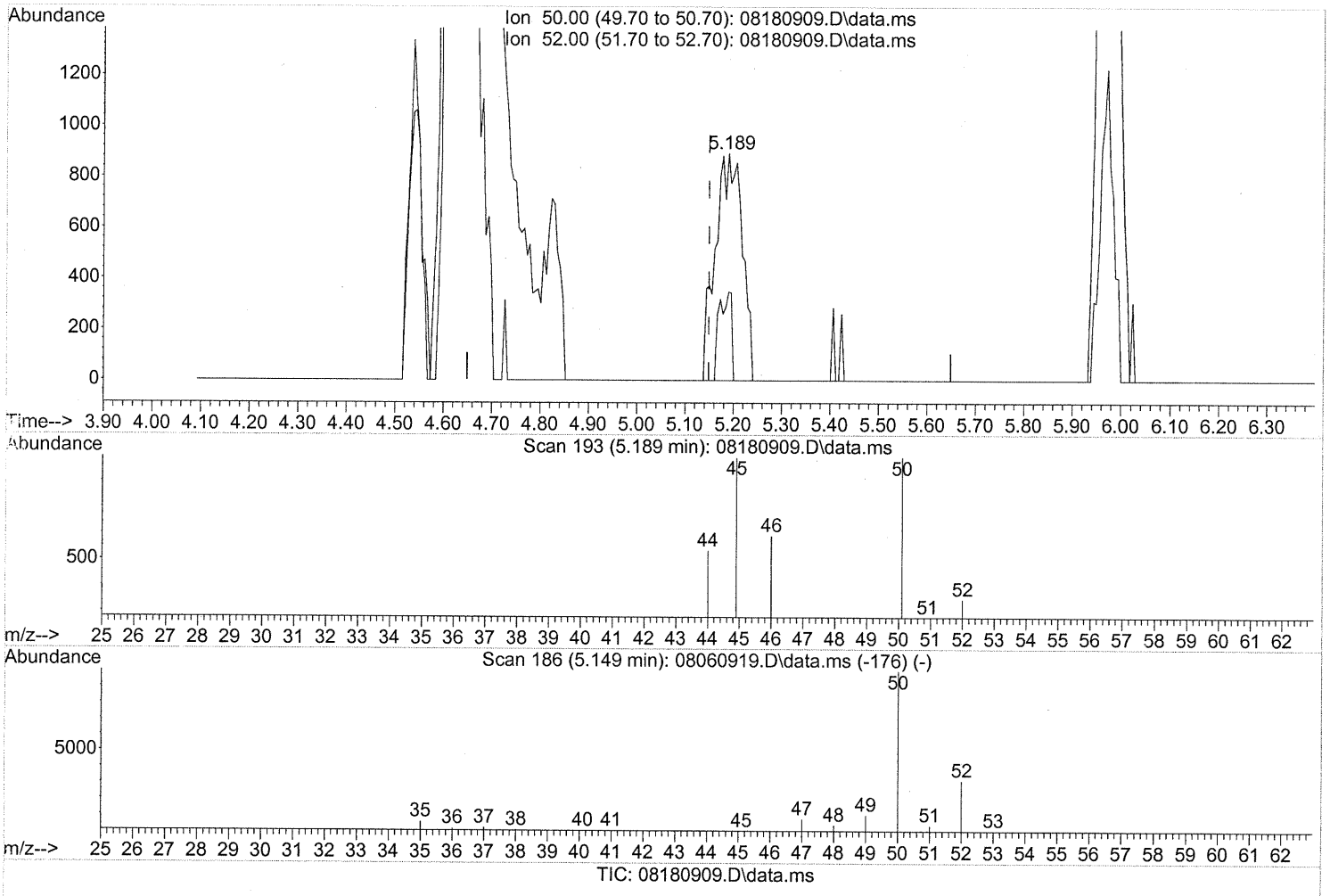
8/25/09

69

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(4) Chloromethane (T)

5.189min (+0.040) 0.17ng

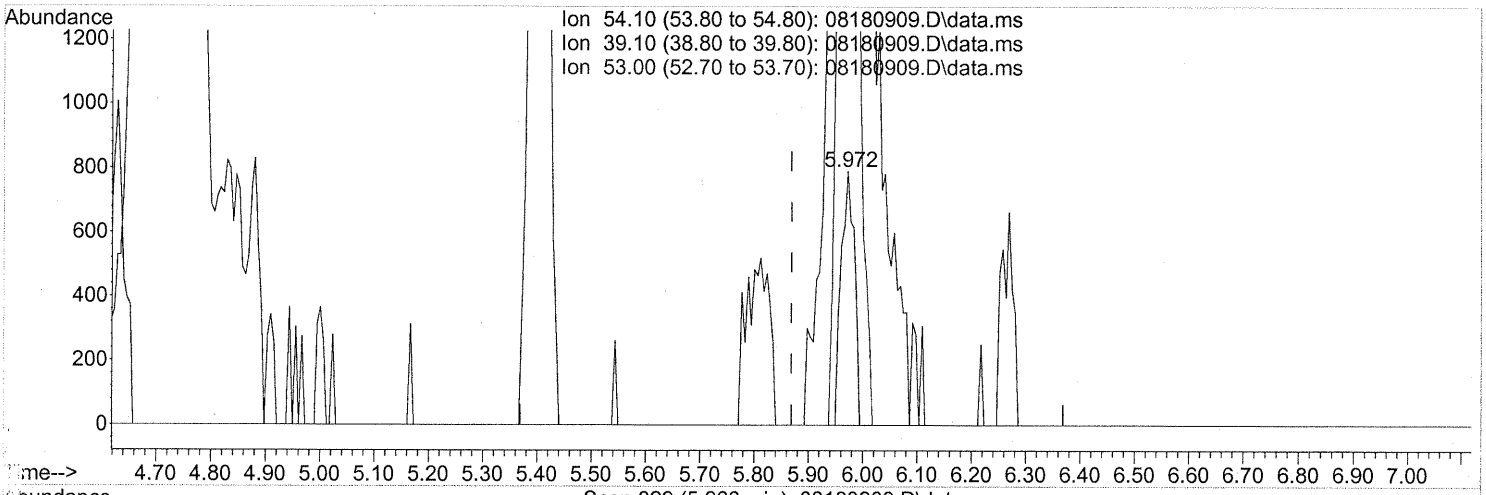
response 3455

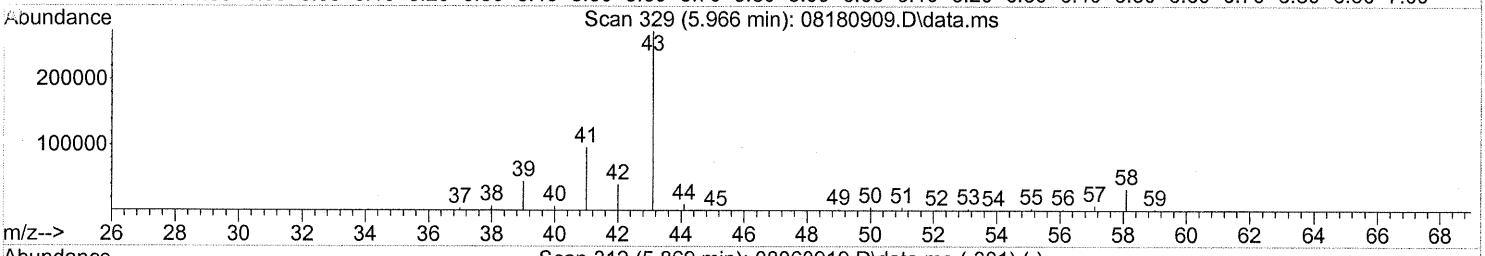
| Ion | Exp% | Act% |
|---|---|---|
| 50.00 | 100 | 100 |
| 52.00 | 31.60 | 18.06 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

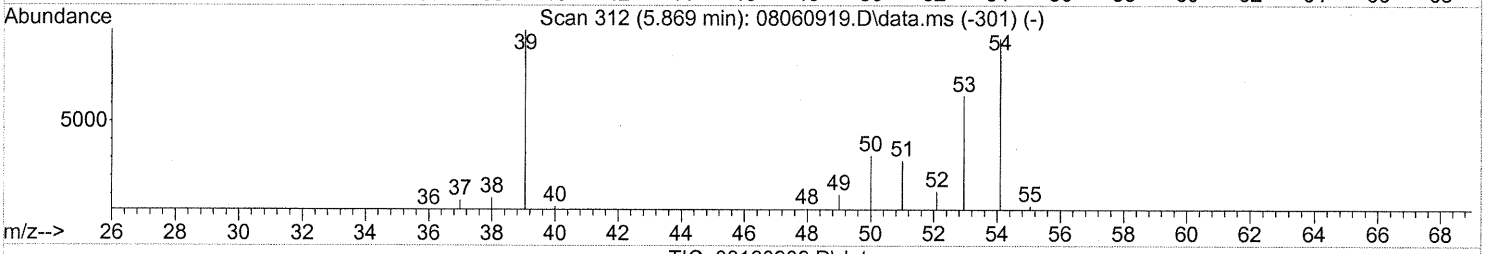
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(7) 1,3-Butadiene (T)

5.972min (+0.103) 0.10ng

response 1335

| Ion | Exp% | Act% |
|---|---|---|
| 54.10 | 100 | 100 |
| 39.10 | 106.70 | 8258.80# |
| 53.00 | 69.50 | 557.15# |
| 0.00 | 0.00 | 0.00 |

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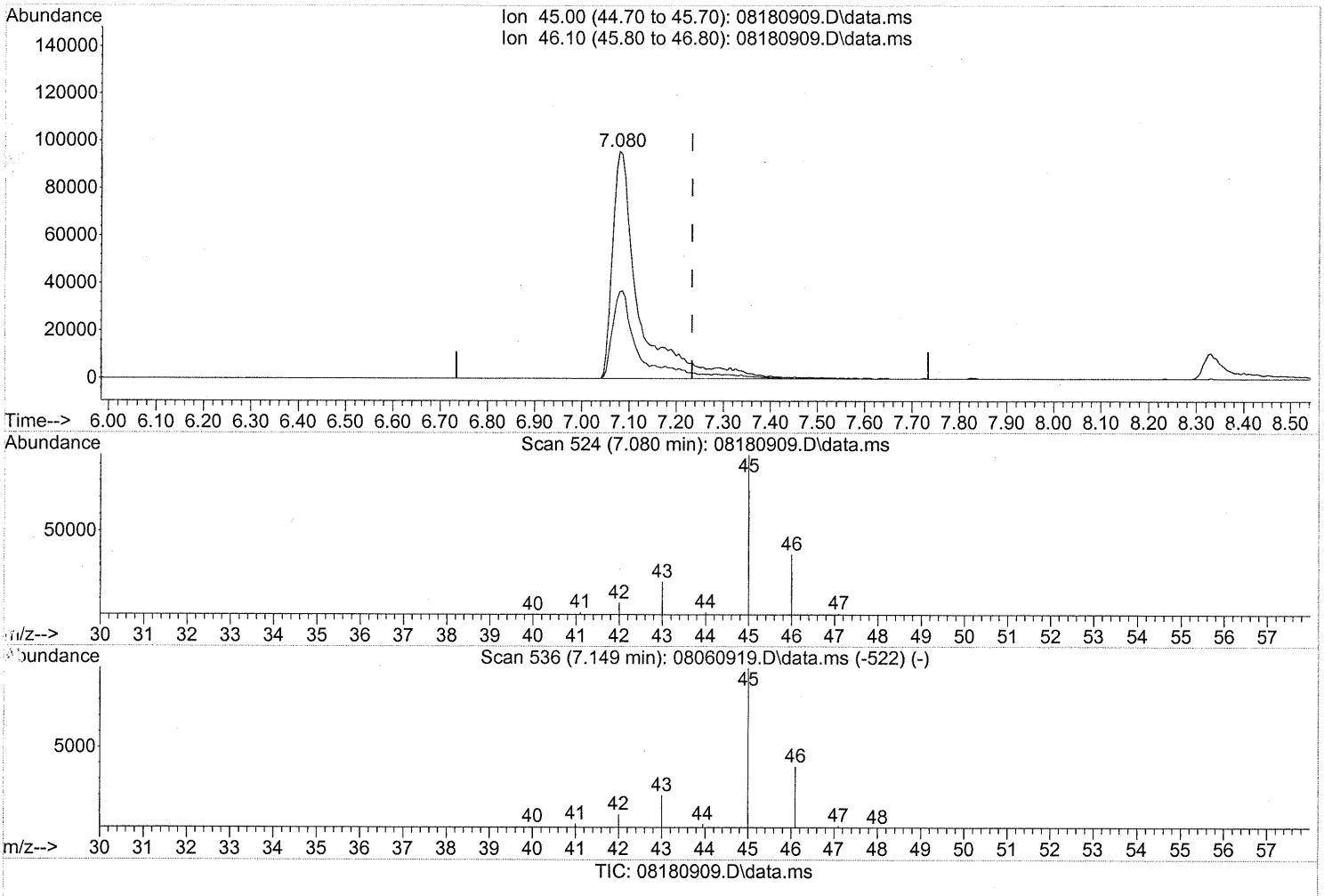
71

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(10) Ethanol (T)

7.080min (-0.154) 32.09ng

response 373522

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.10 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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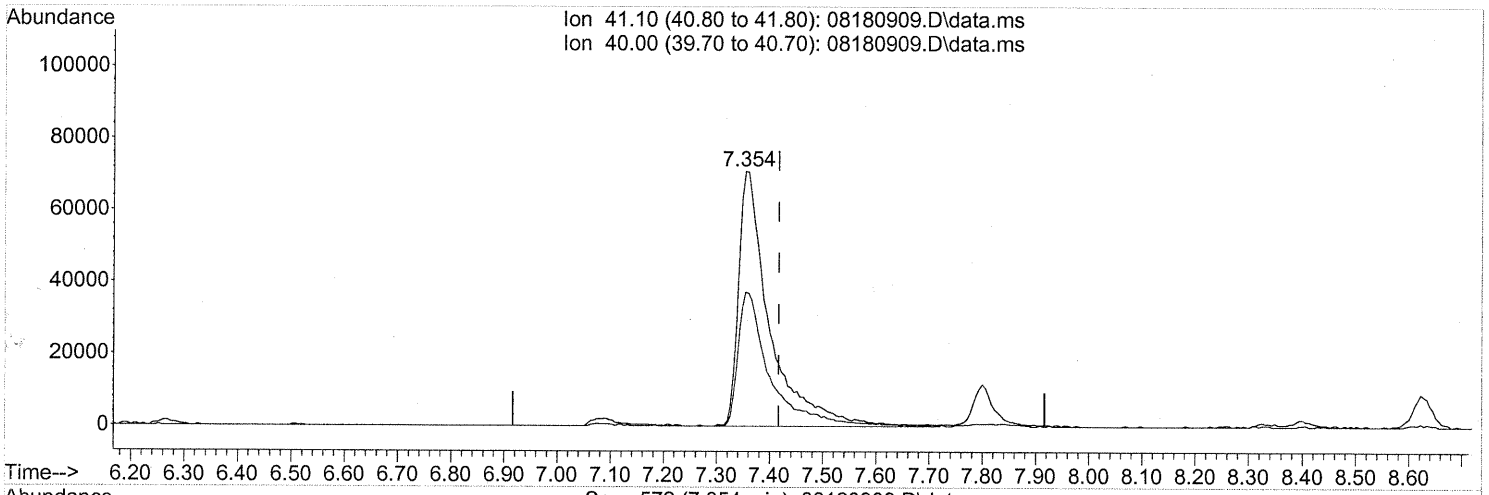
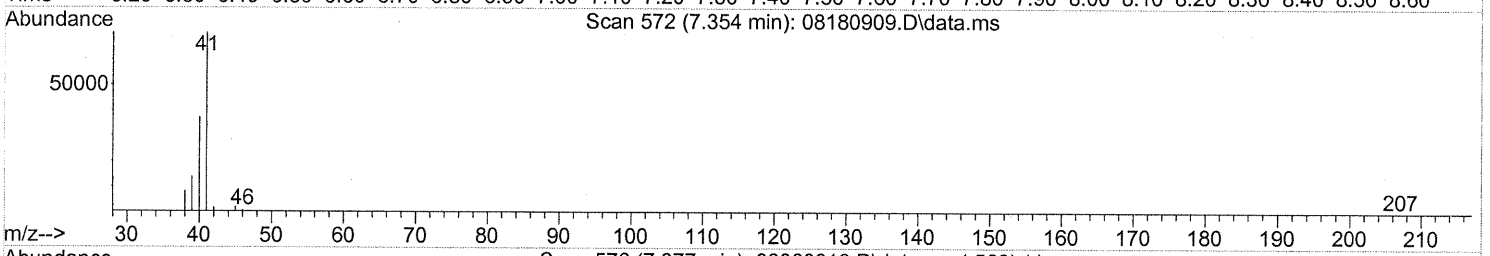
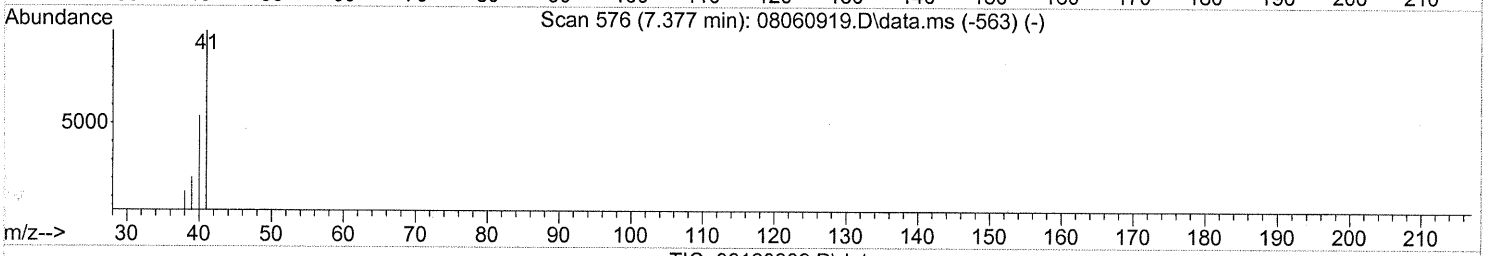
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(11) Acetonitrile (T)

7.354min (-0.063) 8.47ng

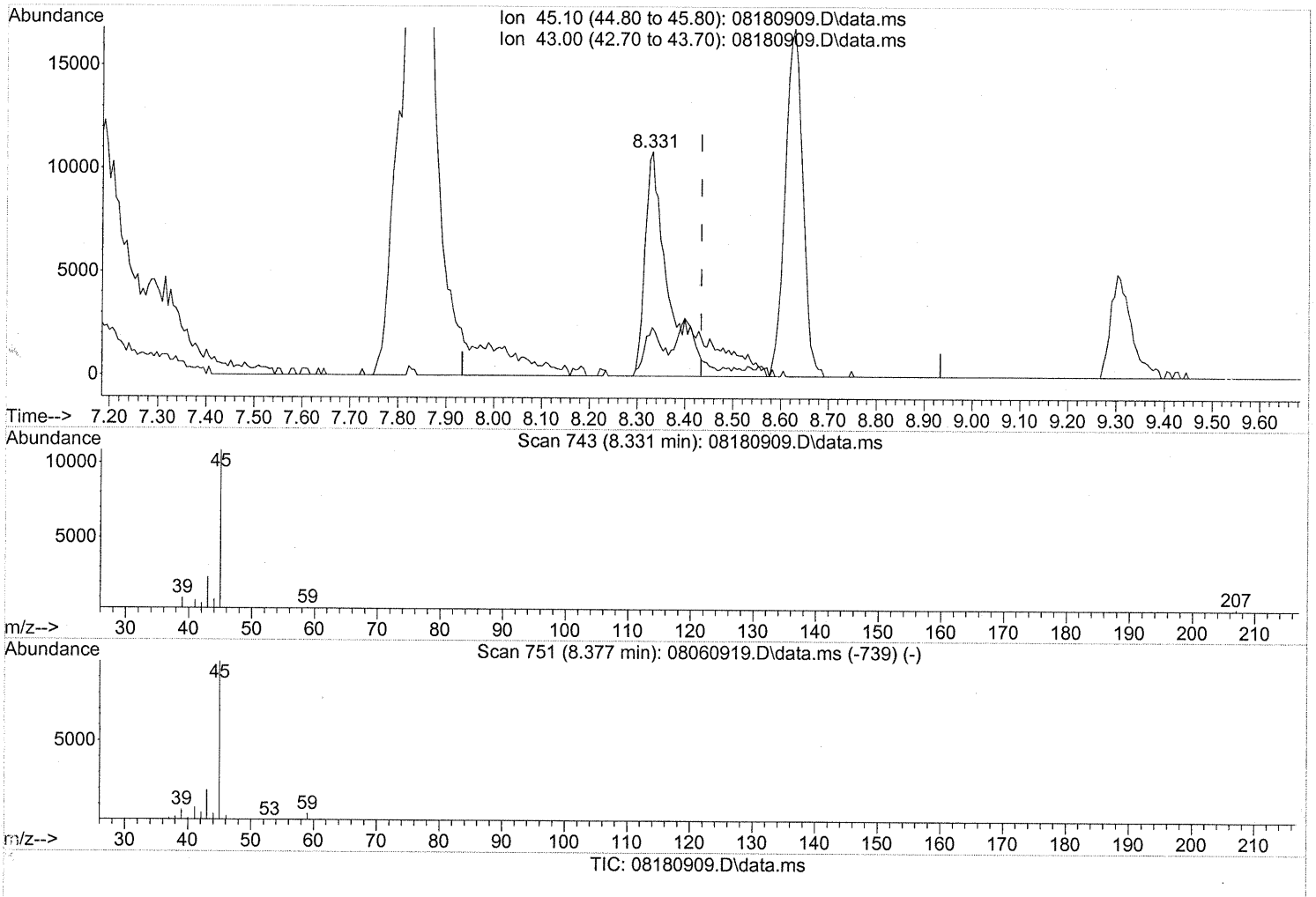
response 288758

| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 40.00 | 53.70 | 53.13 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

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

8.331min (-0.103) 1.04ng

response 45016

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.00 | 14.50 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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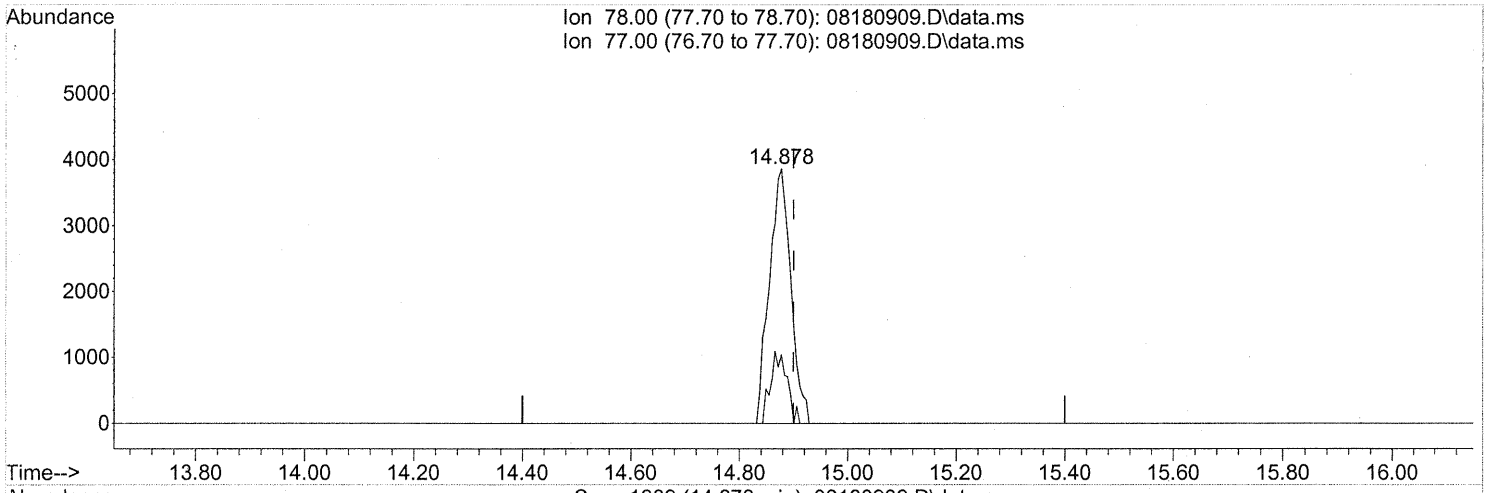
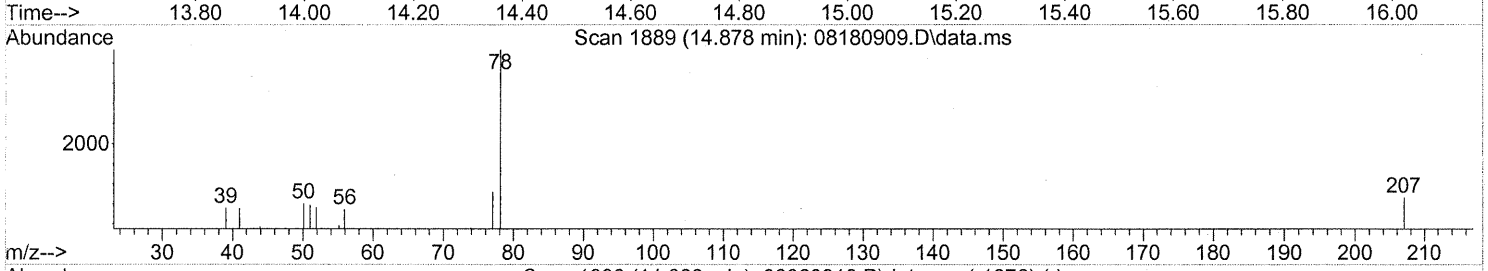
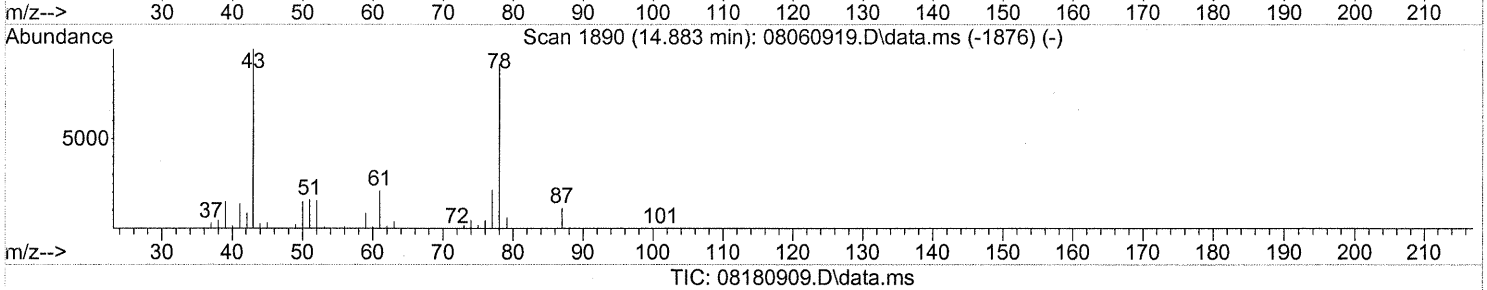
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(41) Benzene (T)

14.878min (-0.023) 0.18ng

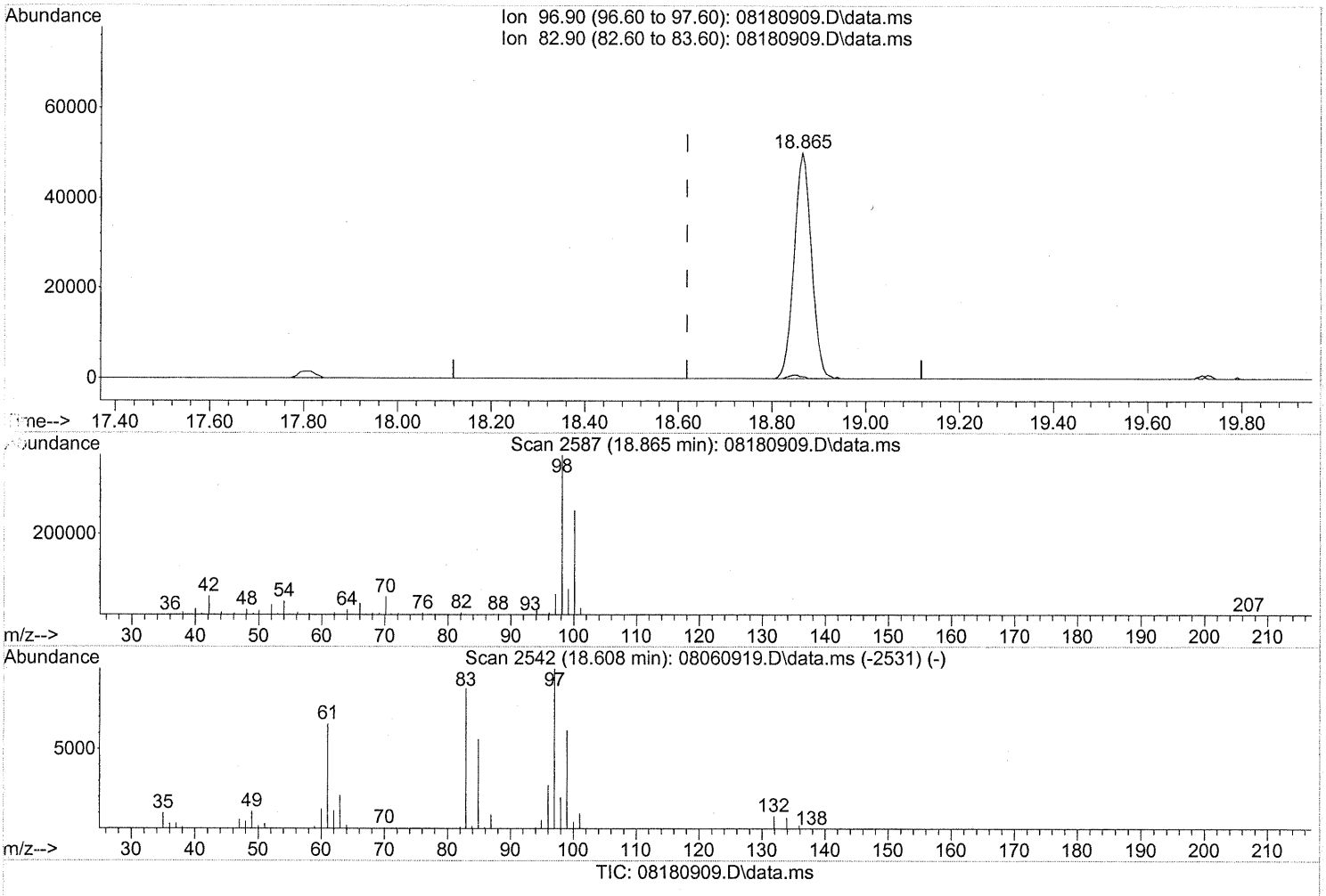
response 10598

| Ion | Exp% | Act% |
|---|---|---|
| 78.00 | 100 | 100 |
| 77.00 | 23.60 | 21.77 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(55) 1,1,2-Trichloroethane (T)

18.865min (+0.246) 9.78ng

response 128493

| Ion | Exp% | Act% |
|---|---|---|
| 96.90 | 100 | 100 |
| 82.90 | 90.30 | 1.05# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

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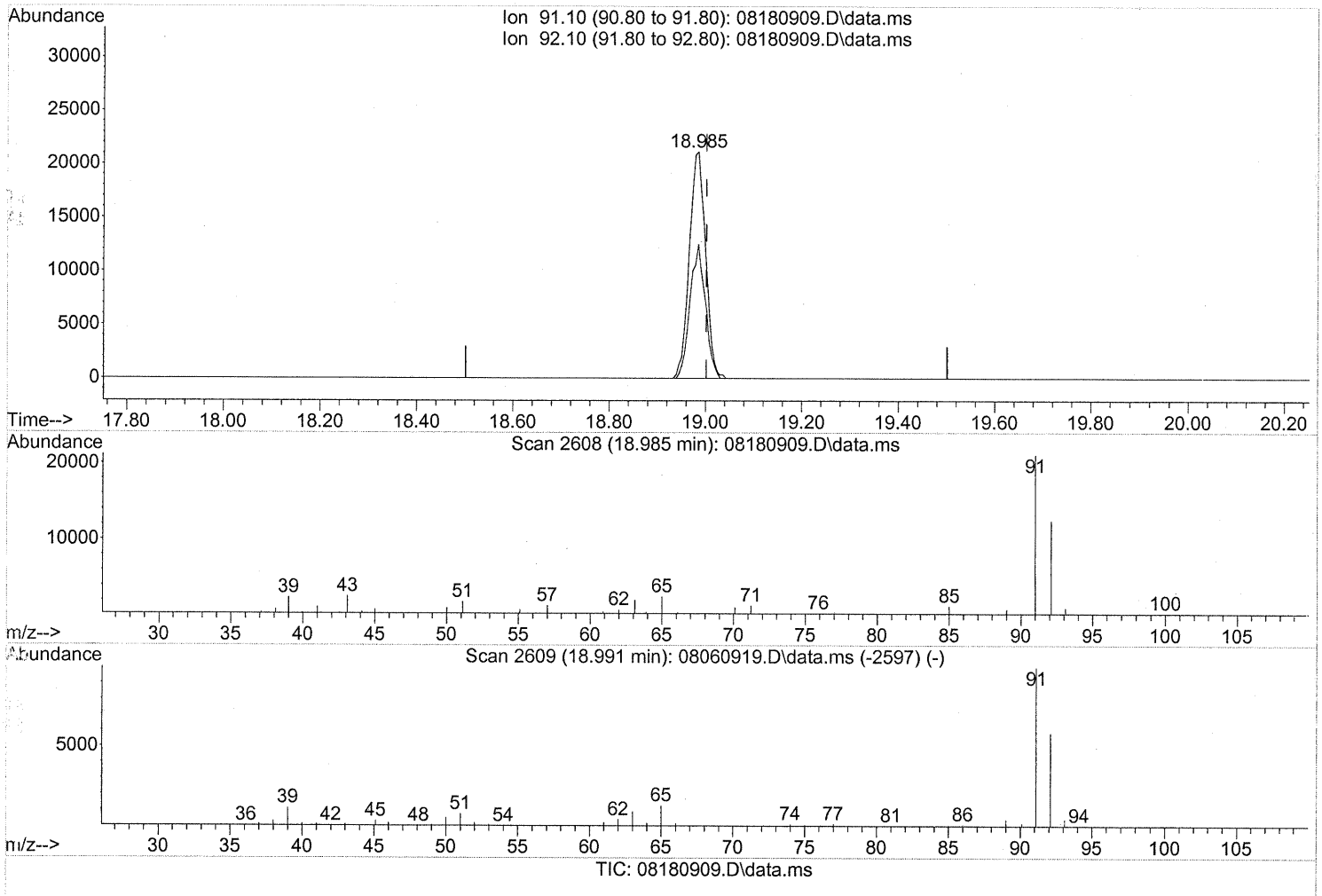
76

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(58) Toluene (T)

18.985min (-0.017) 0.88ng

response 49093

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 92.10 | 58.60 | 55.71 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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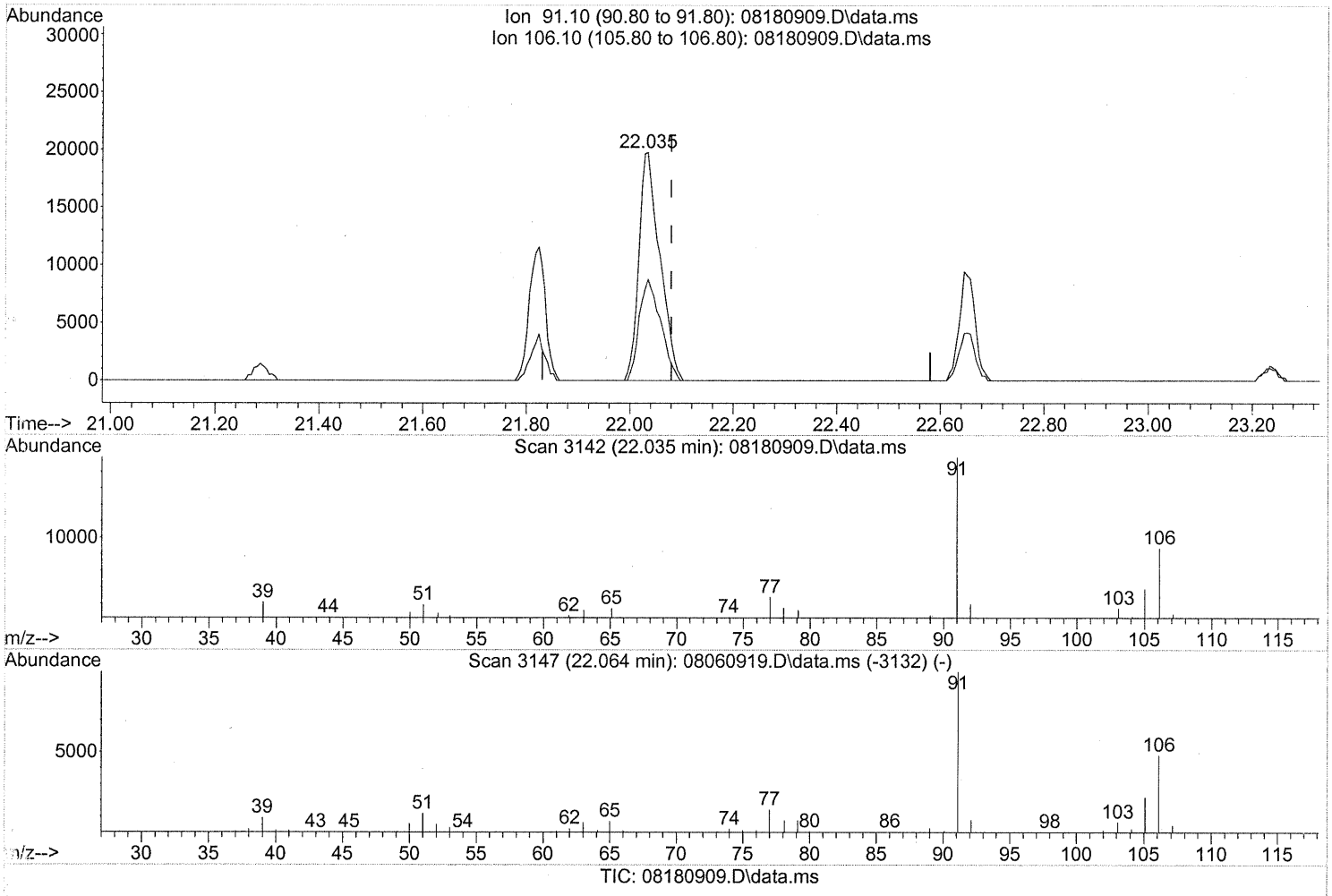
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(67) m- & p-Xylenes (T)

22.035min (-0.046) 1.08ng

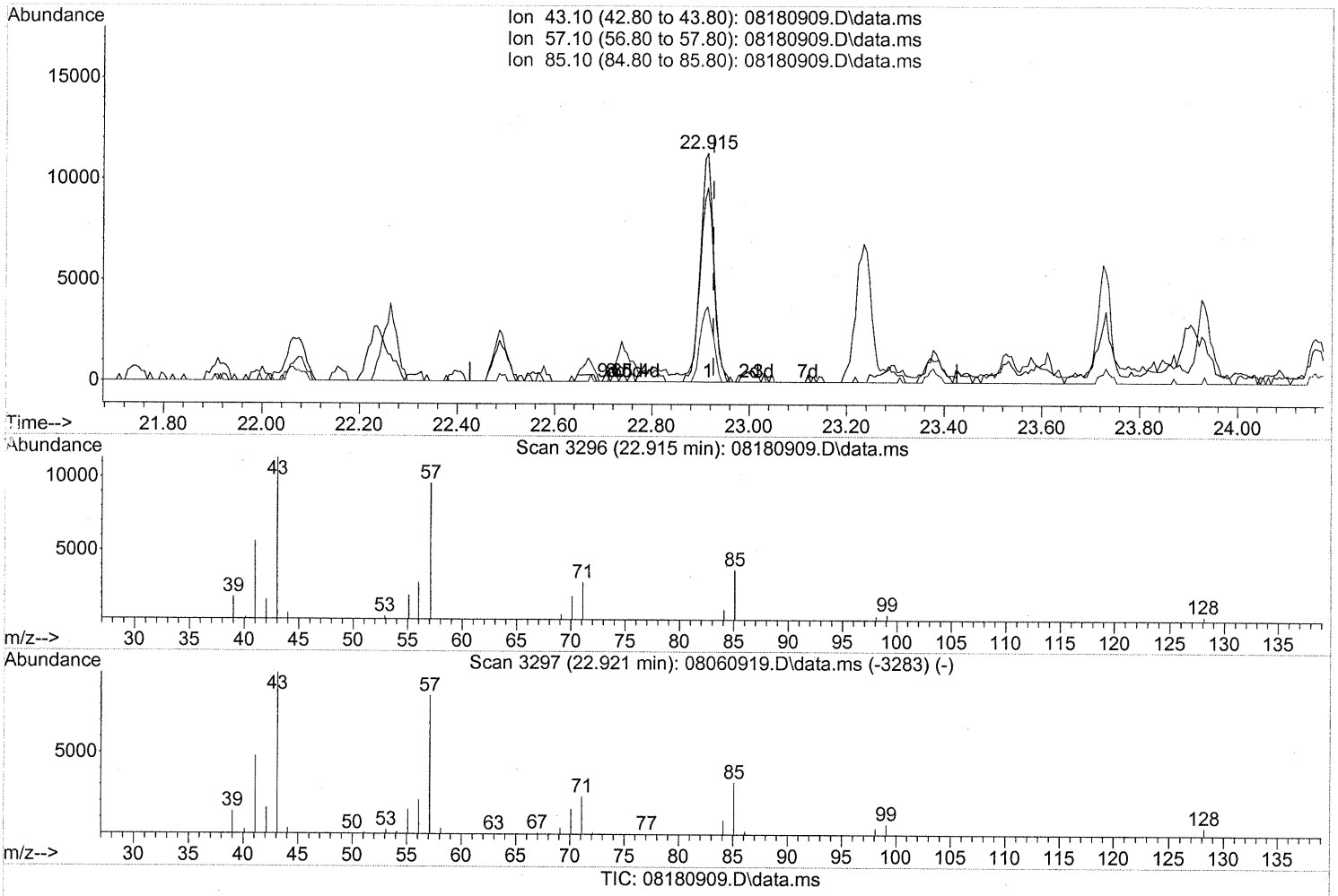
response 55805

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 46.90 | 45.41 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(71) n-Nonane (T)

22.915min (-0.011) 0.63ng

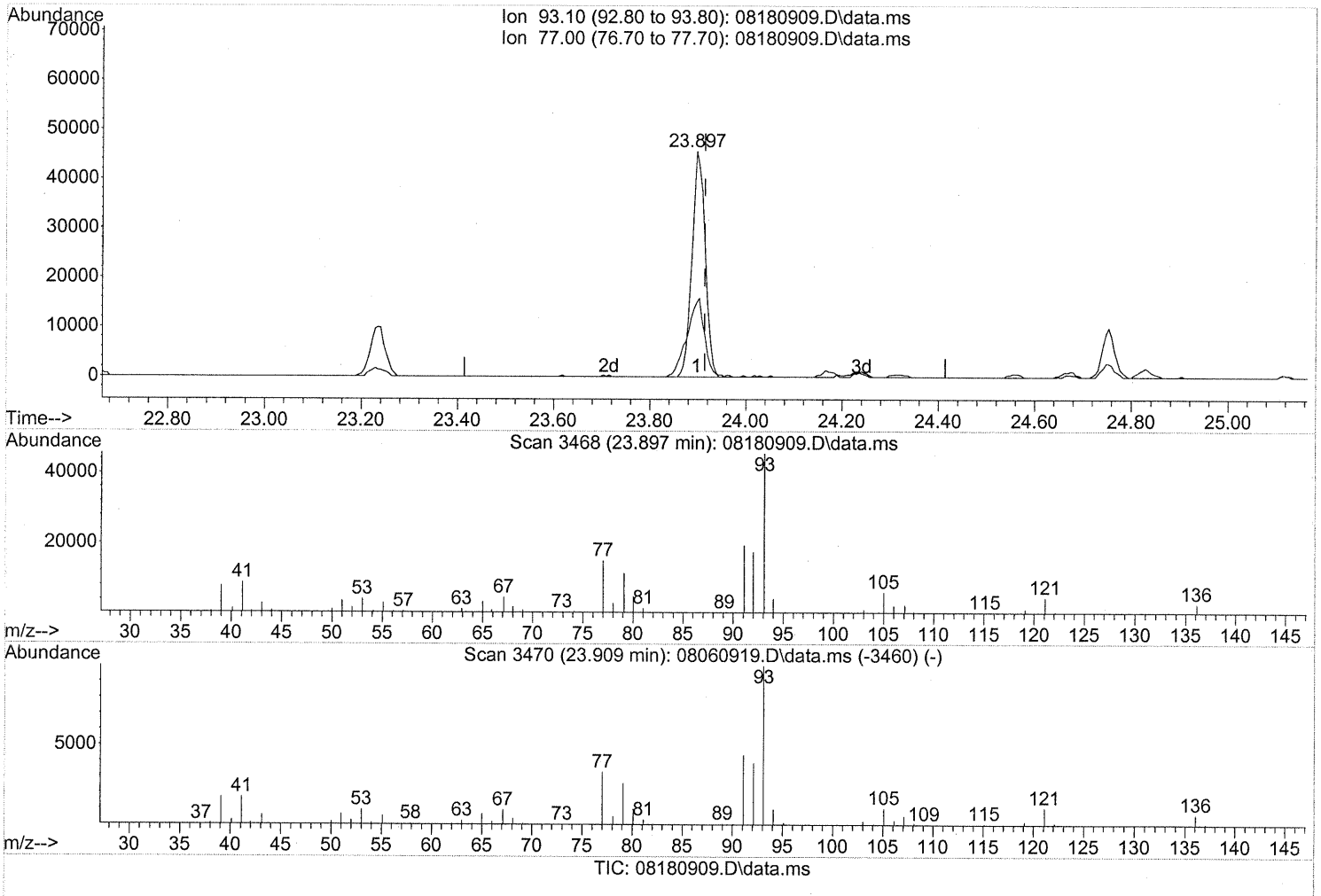
response 21577

| Ion | Exp% | Act% |
|---|---|---|
| 43.10 | 100 | 100 |
| 57.10 | 84.90 | 90.16 |
| 85.10 | 30.40 | 31.53 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(75) alpha-Pinene (T)

23.897min (-0.017) 2.58ng

response 86574

| Ion | Exp% | Act% |
|---|---|---|
| 93.10 | 100 | 100 |
| 77.00 | 32.40 | 45.86 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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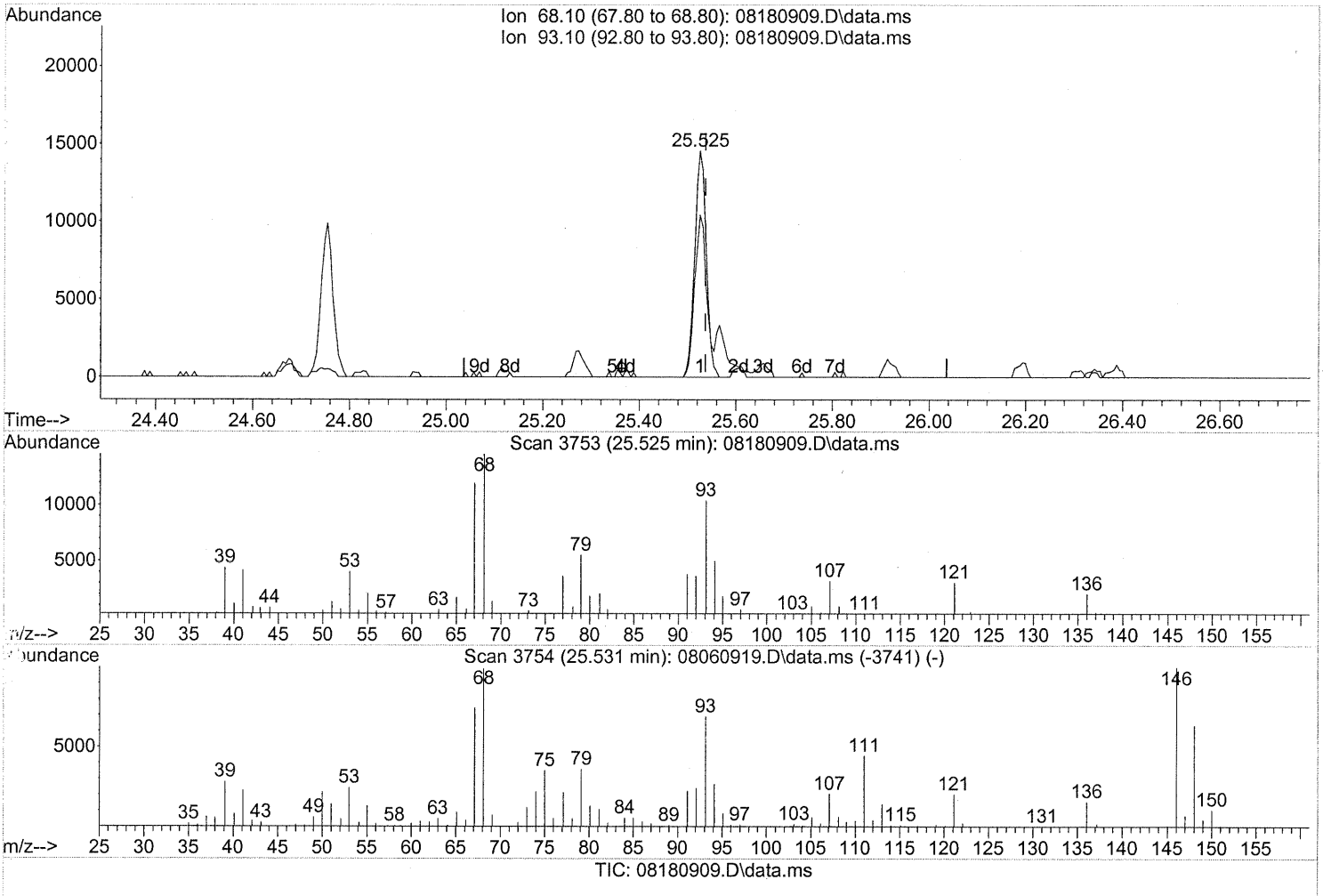
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180909.D
Acq On : 18 Aug 2009 20:05
Operator : WA
Sample : P0902766-002 (1000mL)
Misc : Env. Health & Engineering 101161
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 19 10:11:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180909.D\data.ms

(91) d-Limonene (T)

25.525min (-0.011) 1.09ng

response 24082

| Ion | Exp% | Act% |
|---|---|---|
| 68.10 | 100 | 100 |
| 93.10 | 67.90 | 74.42 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101162**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00977

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/19/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.9 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.69

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | ND | 0.85 | ND | 0.49 | |
| 75-71-8 | **Dichlorodifluoromethane (CFC 12)** | **2.7** | 0.85 | **0.54** | 0.17 | |
| 74-87-3 | **Chloromethane** | **0.93** | 0.17 | **0.45** | 0.082 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.85 | ND | 0.12 | |
| 75-01-4 | Vinyl Chloride | ND | 0.17 | ND | 0.066 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.17 | ND | 0.076 | |
| 74-83-9 | Bromomethane | ND | 0.17 | ND | 0.044 | |
| 75-00-3 | Chloroethane | ND | 0.17 | ND | 0.064 | |
| 64-17-5 | **Ethanol** | **450** | 8.5 | **240** | 4.5 | |
| 75-05-8 | **Acetonitrile** | **160** | 0.85 | **97** | 0.50 | |
| 107-02-8 | **Acrolein** | **5.4** | 0.85 | **2.4** | 0.37 | |
| 67-64-1 | **Acetone** | **65** | 8.5 | **27** | 3.6 | |
| 75-69-4 | **Trichlorofluoromethane** | **1.3** | 0.17 | **0.23** | 0.030 | |
| 67-63-0 | **2-Propanol (Isopropyl Alcohol)** | **10** | 0.85 | **4.1** | 0.34 | |
| 107-13-1 | Acrylonitrile | ND | 0.85 | ND | 0.39 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.17 | ND | 0.043 | |
| 75-09-2 | Methylene Chloride | ND | 0.85 | ND | 0.24 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.17 | ND | 0.054 | |
| 76-13-1 | **Trichlorotrifluoroethane** | **0.60** | 0.17 | **0.079** | 0.022 | |
| 75-15-0 | **Carbon Disulfide** | **1.7** | 0.85 | **0.56** | 0.27 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.17 | ND | 0.043 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.17 | ND | 0.042 | |
| 1634-04-4 | **Methyl tert-Butyl Ether** | **1.0** | 0.17 | **0.28** | 0.047 | |
| 108-05-4 | Vinyl Acetate | ND | 8.5 | ND | 2.4 | |
| 78-93-3 | **2-Butanone (MEK)** | **5.5** | 0.85 | **1.9** | 0.29 | |

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: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101162**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00977

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/19/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.9 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.69

| 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 | 0.043 | |
| 141-78-6 | **Ethyl Acetate** | **1.9** | 0.85 | **0.54** | 0.23 | |
| 110-54-3 | **n-Hexane** | **1.8** | 0.85 | **0.51** | 0.24 | |
| 67-66-3 | **Chloroform** | **0.75** | 0.17 | **0.15** | 0.035 | |
| 109-99-9 | **Tetrahydrofuran (THF)** | **2.7** | 0.85 | **0.93** | 0.29 | |
| 107-06-2 | **1,2-Dichloroethane** | **1.0** | 0.17 | **0.26** | 0.042 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.17 | ND | 0.031 | |
| 71-43-2 | **Benzene** | **1.8** | 0.17 | **0.58** | 0.053 | |
| 56-23-5 | **Carbon Tetrachloride** | **0.58** | 0.17 | **0.092** | 0.027 | |
| 110-82-7 | **Cyclohexane** | **1.4** | 0.85 | **0.41** | 0.25 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.17 | ND | 0.037 | |
| 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 | 0.85 | ND | 0.23 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.85 | ND | 0.21 | |
| 142-82-5 | **n-Heptane** | **2.0** | 0.85 | **0.48** | 0.21 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.85 | ND | 0.19 | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.85 | ND | 0.21 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.85 | ND | 0.19 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.17 | ND | 0.031 | |
| 108-88-3 | **Toluene** | **10** | 0.85 | **2.7** | 0.22 | |
| 591-78-6 | 2-Hexanone | ND | 0.85 | ND | 0.21 | |
| 124-48-1 | Dibromochloromethane | ND | 0.17 | ND | 0.020 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.17 | ND | 0.022 | |
| 123-86-4 | **n-Butyl Acetate** | **2.9** | 0.85 | **0.61** | 0.18 | |

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# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101162**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-003

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
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Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/19/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.9 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.69

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | **n-Octane** | **1.6** | 0.85 | **0.34** | 0.18 | |
| 127-18-4 | **Tetrachloroethene** | **0.52** | 0.17 | **0.077** | 0.025 | |
| 108-90-7 | Chlorobenzene | ND | 0.17 | ND | 0.037 | |
| 100-41-4 | **Ethylbenzene** | **4.8** | 0.85 | **1.1** | 0.19 | |
| 179601-23-1 | **m,p-Xylenes** | **13** | 0.85 | **3.0** | 0.19 | |
| 75-25-2 | Bromoform | ND | 0.85 | ND | 0.082 | |
| 100-42-5 | **Styrene** | **2.2** | 0.85 | **0.52** | 0.20 | |
| 95-47-6 | **o-Xylene** | **4.6** | 0.85 | **1.0** | 0.19 | |
| 111-84-2 | **n-Nonane** | **7.6** | 0.85 | **1.5** | 0.16 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.17 | ND | 0.025 | |
| 98-82-8 | Cumene | ND | 0.85 | ND | 0.17 | |
| 80-56-8 | **alpha-Pinene** | **33** | 0.85 | **5.9** | 0.15 | |
| 103-65-1 | n-Propylbenzene | ND | 0.85 | ND | 0.17 | |
| 622-96-8 | **4-Ethyltoluene** | **1.1** | 0.85 | **0.23** | 0.17 | |
| 108-67-8 | **1,3,5-Trimethylbenzene** | **1.5** | 0.85 | **0.30** | 0.17 | |
| 95-63-6 | **1,2,4-Trimethylbenzene** | **4.3** | 0.85 | **0.86** | 0.17 | |
| 100-44-7 | Benzyl Chloride | ND | 0.17 | ND | 0.033 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.17 | ND | 0.028 | |
| 106-46-7 | **1,4-Dichlorobenzene** | **0.19** | 0.17 | **0.032** | 0.028 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.17 | ND | 0.028 | |
| 5989-27-5 | **d-Limonene** | **14** | 0.85 | **2.4** | 0.15 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.85 | ND | 0.087 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.85 | ND | 0.11 | |
| 91-20-3 | Naphthalene | ND | 0.85 | ND | 0.16 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.85 | ND | 0.079 | |

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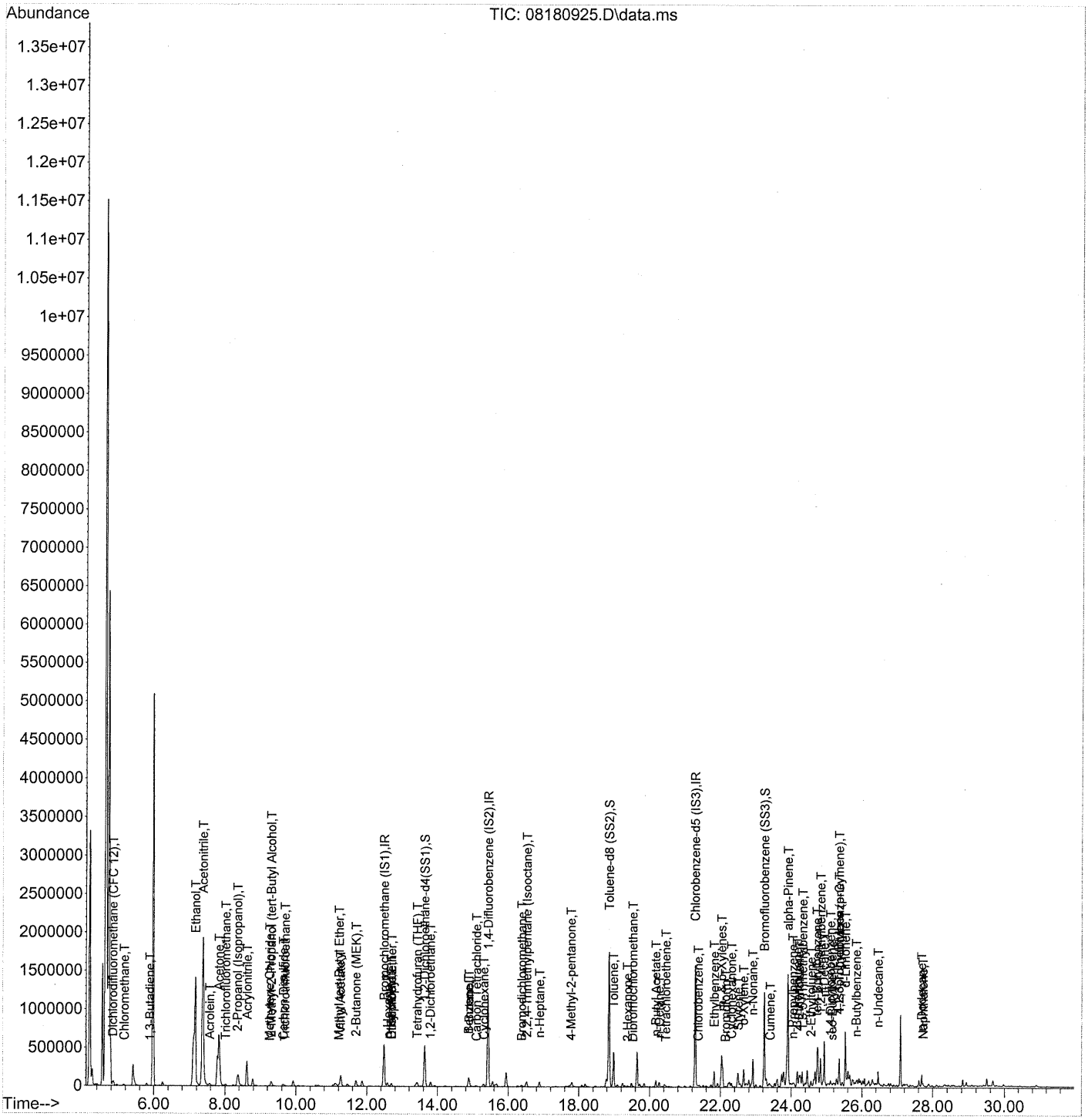
Verified By: _____ Date: 8/25/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 16:46:50 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration



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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 272229 | 25.000 | ng | | -0.02 |
| 37) 1,4-Difluorobenzene (IS2) | 15.43 | 114 | 1370304 | 25.000 | ng | | -0.02 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 656210 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 554472 | 23.434 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery = 93.72% | | | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1476508 | 25.751 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = 103.00% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 392214 | 25.939 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 103.76% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 0.00 | 42 | 0 | N.D. d | | | |
| 3) Dichlorodifluoromethan... | 4.85 | 85 | 48424 | 1.586 ng | | | 99 |
| 4) Chloromethane | 5.17 | 50 | 11262 | 0.549 ng | | | 96 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.40 | 135 | 455 | N.D. | | | |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 5.88 | 54 | 776 | 0.055 ng | # | | 18 |
| 8) Bromomethane | 6.35 | 94 | 528 | N.D. | | | |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | | | |
| 10) Ethanol | 7.17 | 45 | 3140448 | 265.211 ng | | | 99 |
| 11) Acetonitrile | 7.38 | 41 | 3348477 | 96.558 ng | | | 100 |
| 12) Acrolein | 7.58 | 56 | 28886 | 3.205 ng | | | 97 |
| 13) Acetone | 7.83 | 58 | 430297 | 38.513 ng | | | 94 |
| 14) Trichlorofluoromethane | 8.02 | 101 | 21299 | 0.772 ng | | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.35 | 45 | 259947 | 5.920 ng | | | 77 |
| 16) Acrylonitrile | 8.62 | 53 | 5595 | 0.277 ng | # | | 47 |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.30 | 59 | 11537 | 0.296 ng | # | | 1 |
| 19) Methylene Chloride | 9.26 | 84 | 5554 | 0.370 ng | | | 84 |
| 20) 3-Chloro-1-propene (Al... | 9.46 | 41 | 181 | N.D. | | | |
| 21) Trichlorotrifluoroethane | 9.69 | 151 | 3574 | 0.356 ng | | | 91 |
| 22) Carbon Disulfide | 9.64 | 76 | 54354 | 1.027 ng | | | 96 |
| 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 | 11.21 | 73 | 25480 | 0.603 ng | | | 98 |
| 26) Vinyl Acetate | 11.25 | 86 | 7313 | 3.216 ng | # | | 1 |
| 27) 2-Butanone (MEK) | 11.70 | 72 | 32632 | 3.235 ng | | | 99 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 12.70 | 87 | 1229 | 0.091 ng | # | | 1 |
| 30) Ethyl Acetate | 12.70 | 61 | 6038 | 1.149 ng | | | 98 |
| 31) n-Hexane | 12.59 | 57 | 28354 | 1.055 ng | | | 97 |



8/22/09

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Data File : 08180925.D
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Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 16:46:50 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.69 | 83 | 10466 | 0.442 | ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.42 | 72 | 17493 | 1.627 | ng | # | 70 |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | | |
| 36) 1,2-Dichloroethane | 13.79 | 62 | 13219 | 0.611 | ng | | 93 |
| 38) 1,1,1-Trichloroethane | 14.19 | 97 | 119 | N.D. | | | |
| 39) Isopropyl Acetate | 14.86 | 61 | 222 | N.D. | | | |
| 40) 1-Butanol | 14.89 | 56 | 64144 | 3.607 | ng | | 79 |
| 41) Benzene | 14.88 | 78 | 65583 | 1.089 | ng | | 100 |
| 42) Carbon Tetrachloride | 15.10 | 117 | 6547 | 0.341 | ng | | 90 |
| 43) Cyclohexane | 15.31 | 84 | 18231 | 0.826 | ng | | 94 |
| 44) tert-Amyl Methyl Ether | 15.88 | 73 | 969 | N.D. | | | |
| 45) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | | | |
| 46) Bromodichloromethane | 16.38 | 83 | 4245 | 0.214 | ng | # | 52 |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | | | |
| 48) 1,4-Dioxane | 16.55 | 88 | 95 | N.D. | | | |
| 49) 2,2,4-Trimethylpentane... | 16.52 | 57 | 66329 | 0.935 | ng | | 88 |
| 50) Methyl Methacrylate | 0.00 | 100 | 0 | N.D. | d | | |
| 51) n-Heptane | 16.89 | 71 | 18665 | 1.154 | ng | | 98 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | | |
| 53) 4-Methyl-2-pentanone | 17.78 | 58 | 5292 | 0.365 | ng | | 93 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | d | | |
| 58) Toluene | 18.98 | 91 | 344832 | 6.119 | ng | | 99 |
| 59) 2-Hexanone | 19.38 | 43 | 16017 | 0.427 | ng | | 91 |
| 60) Dibromochloromethane | 19.53 | 129 | 1081 | 0.081 | ng | | 93 |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | | |
| 62) n-Butyl Acetate | 20.18 | 43 | 75128 | 1.701 | ng | | 96 |
| 63) n-Octane | 20.28 | 57 | 12806 | 0.940 | ng | | 99 |
| 64) Tetrachloroethene | 20.46 | 166 | 4046 | 0.310 | ng | | 100 |
| 65) Chlorobenzene | 21.37 | 112 | 1793 | 0.051 | ng | # | 43 |
| 66) Ethylbenzene | 21.82 | 91 | 183845 | 2.854 | ng | | 100 |
| 67) m- & p-Xylenes | 22.04 | 91 | 398539 | 7.648 | ng | | 99 |
| 68) Bromoform | 22.15 | 173 | 1783 | 0.161 | ng | | 85 |
| 69) Styrene | 22.50 | 104 | 49612 | 1.317 | ng | | 99 |
| 70) o-Xylene | 22.65 | 91 | 140859 | 2.696 | ng | | 97 |
| 71) n-Nonane | 22.91 | 43 | 156413 | 4.506 | ng | | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 22.65 | 83 | 1119 | N.D. | | | |
| 74) Cumene | 23.41 | 105 | 12842 | 0.195 | ng | | 96 |
| 75) alpha-Pinene | 23.90 | 93 | 656433 | 19.404 | ng | | 70 |
| 76) n-Propylbenzene | 24.05 | 91 | 38509 | 0.464 | ng | | 95 |
| 77) 3-Ethyltoluene | 24.17 | 105 | 96103 | 1.524 | ng | | 99 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 40528 | 0.663 | ng | | 97 |
| 79) 1,3,5-Trimethylbenzene | 24.32 | 105 | 44342 | 0.860 | ng | | 100 |

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ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 16:46:50 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

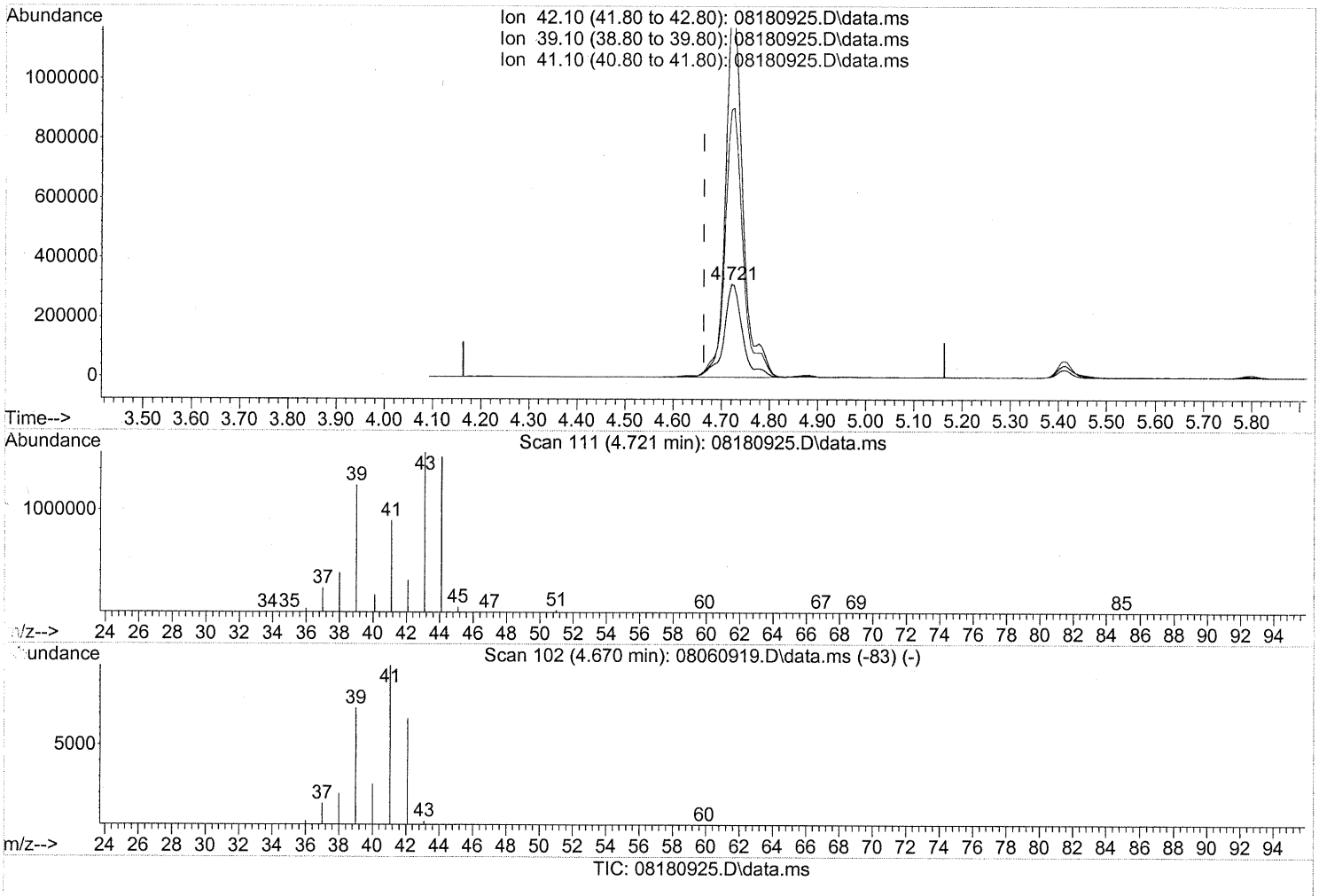
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 1366 | N.D. | | |
| 81) 2-Ethyltoluene | 24.56 | 105 | 42212 | 0.664 ng | | 98 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 132225 | 2.515 ng | | 89 |
| 83) n-Decane | 24.93 | 57 | 204381 | 5.980 ng | | 98 |
| 84) Benzyl Chloride | 25.01 | 91 | 125 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 0.00 | 146 | 0 | N.D. d | | |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 3213 | 0.113 ng | | 91 |
| 87) sec-Butylbenzene | 25.16 | 105 | 3713 | 0.052 ng | | 85 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 61196 | 0.966 ng | | 98 |
| 89) 1,2,3-Trimethylbenzene | 25.35 | 105 | 37820 | 0.706 ng | | 92 |
| 90) 1,2-Dichlorobenzene | 0.00 | 146 | 0 | N.D. d | | |
| 91) d-Limonene | 25.53 | 68 | 179303 | 8.022 ng | # | 69 |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 93) n-Undecane | 26.46 | 57 | 65645 | 1.805 ng | | 92 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 112 | N.D. | | |
| 95) Naphthalene | 27.73 | 128 | 21777 | 0.305 ng | <RL | 100 |
| 96) n-Dodecane | 27.69 | 57 | 49279 | 1.167 ng | | 97 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.32 | 55 | 23601 | 1.011 ng | | 88 |
| 99) tert-Butylbenzene | 24.73 | 119 | 9391 | 0.185 ng | | 95 |
| 100) n-Butylbenzene | 25.84 | 91 | 11850 | 0.202 ng | # | 42 |

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(2) Propene (T)

4.721min (+0.057) 45.32ng

response 846689

| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 111.90 | 367.13# |
| 41.10 | 150.20 | 277.54# |
| 0.00 | 0.00 | 0.00 |

FP

8/22/09 8/25/09

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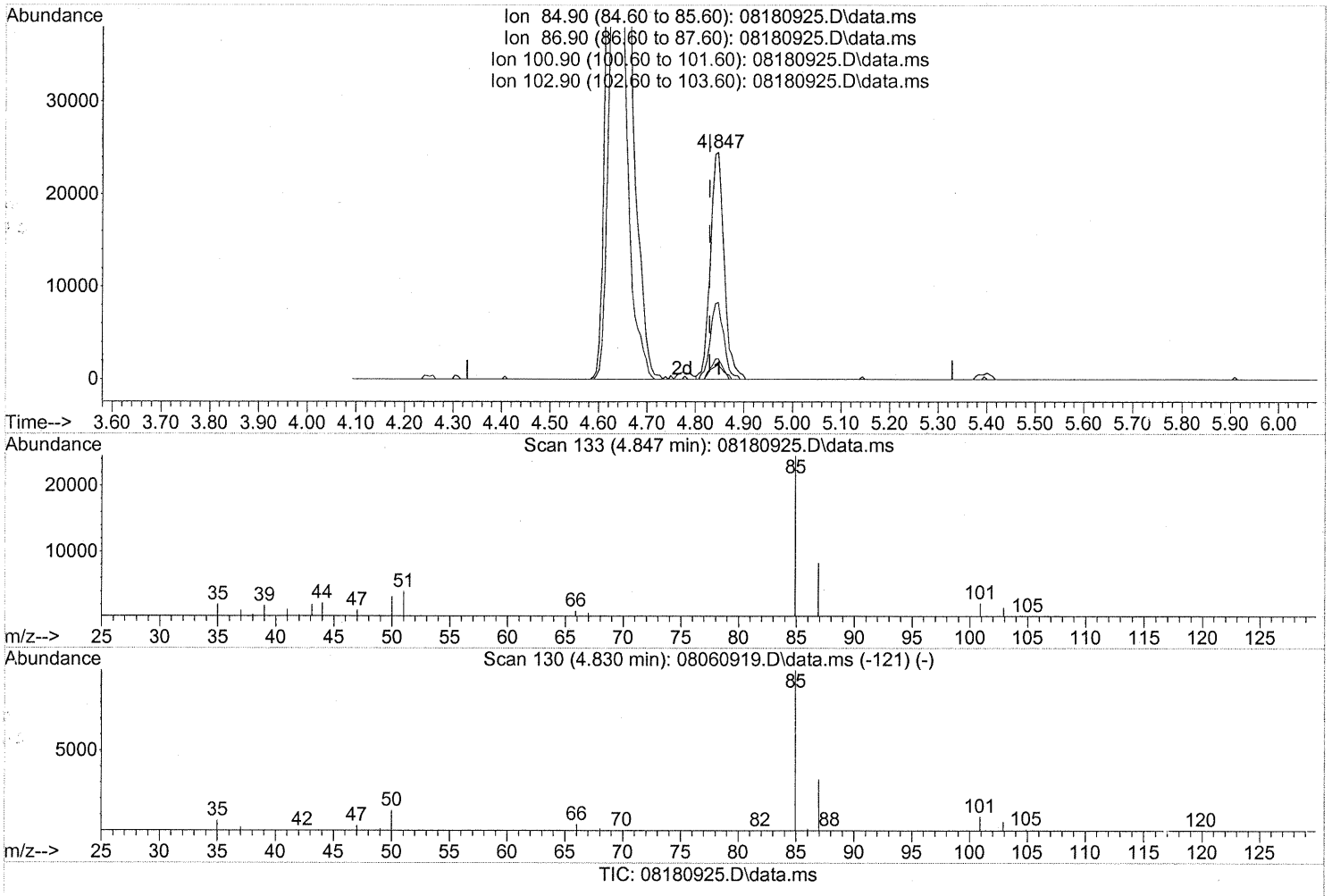
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration










TIC: 08180925.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

4.847min (+0.017) 1.59ng

response 48424

| Ion | Exp% | Act% |
|---|---|---|
| 84.90 | 100 | 100 |
| 86.90 | 32.80 | 33.00 |
| 100.90 | 8.80 | 8.08 |
| 102.90 | 5.20 | 5.67 |

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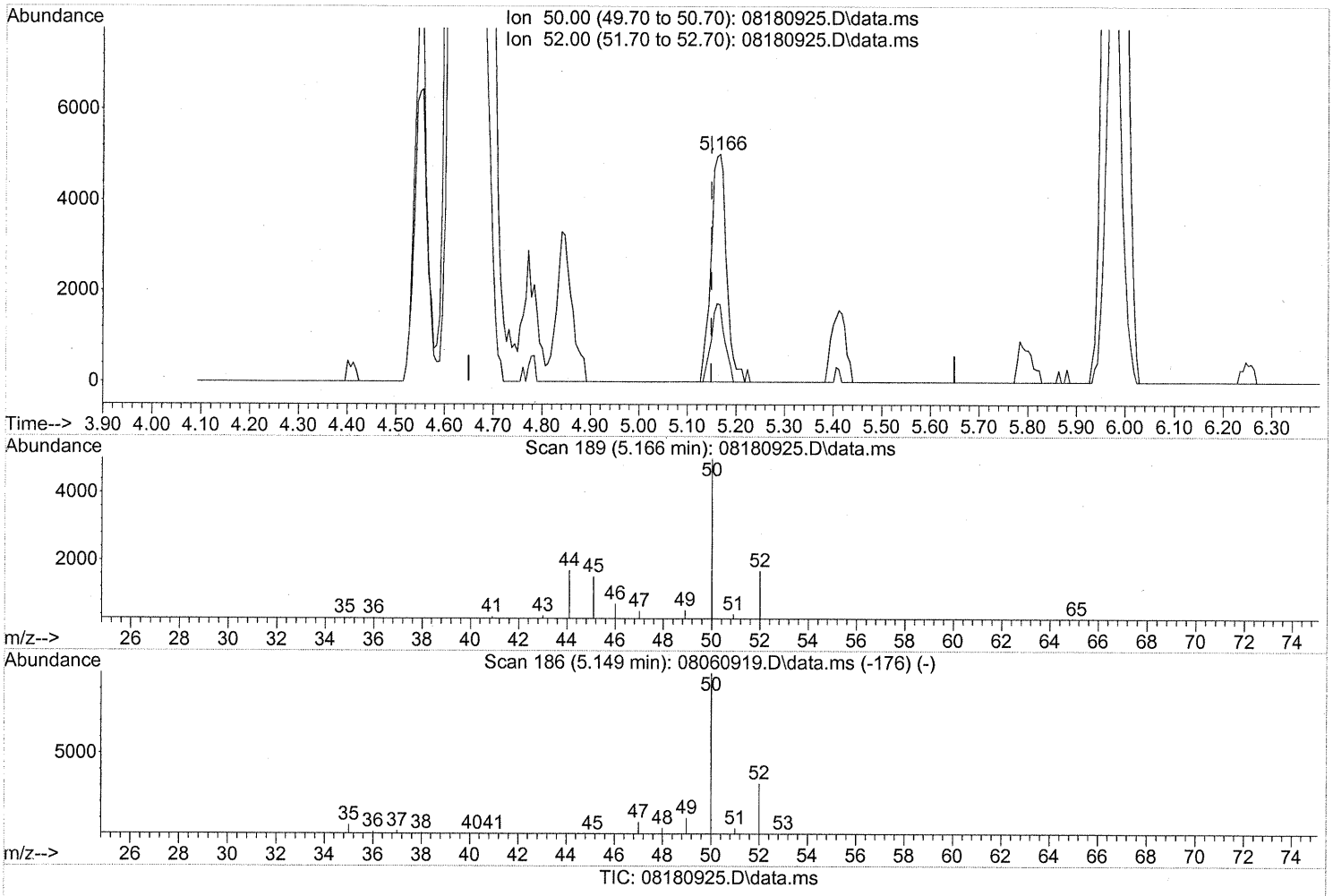
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(4) Chloromethane (T)

5.166min (+0.017) 0.55ng

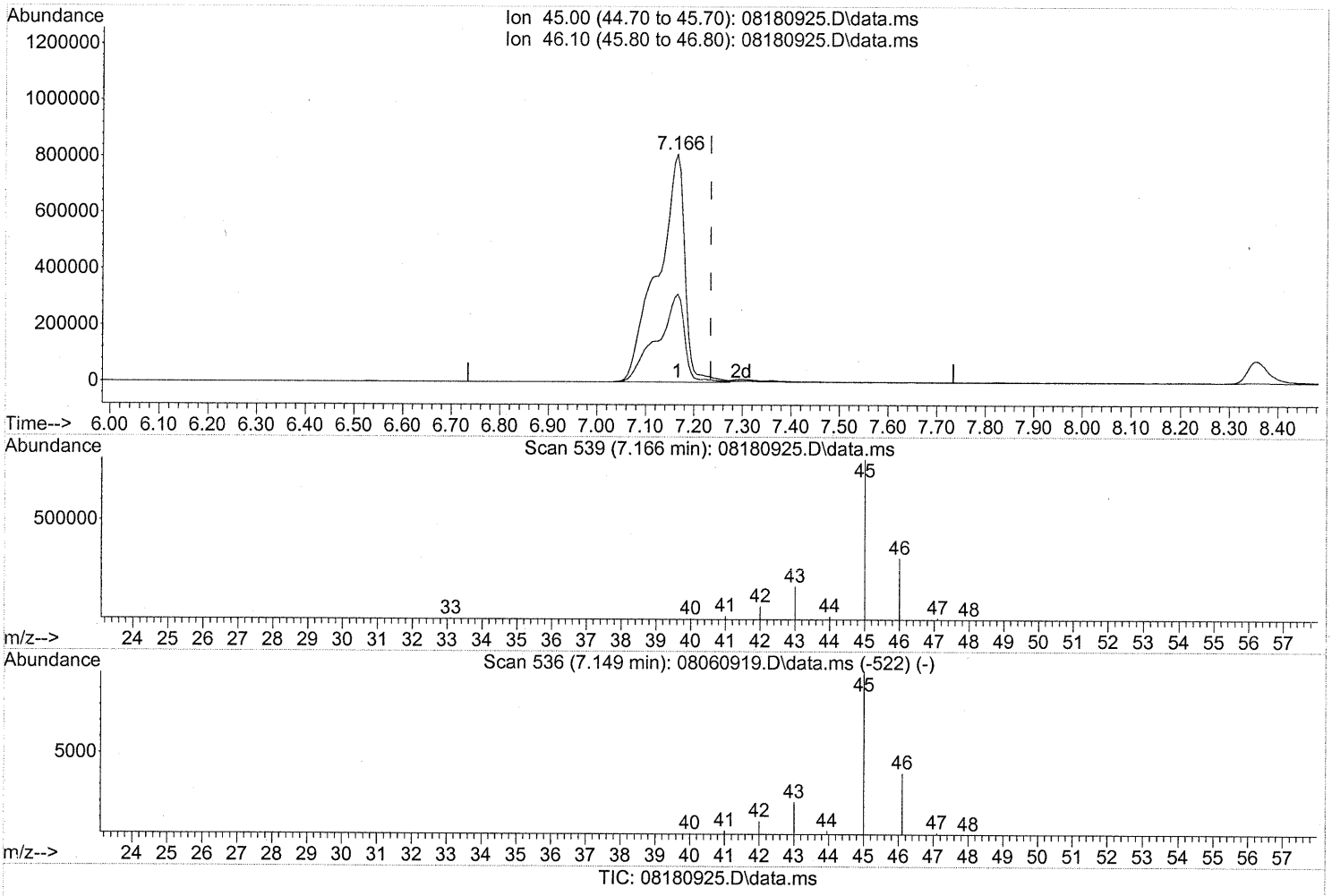
response 11262

| Ion | Exp% | Act% |
|---|---|---|
| 50.00 | 100 | 100 |
| 52.00 | 31.60 | 29.56 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(10) Ethanol (T)

7.166min (-0.069) 265.21ng

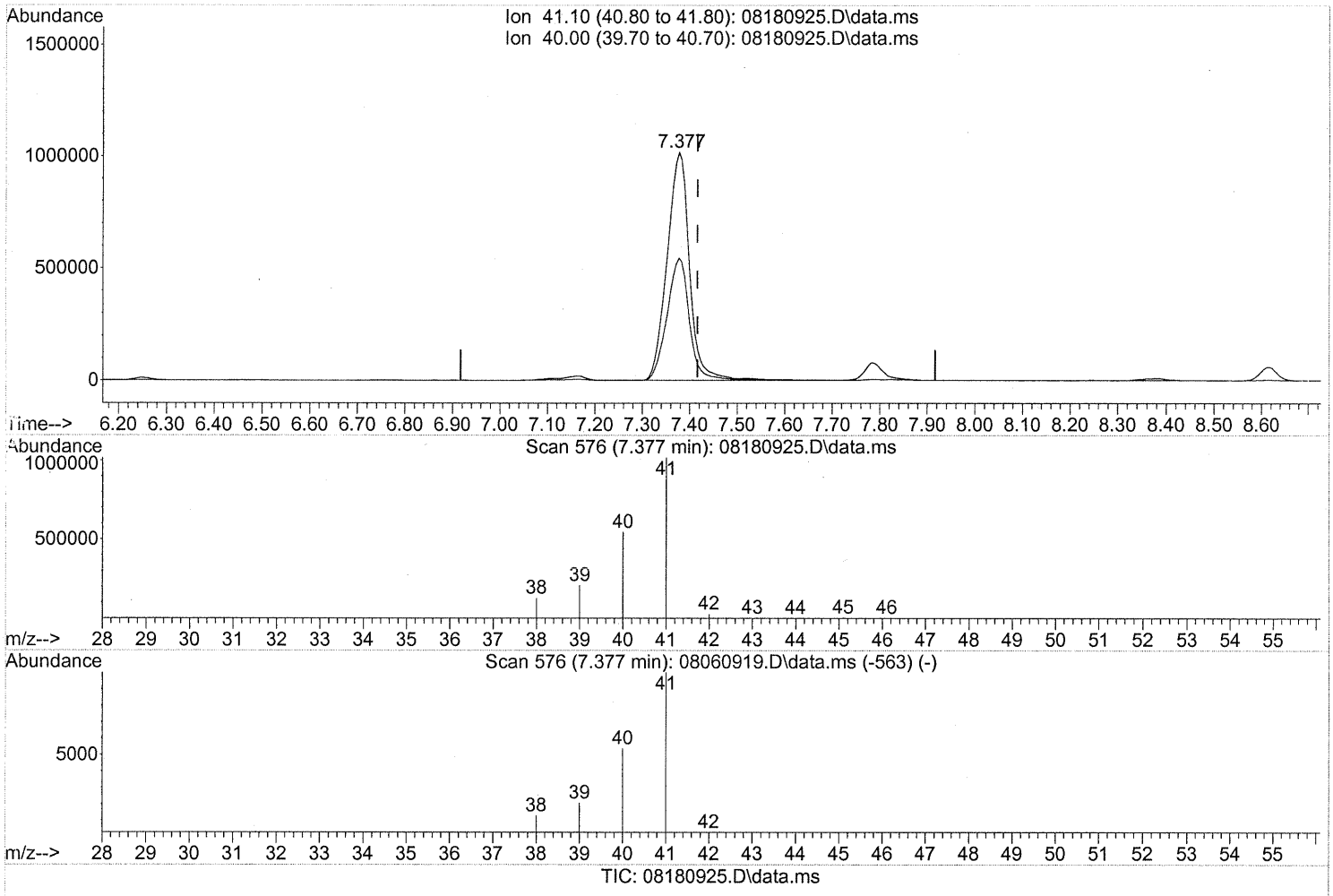
response 3140448

| 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:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(11) Acetonitrile (T)

7.377min (-0.040) 96.56ng

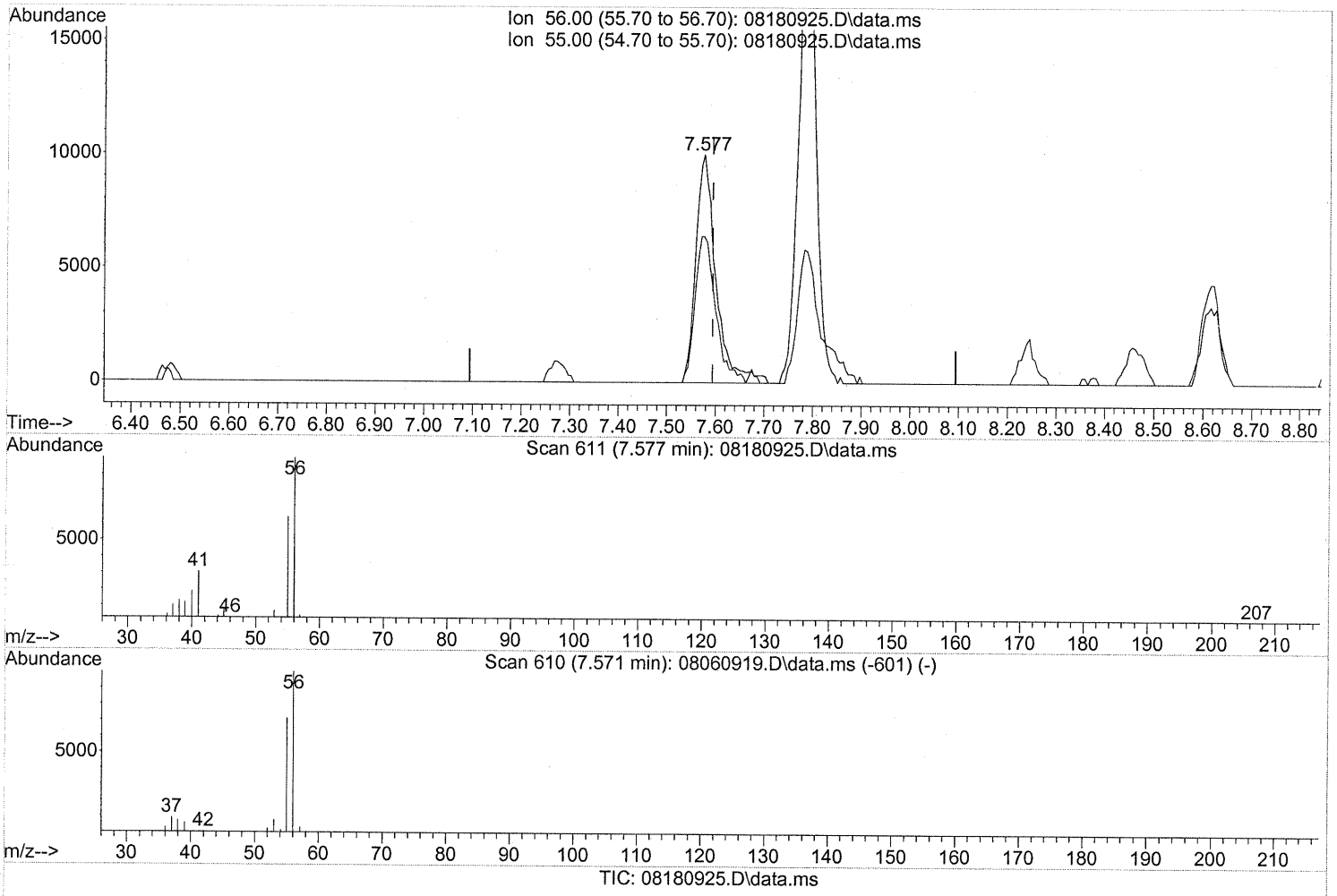
response 3348477

| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 40.00 | 53.70 | 53.48 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(12) Acrolein (T)

7.577min (-0.017) 3.20ng

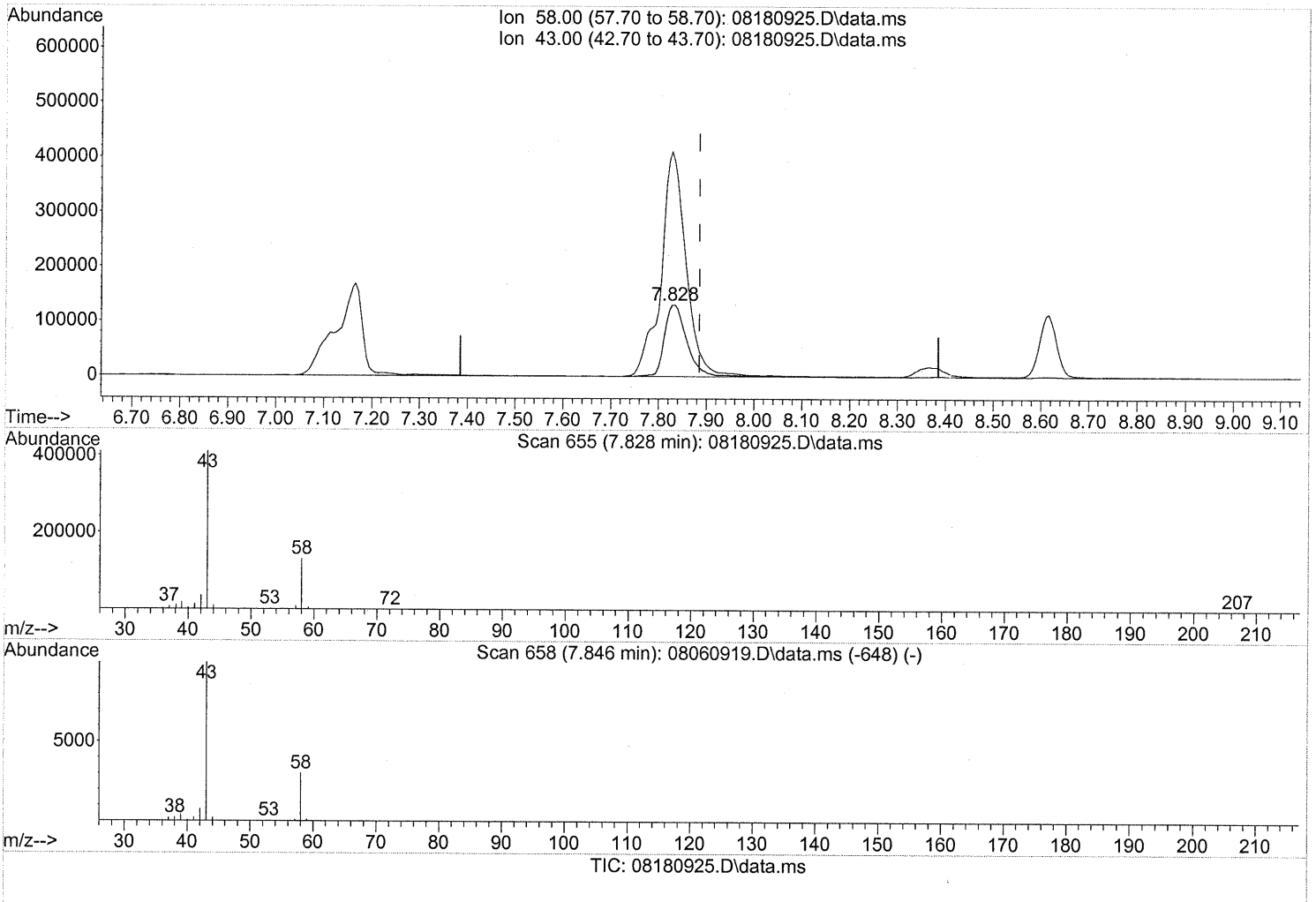
response 28886

| Ion | Exp% | Act% |
|---|---|---|
| 56.00 | 100 | 100 |
| 55.00 | 68.10 | 65.77 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(13) Acetone (T)

7.828min (-0.058) 38.51ng

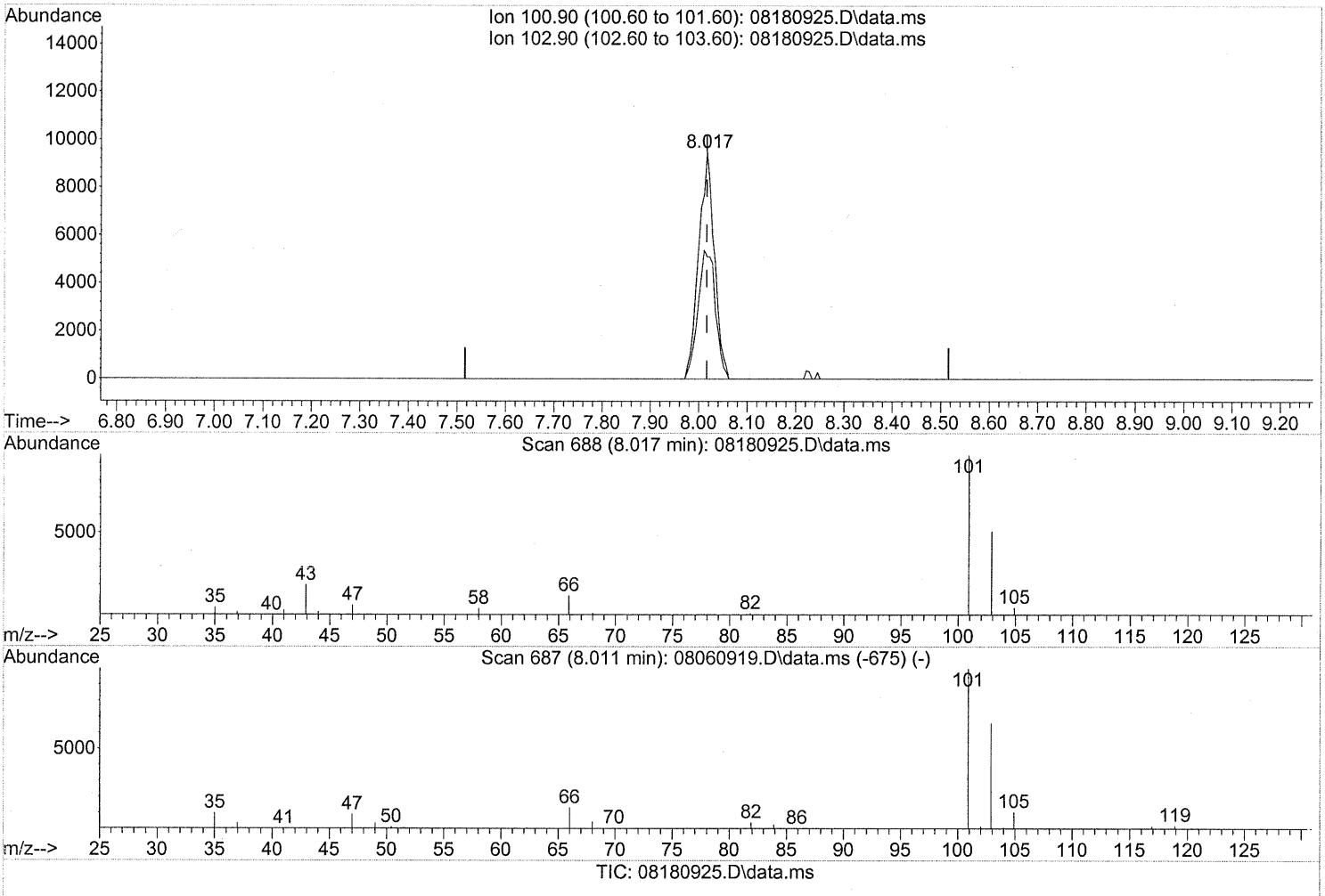
response 430297

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 340.40 | 352.49 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(14) Trichlorofluoromethane (T)

8.017min (+0.000) 0.77ng

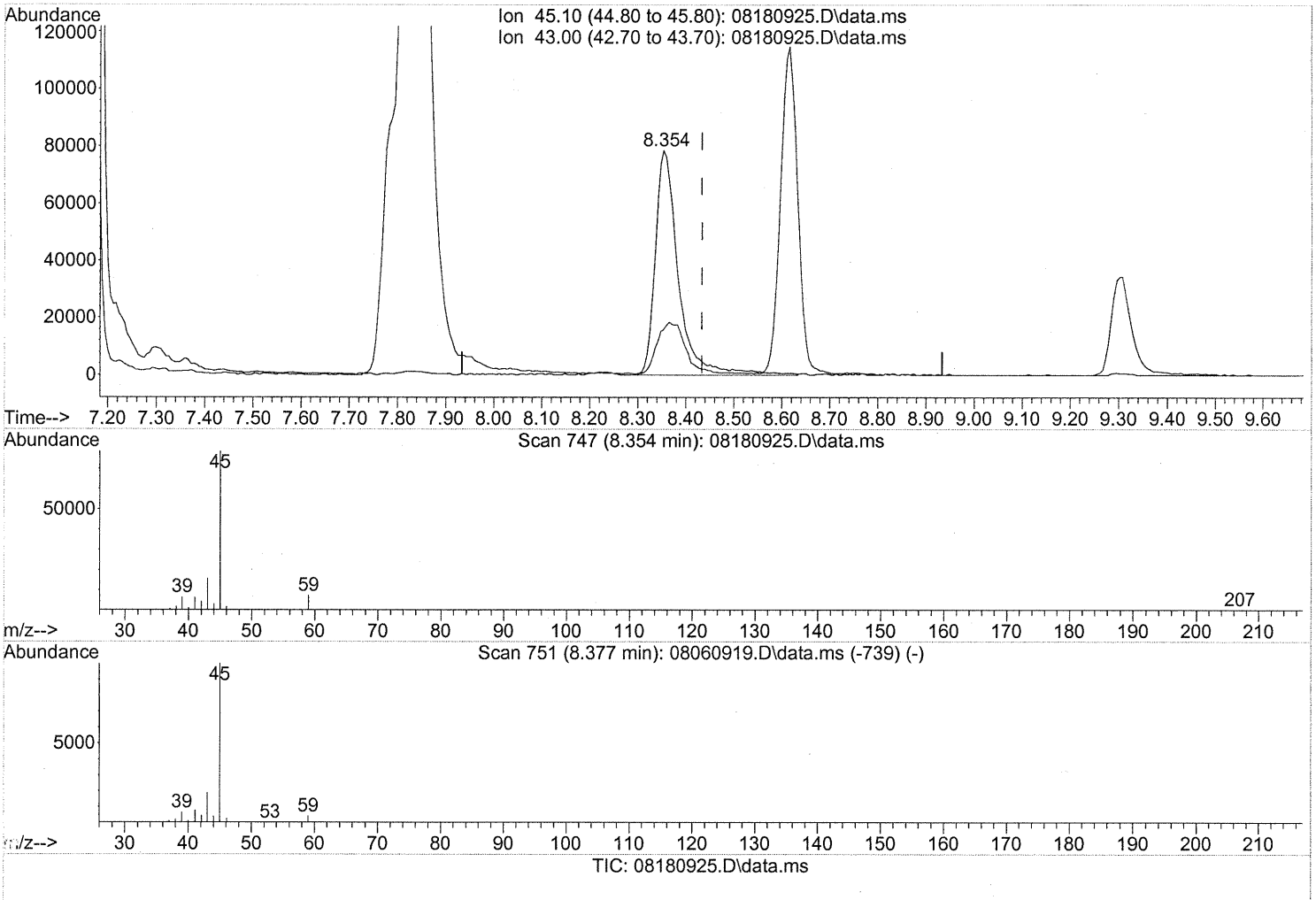
response 21299

| Ion | Exp% | Act% |
|---|---|---|
| 100.90 | 100 | 100 |
| 102.90 | 64.40 | 62.59 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




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

8.354min (-0.080) 5.92ng

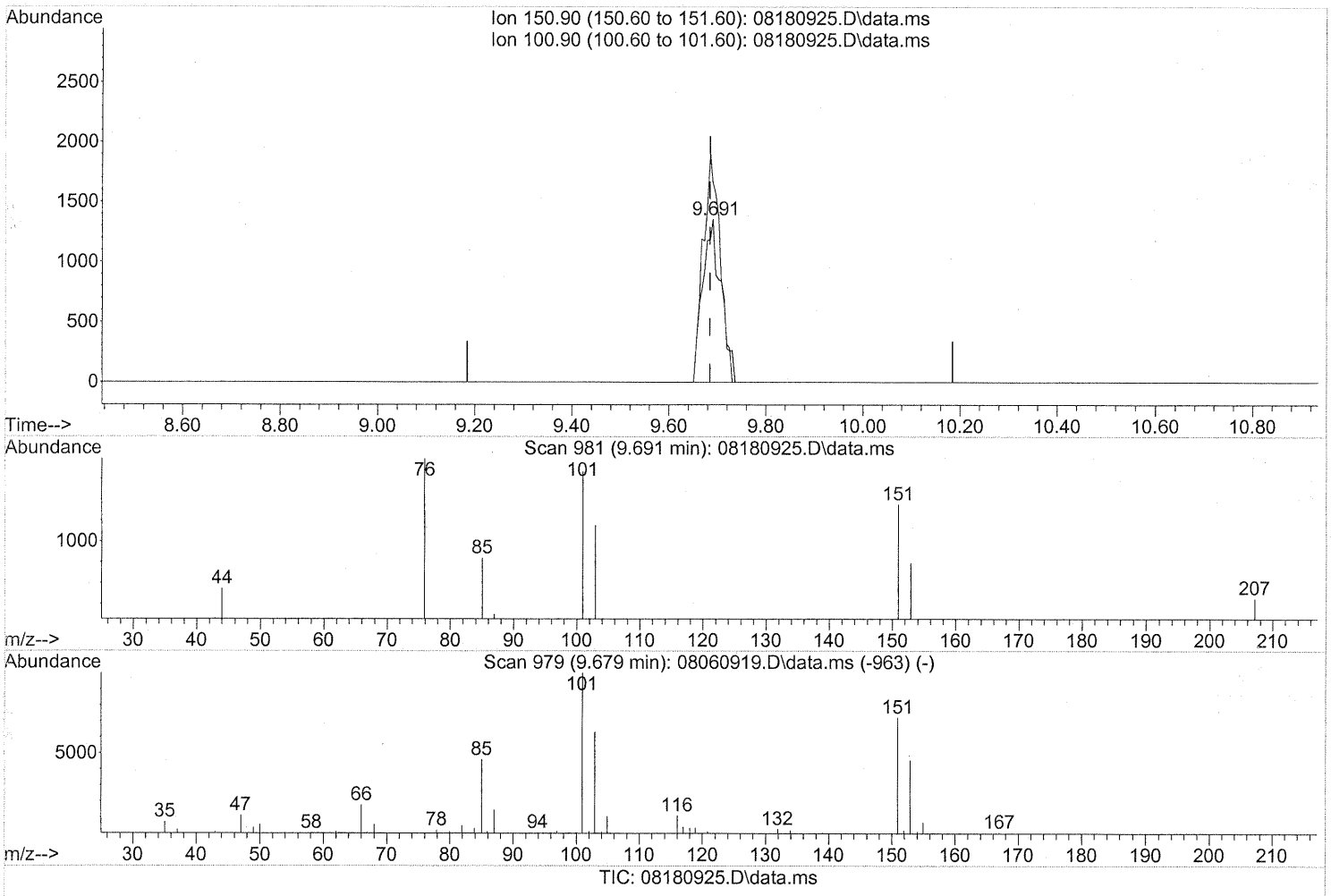
response 259947

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.00 | 29.21 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

97

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 24 17:53:12 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.691min (+0.006) 0.36ng

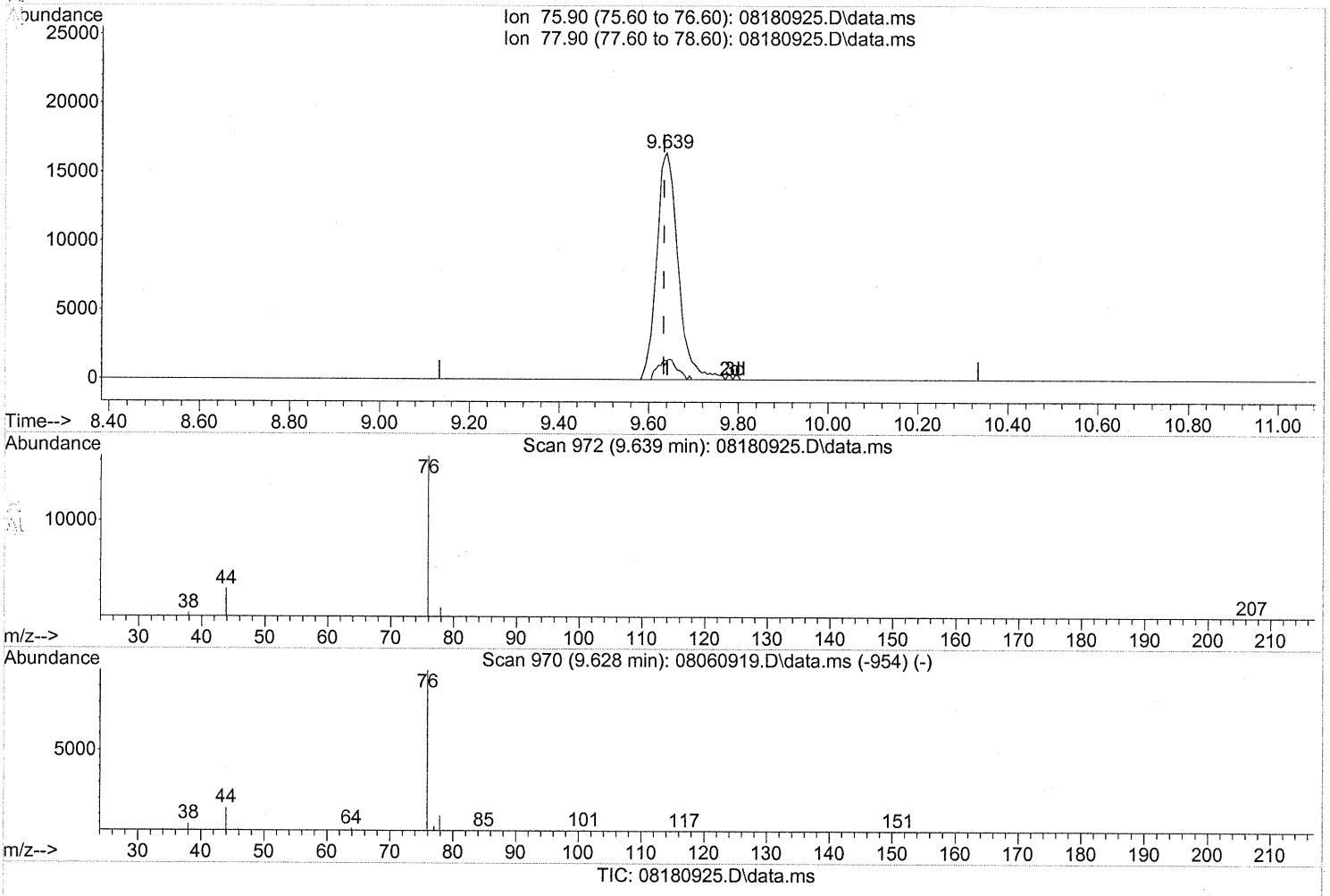
response 3574

| Ion | Exp% | Act% |
|---|---|---|
| 150.90 | 100 | 100 |
| 100.90 | 138.40 | 127.98 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(22) Carbon Disulfide (T)

9.639min (+0.006) 1.03ng

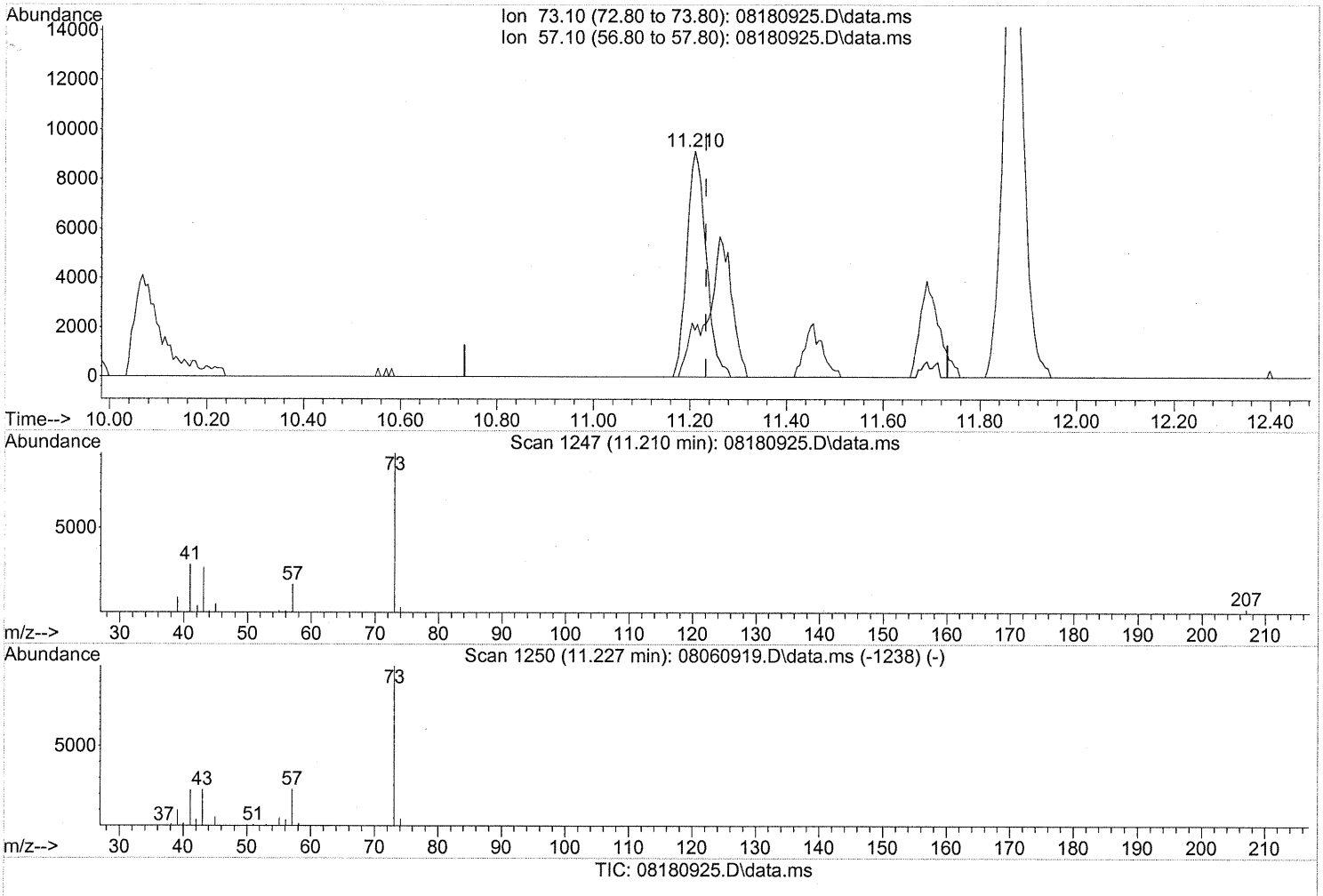
response 54354

| Ion | Exp% | Act% |
|---|---|---|
| 75.90 | 100 | 100 |
| 77.90 | 9.40 | 7.96 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(25) Methyl tert-Butyl Ether (T)

11.210min (-0.023) 0.60ng

response 25480

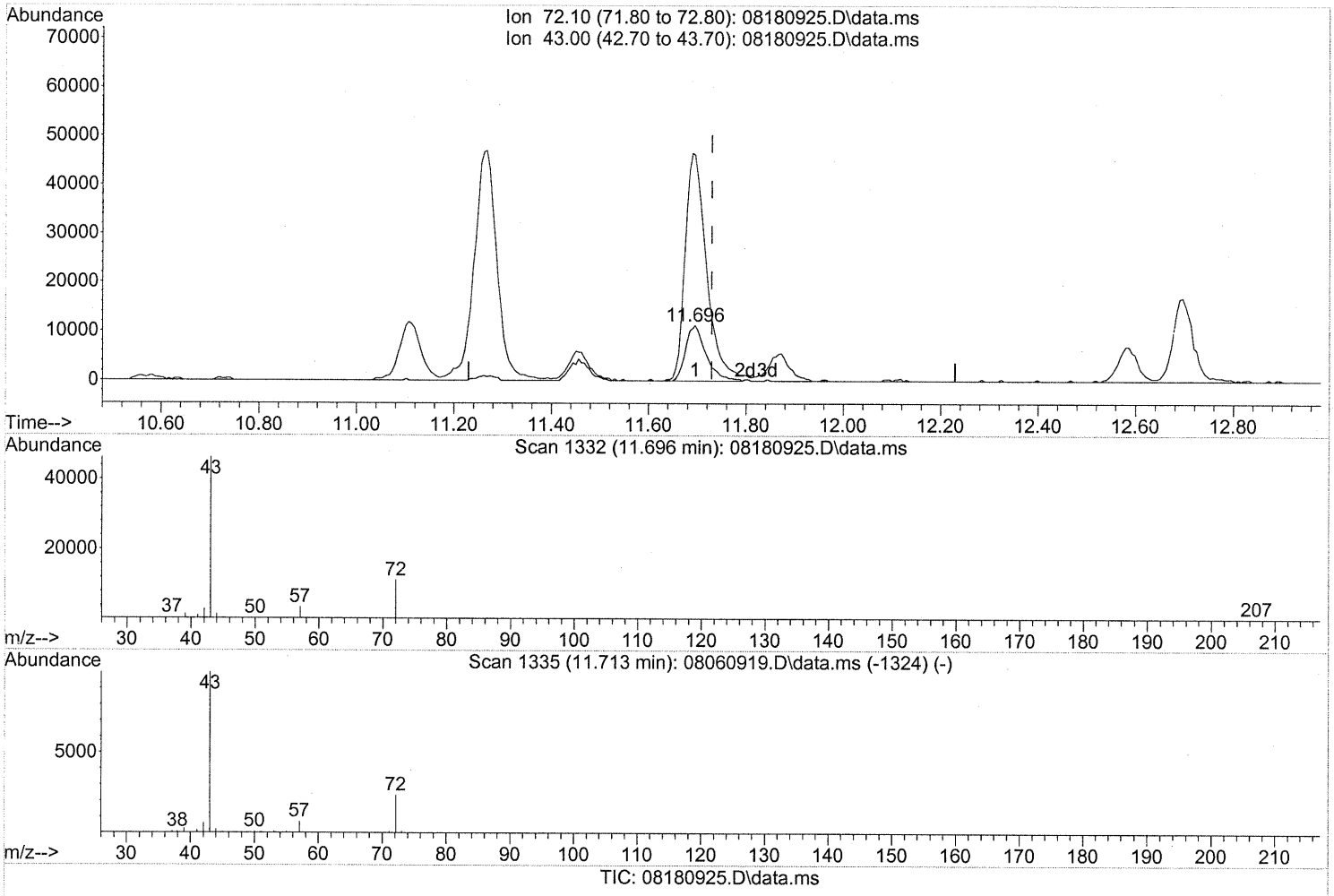
| Ion | Exp% | Act% |
|---|---|---|
| 73.10 | 100 | 100 |
| 57.10 | 22.50 | 21.55 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

100

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(27) 2-Butanone (MEK) (T)

11.696min (-0.034) 3.23ng

response 32632

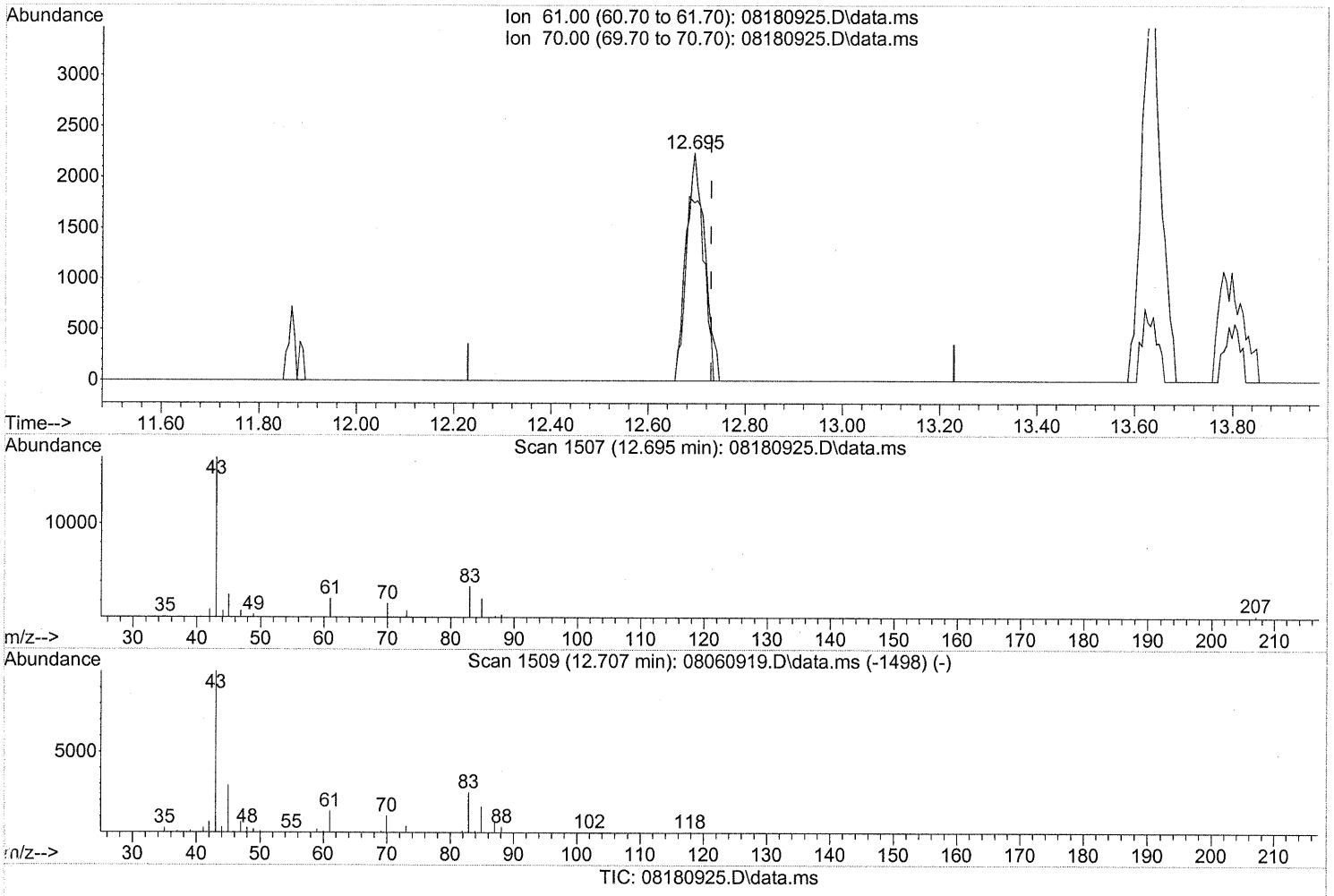
| Ion | Exp% | Act% |
|---|---|---|
| 72.10 | 100 | 100 |
| 43.00 | 437.40 | 439.16 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

101

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(30) Ethyl Acetate (T)

12.695min (-0.034) 1.15ng

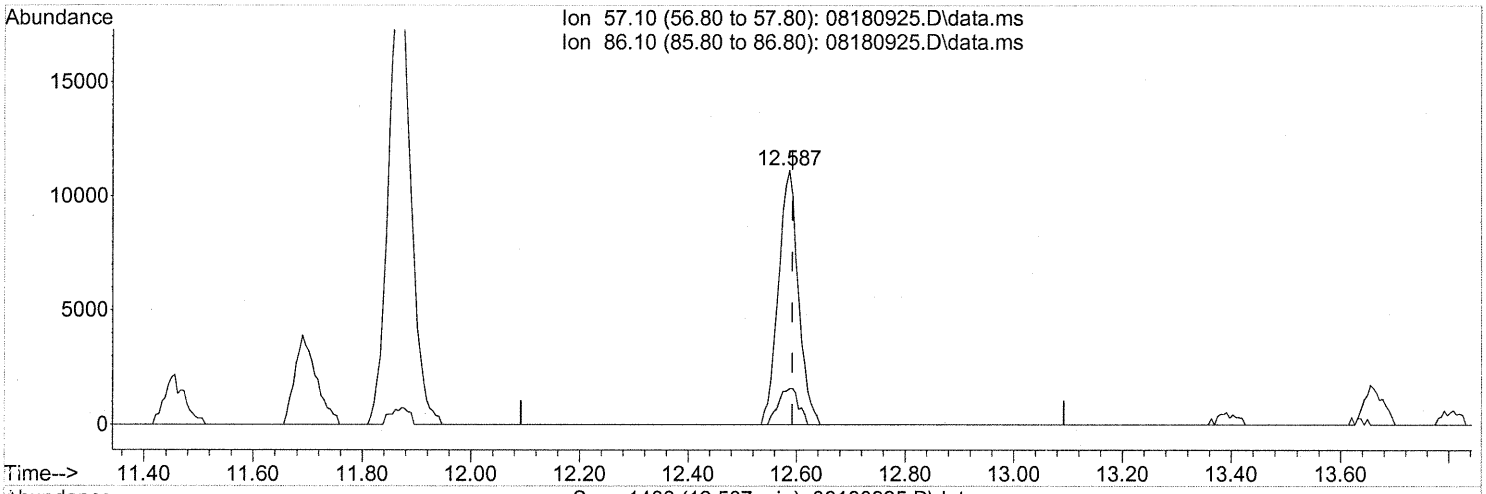
response 6038

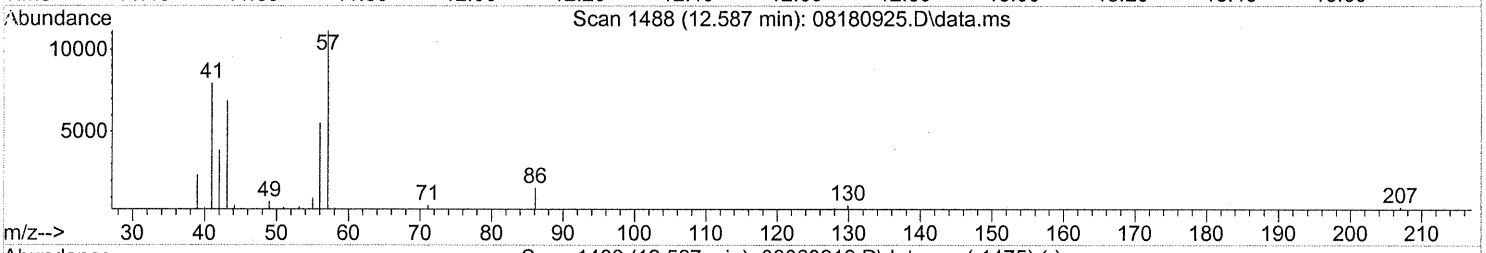
| Ion | Exp% | Act% |
|---|---|---|
| 61.00 | 100 | 100 |
| 70.00 | 82.00 | 83.82 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

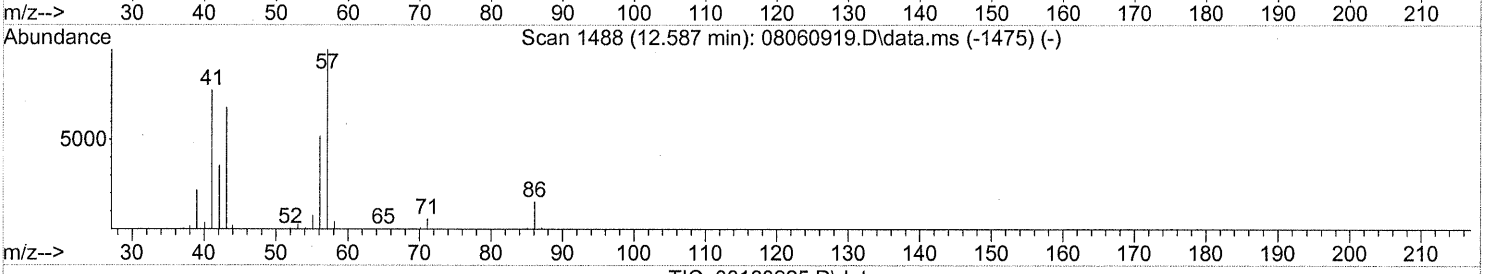
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(31) n-Hexane (T)

12.587min (-0.006) 1.05ng

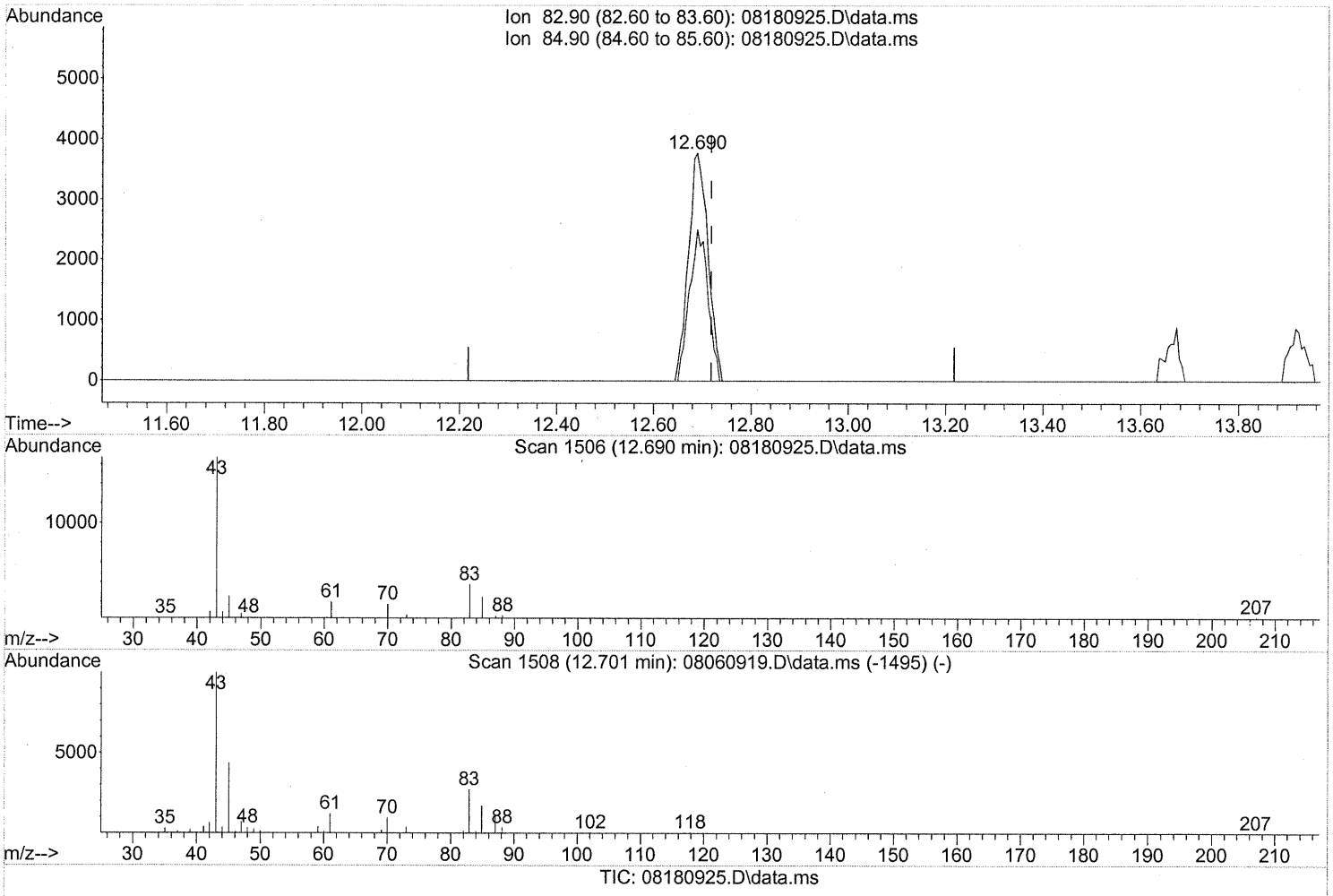
response 28354

| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 86.10 | 15.70 | 14.39 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(32) Chloroform (T)

12.690min (-0.029) 0.44ng

response 10466

| Ion | Exp% | Act% |
|---|---|---|
| 82.90 | 100 | 100 |
| 84.90 | 64.30 | 62.63 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

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Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
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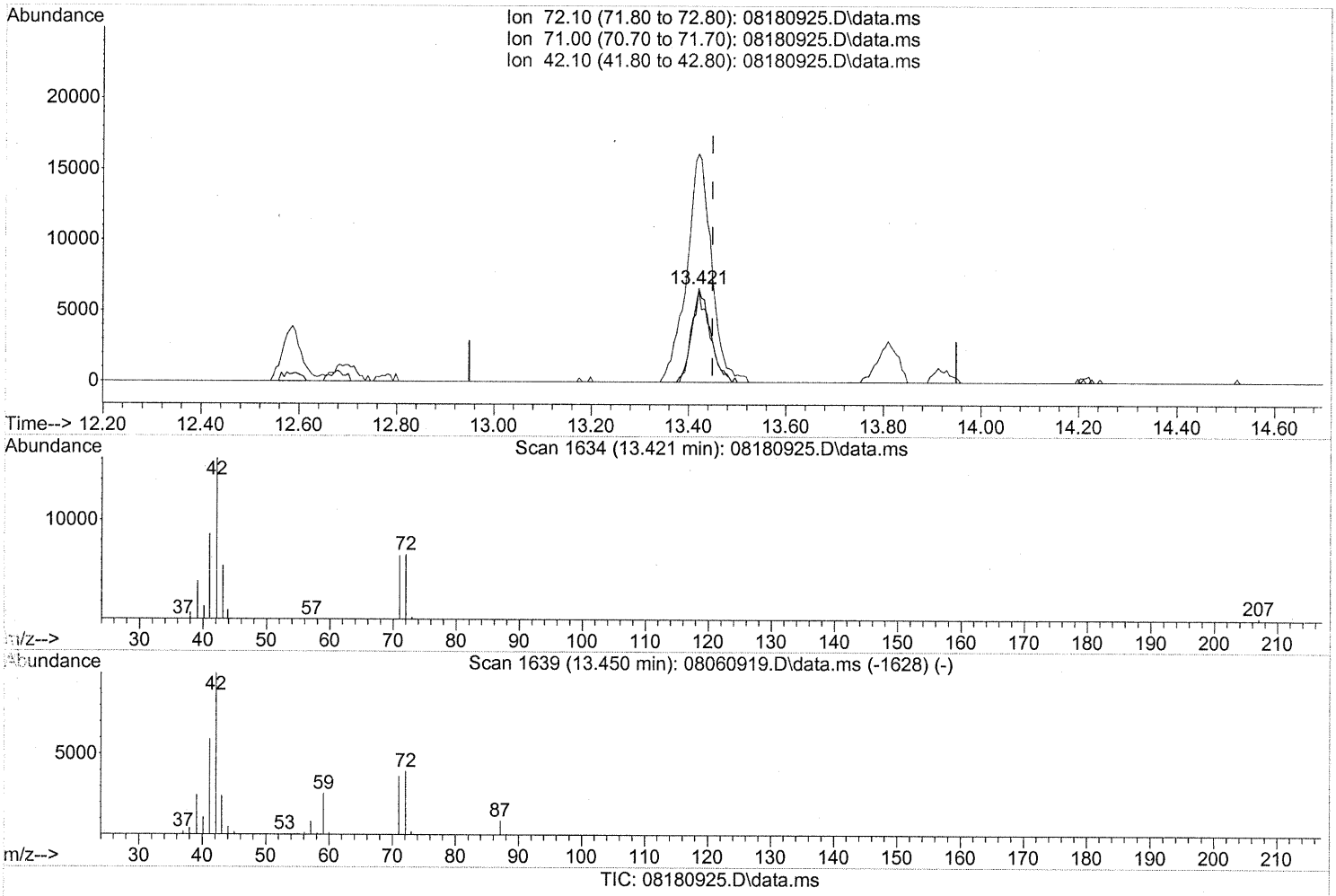
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(34) Tetrahydrofuran (THF) (T)

13.421min (-0.028) 1.63ng

response 17493

| Ion | Exp% | Act% |
|---|---|---|
| 72.10 | 100 | 100 |
| 71.00 | 95.70 | 96.68 |
| 42.10 | 253.40 | 325.57# |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
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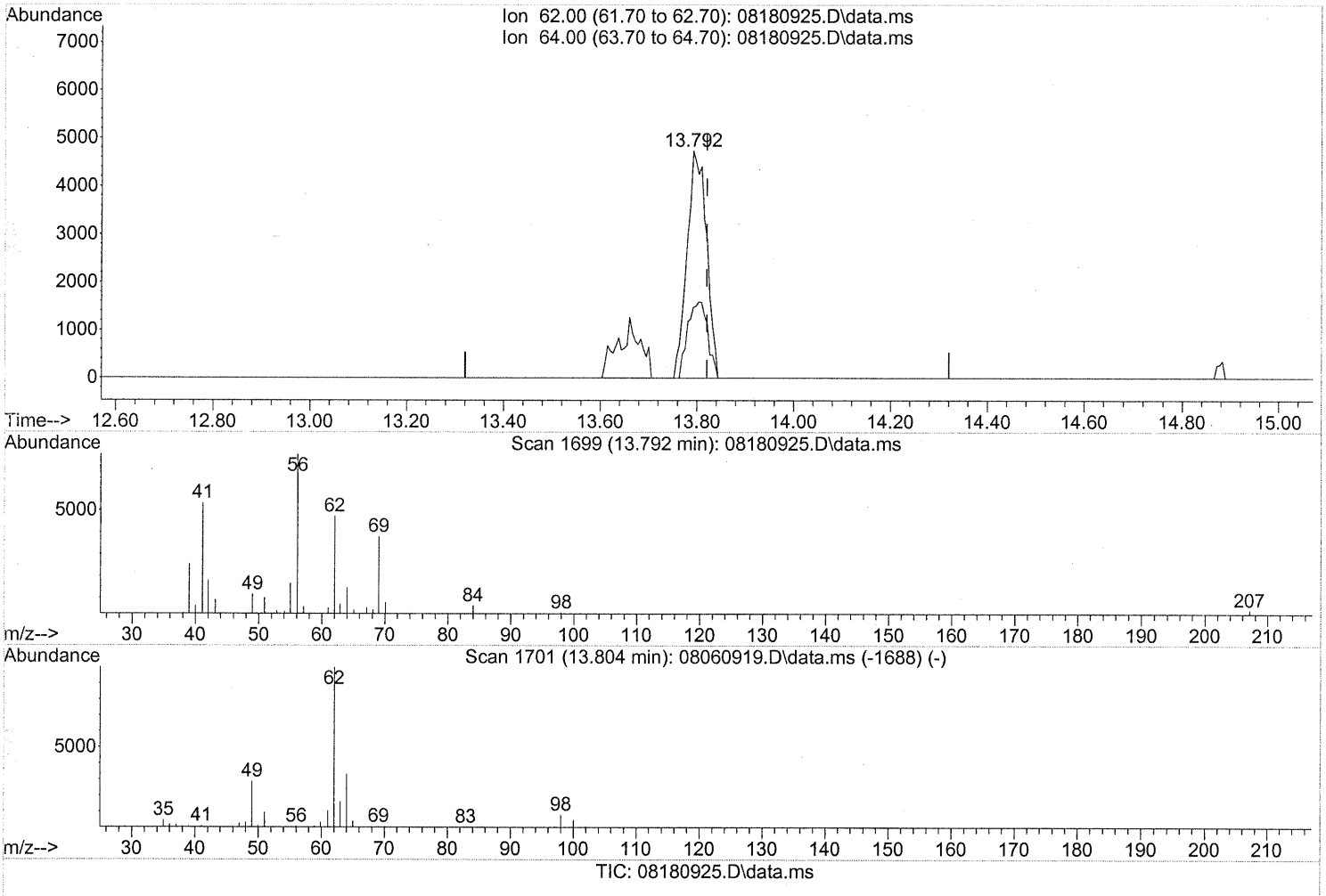
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(36) 1,2-Dichloroethane (T)

13.792min (-0.029) 0.61ng

response 13219

| Ion | Exp% | Act% |
|---|---|---|
| 62.00 | 100 | 100 |
| 64.00 | 30.80 | 34.41 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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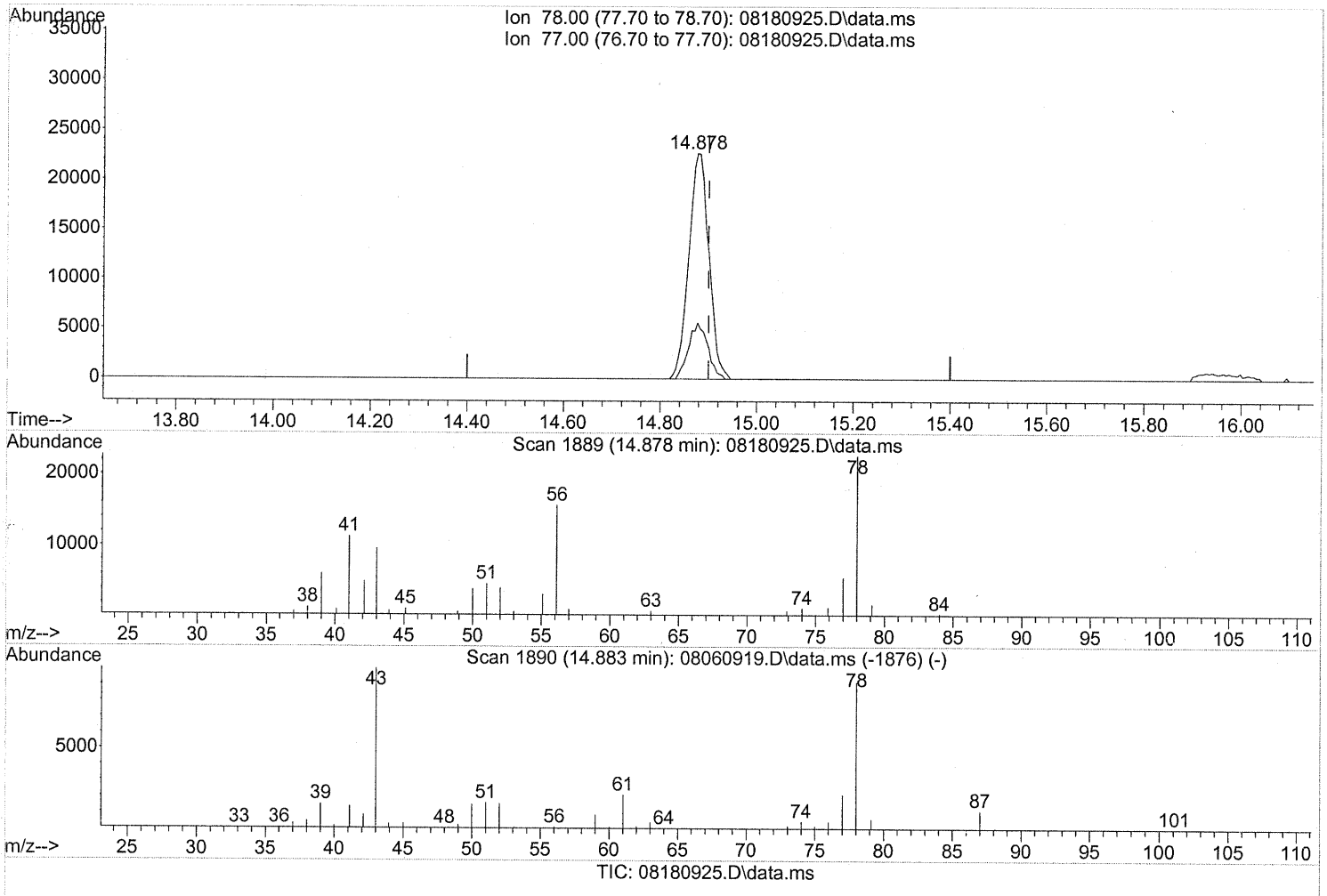
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(41) Benzene (T)

14.878min (-0.023) 1.09ng

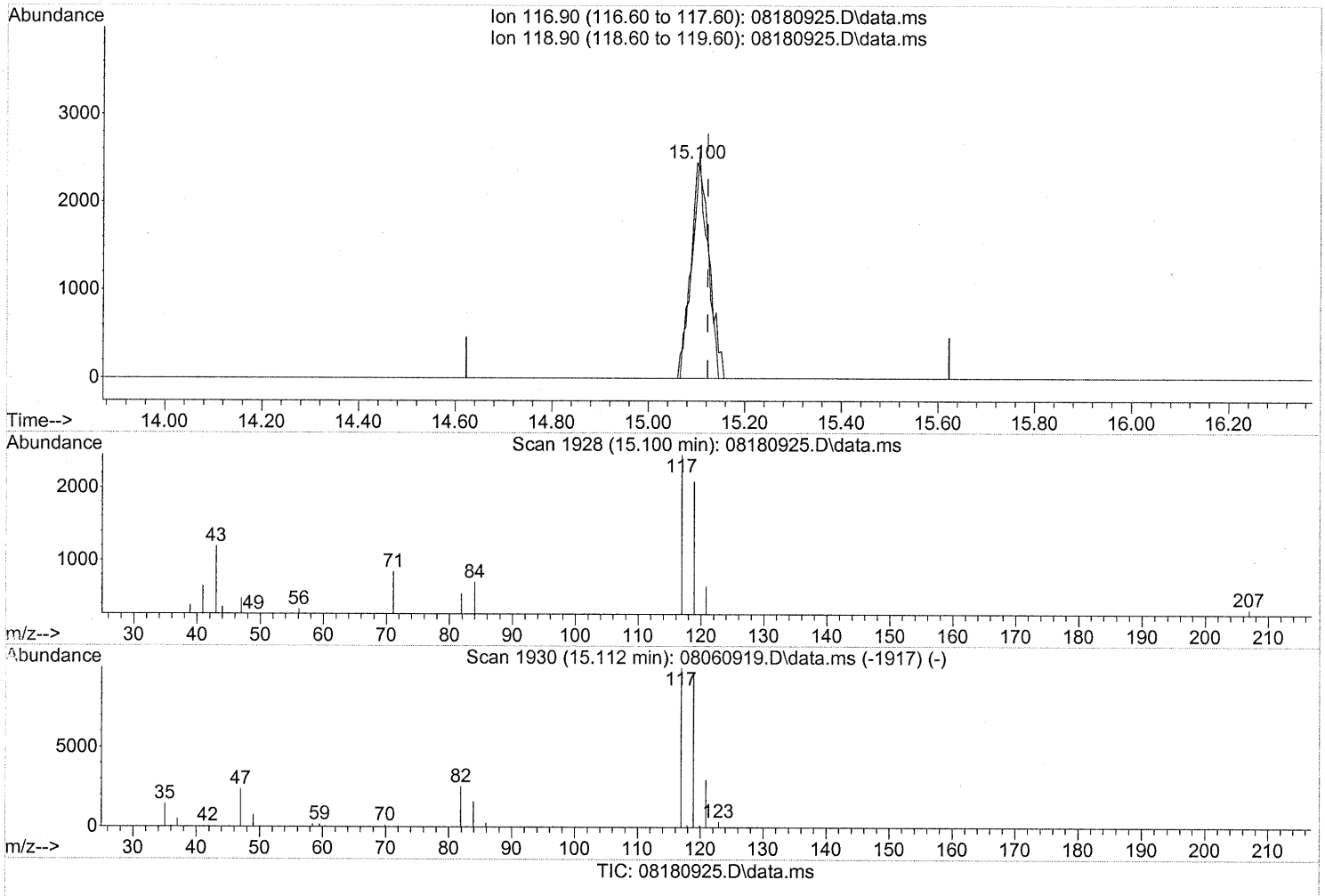
response 65583

| Ion | Exp% | Act% |
|---|---|---|
| 78.00 | 100 | 100 |
| 77.00 | 23.60 | 23.63 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(42) Carbon Tetrachloride (T)

15.100min (-0.023) 0.34ng

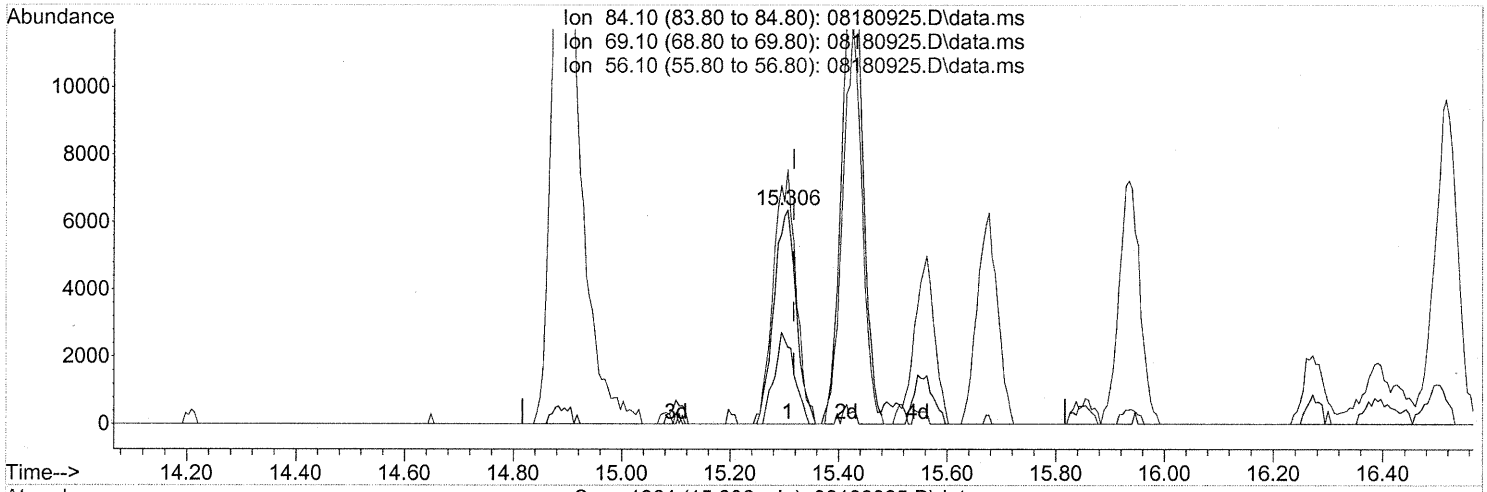
response 6547

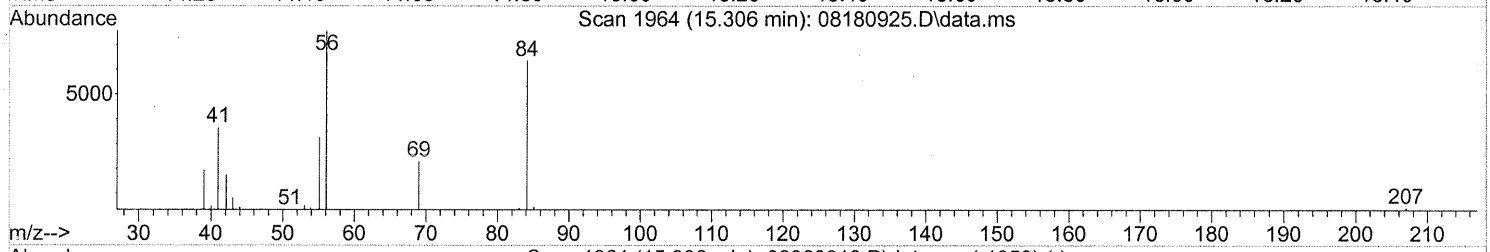
| Ion | Exp% | Act% |
|---|---|---|
| 116.90 | 100 | 100 |
| 118.90 | 97.10 | 87.69 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

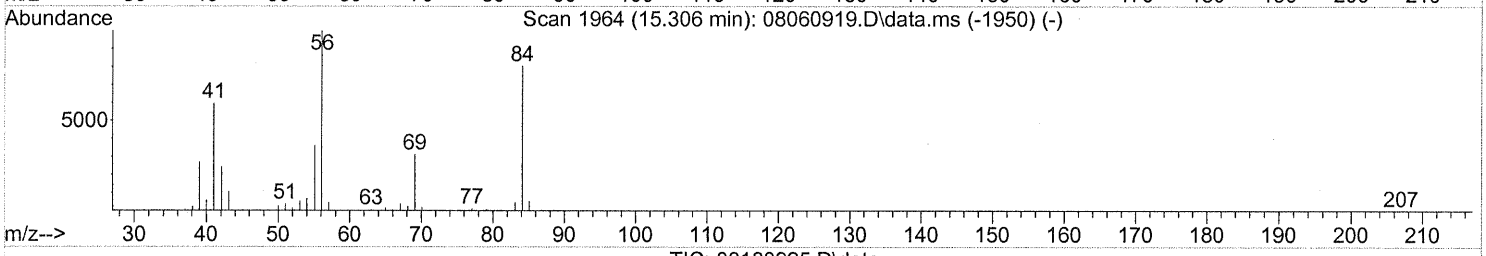
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(43) Cyclohexane (T)

15.306min (-0.011) 0.83ng

response 18231

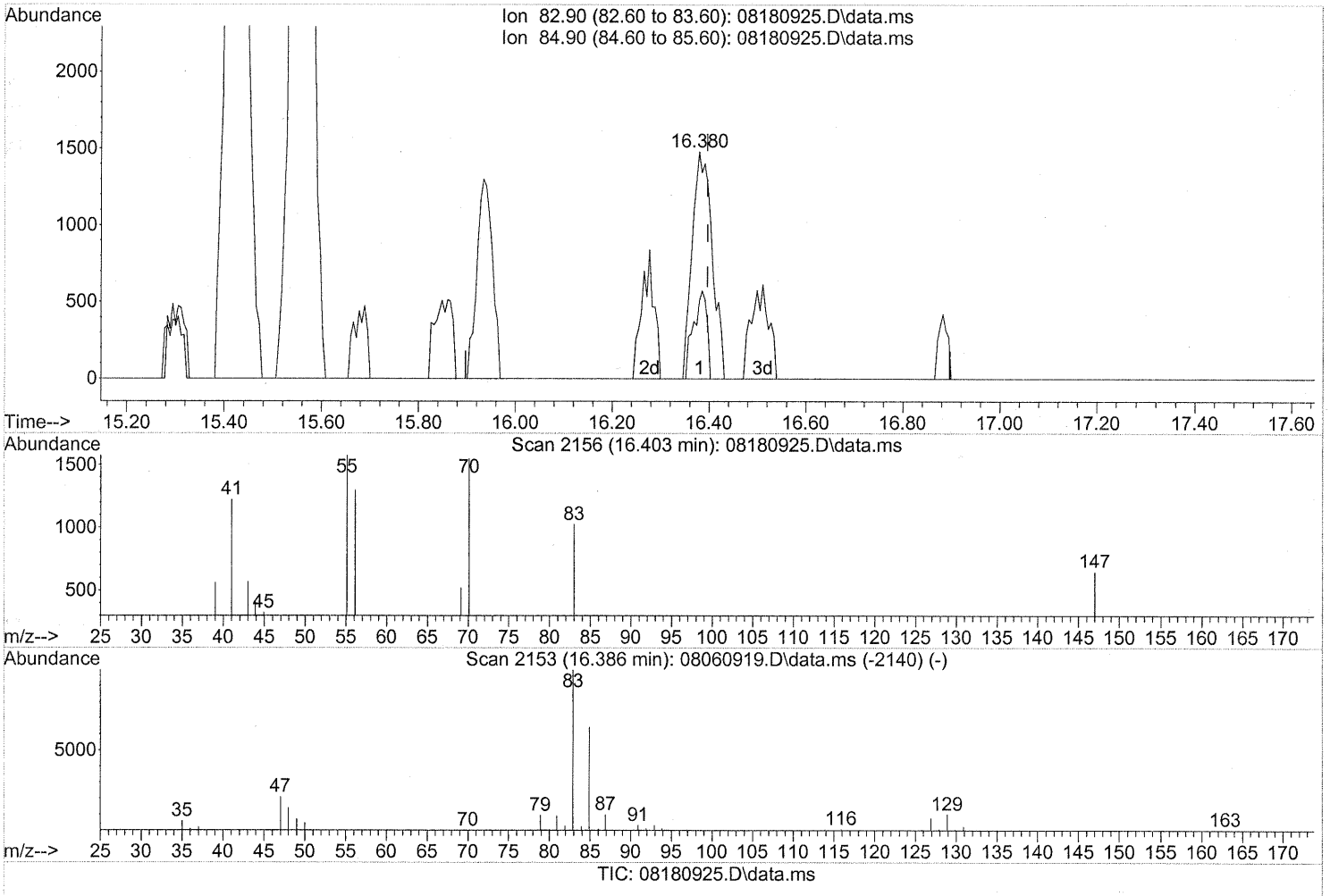
| Ion | Exp% | Act% |
|---|---|---|
| 84.10 | 100 | 100 |
| 69.10 | 38.70 | 37.89 |
| 56.10 | 127.50 | 118.83 |
| 0.00 | 0.00 | 0.00 |

109

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 16:46:50 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(46) Bromodichloromethane (T)

16.380min (-0.017) 0.21ng

response 4245

| Ion | Exp% | Act% |
|---|---|---|
| 82.90 | 100 | 100 |
| 84.90 | 62.80 | 25.89# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

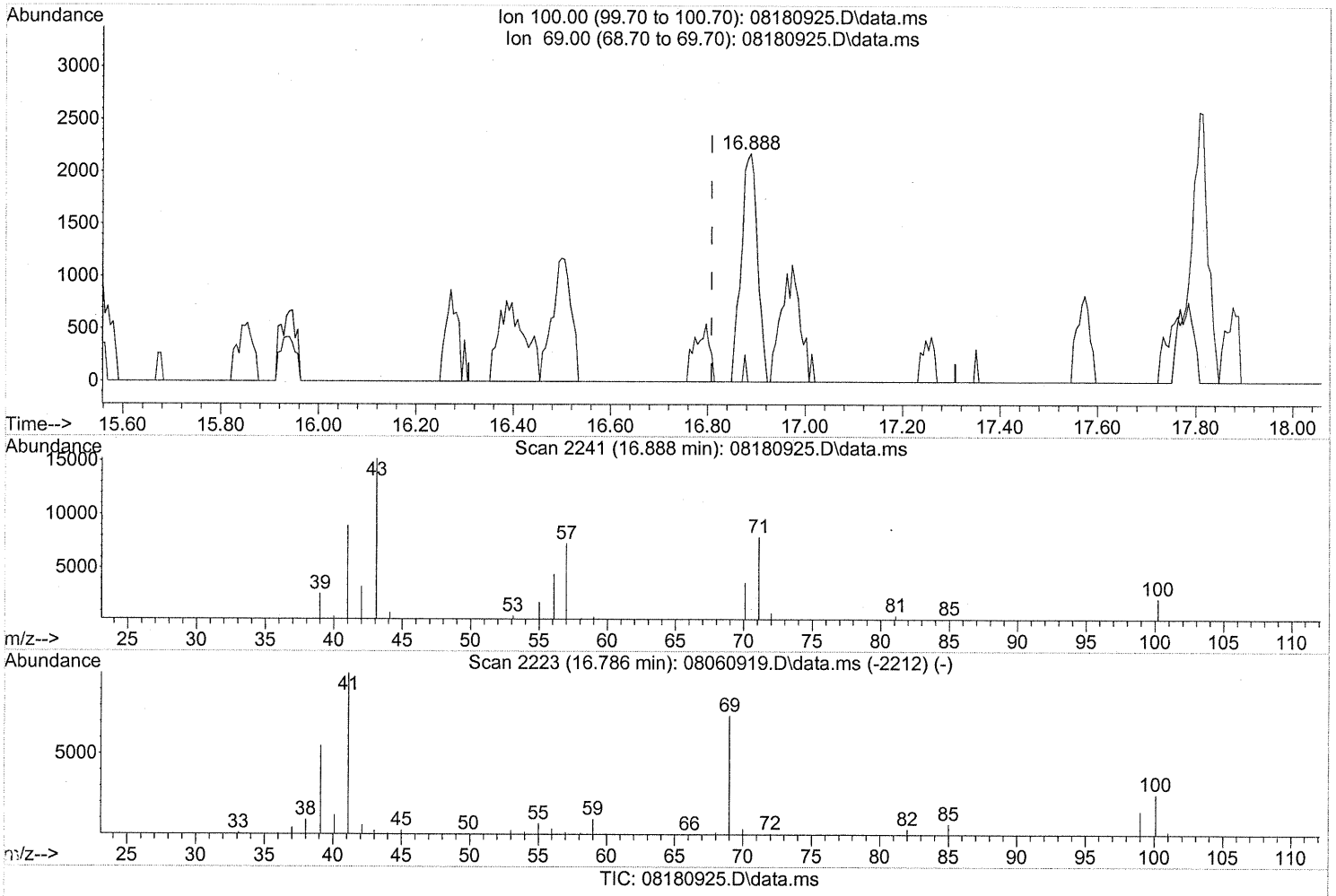
AM 8/24/09 Em 8/25/09

110

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(50) Methyl Methacrylate (T)

16.888min (+0.080) 0.92ng

response 5080

| Ion | Exp% | Act% |
|---|---|---|
| 100.00 | 100 | 100 |
| 69.00 | 294.80 | 1.71# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

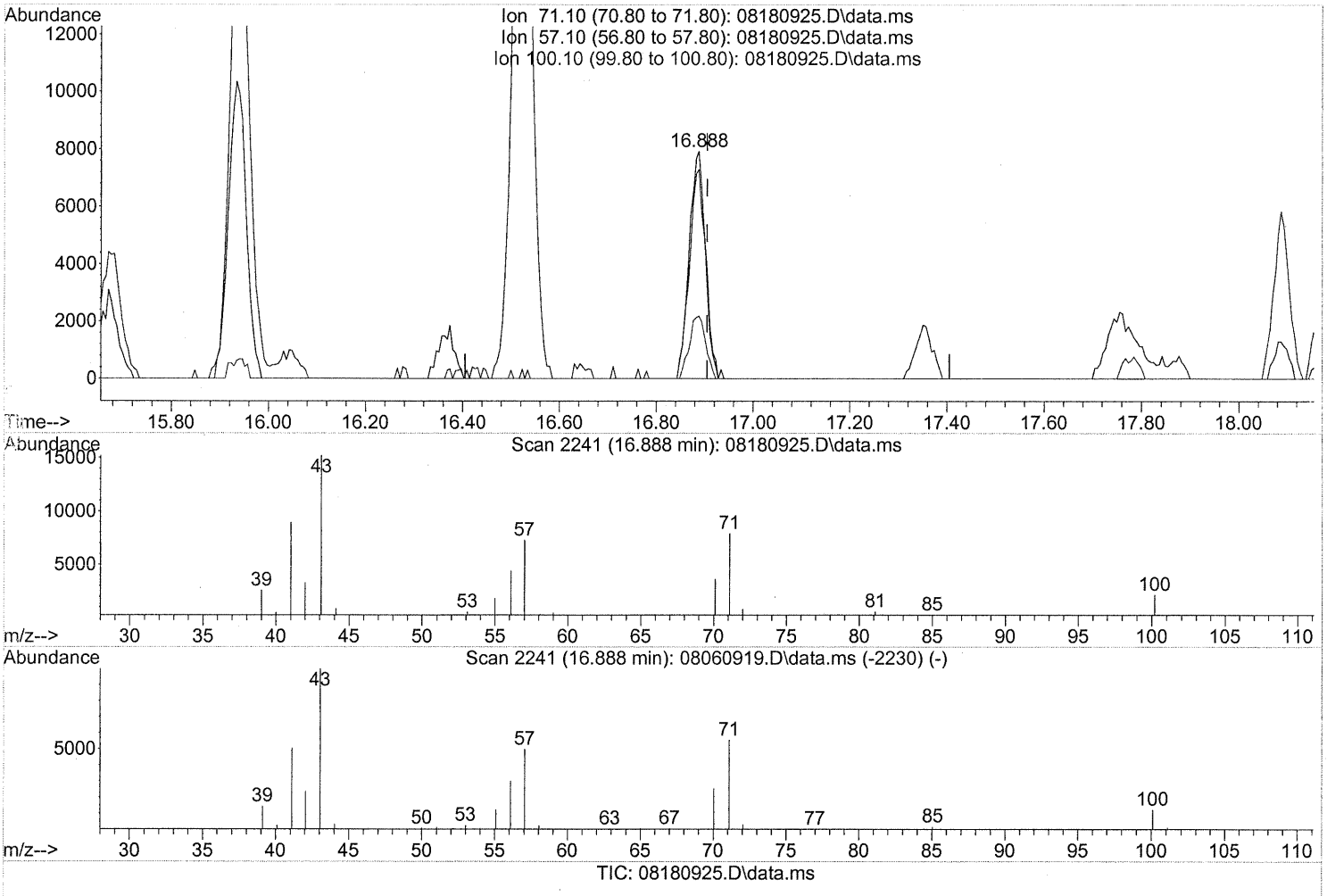
KOA 8/22/09 Em 8/25/09

111

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(51) n-Heptane (T)

16.888min (-0.017) 1.15ng

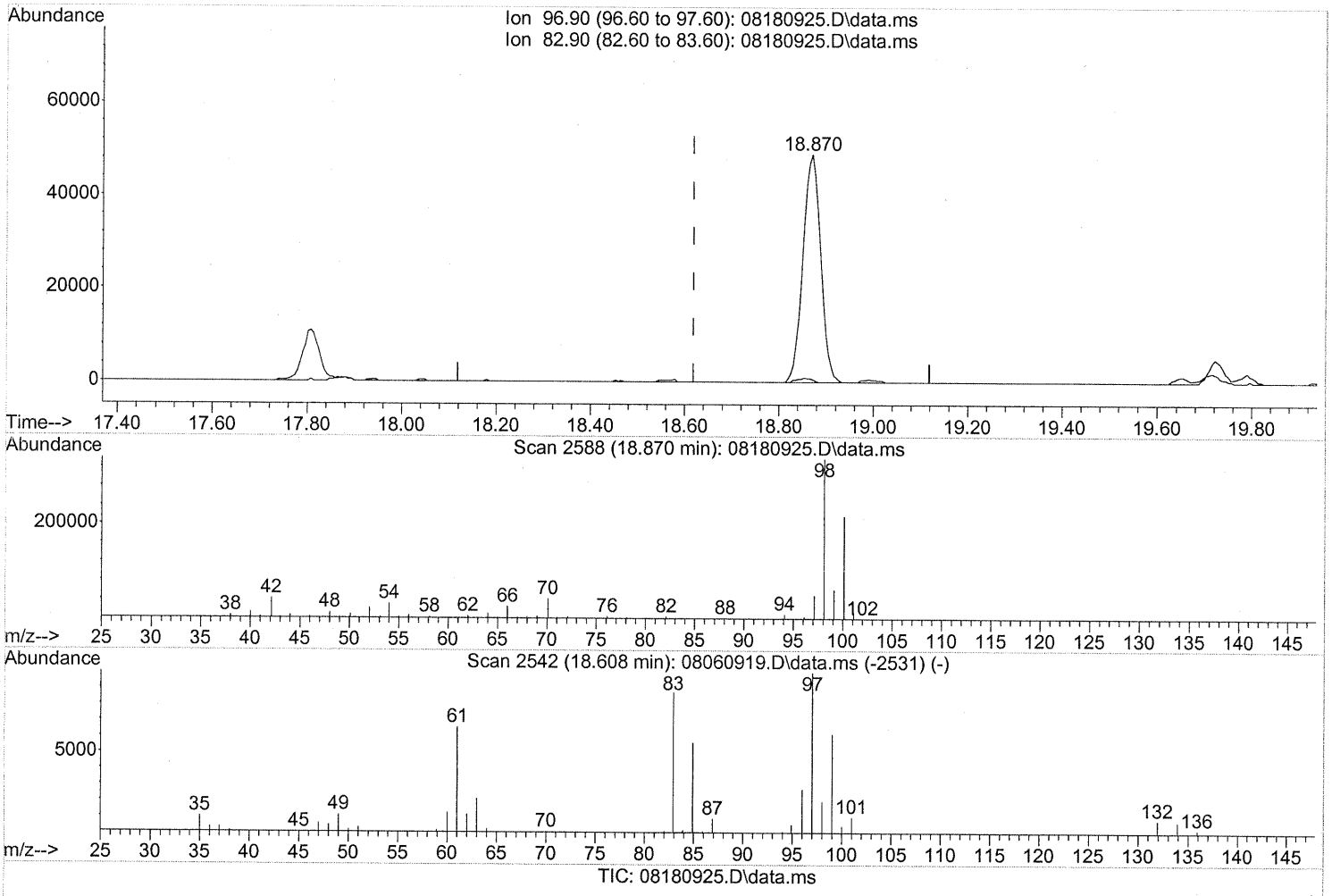
response 18665

| Ion | Exp% | Act% |
|---|---|---|
| 71.10 | 100 | 100 |
| 57.10 | 91.90 | 90.00 |
| 100.10 | 26.40 | 27.22 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(55) 1,1,2-Trichloroethane (T)

18.870min (+0.251) 9.61ng

response 127069

| Ion | Exp% | Act% |
|---|---|---|
| 96.90 | 100 | 100 |
| 82.90 | 90.30 | 1.50# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

TP

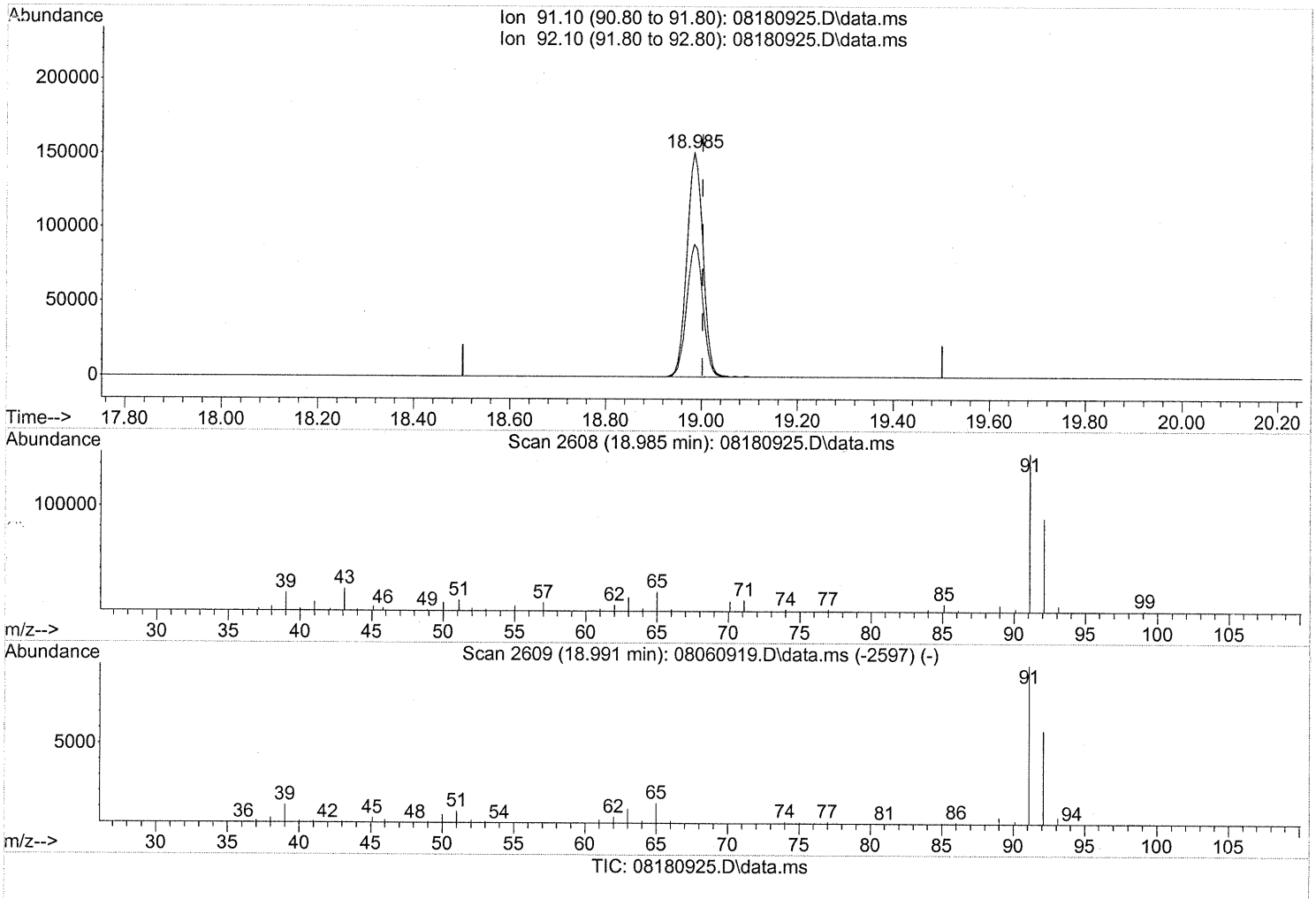
8/22/09 8/25/09

113

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(58) Toluene (T)

18.985min (-0.017) 6.12ng

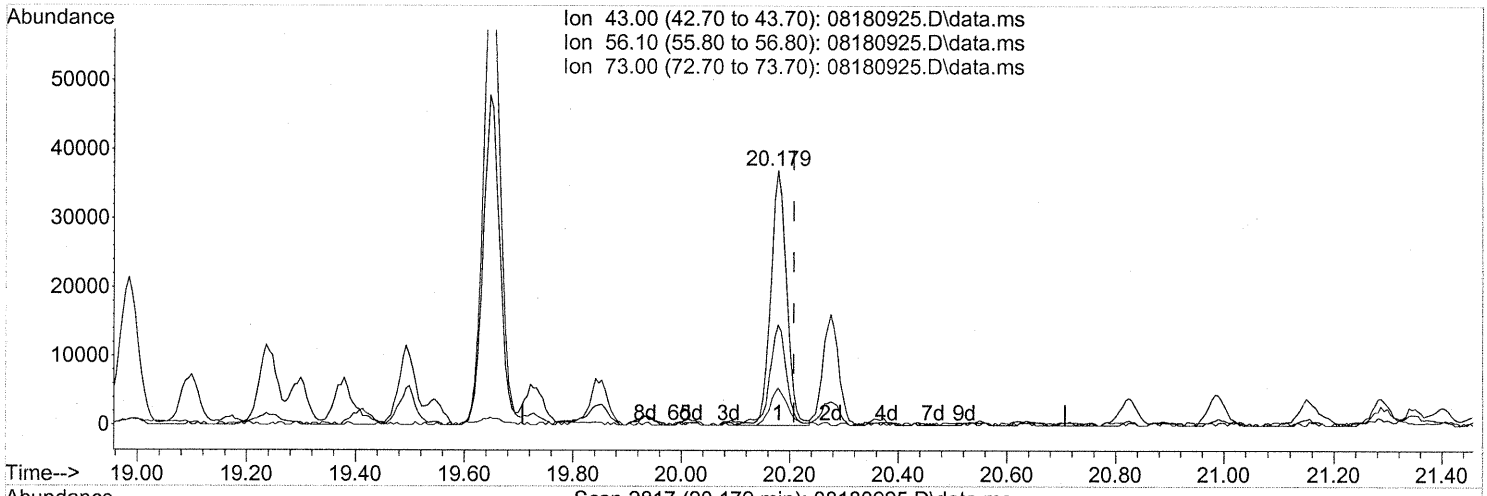
response 344832

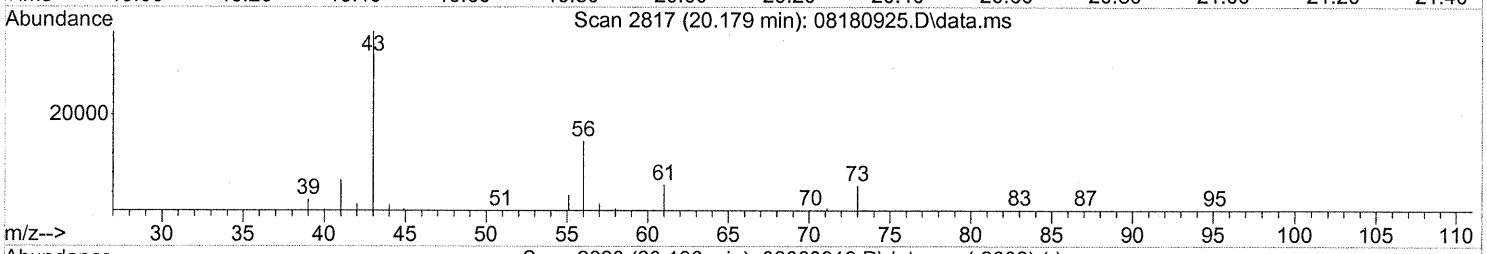
| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 92.10 | 58.60 | 59.53 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

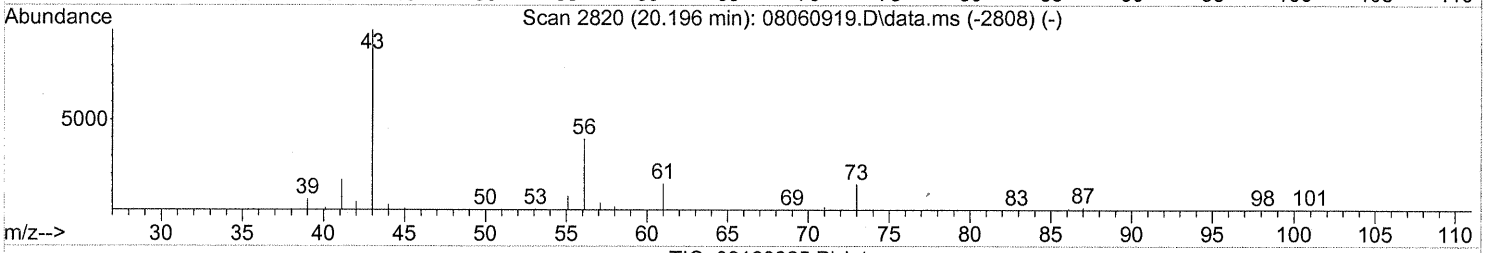
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(62) n-Butyl Acetate (T)

20.179min (-0.029) 1.70ng

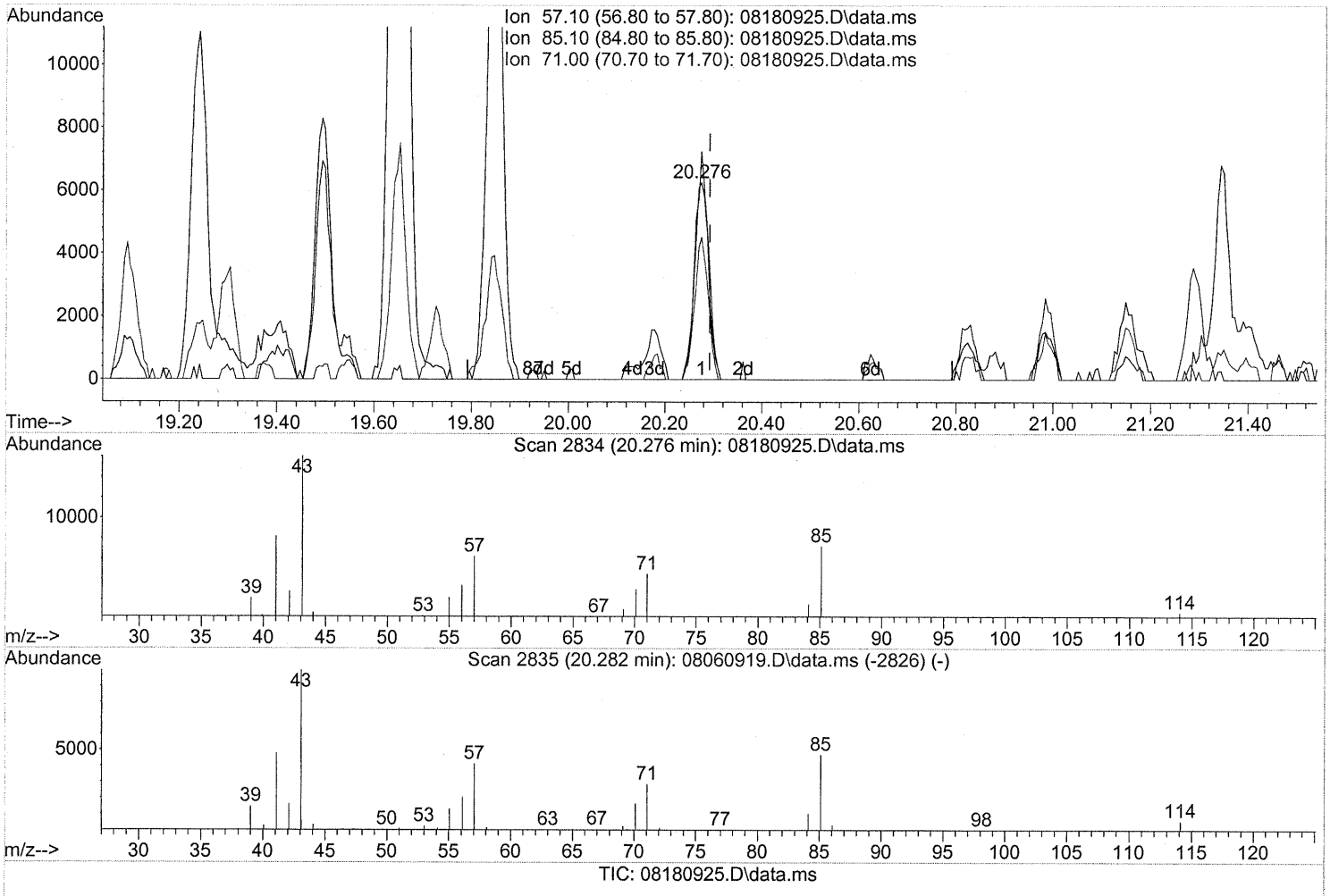
response 75128

| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 56.10 | 38.50 | 40.97 |
| 73.00 | 14.80 | 16.13 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(63) n-Octane (T)

20.276min (-0.017) 0.94ng

response 12806

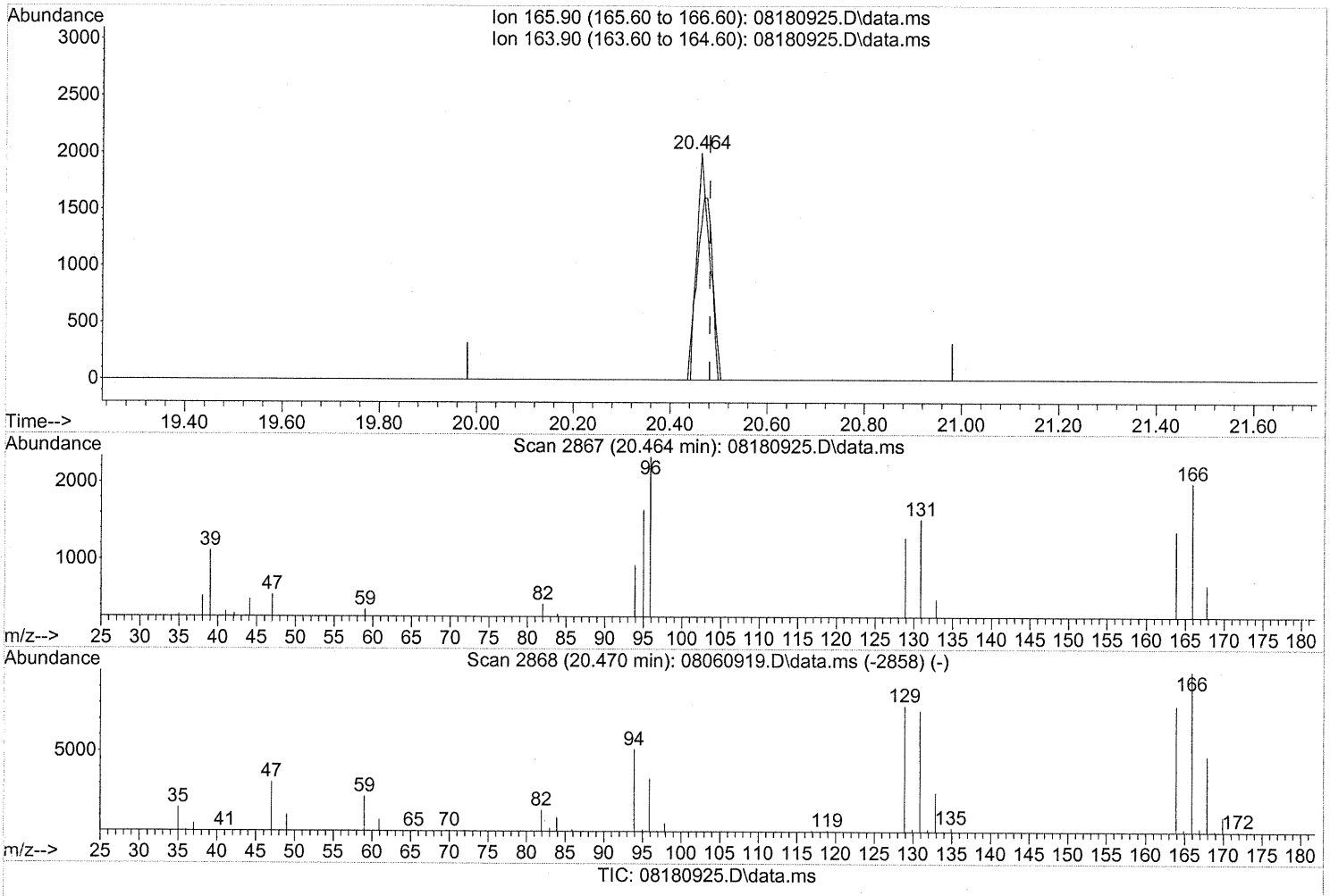
| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 85.10 | 107.00 | 107.62 |
| 71.00 | 68.10 | 69.08 |
| 0.00 | 0.00 | 0.00 |

116

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(64) Tetrachloroethene (T)

20.464min (-0.017) 0.31ng

response 4046

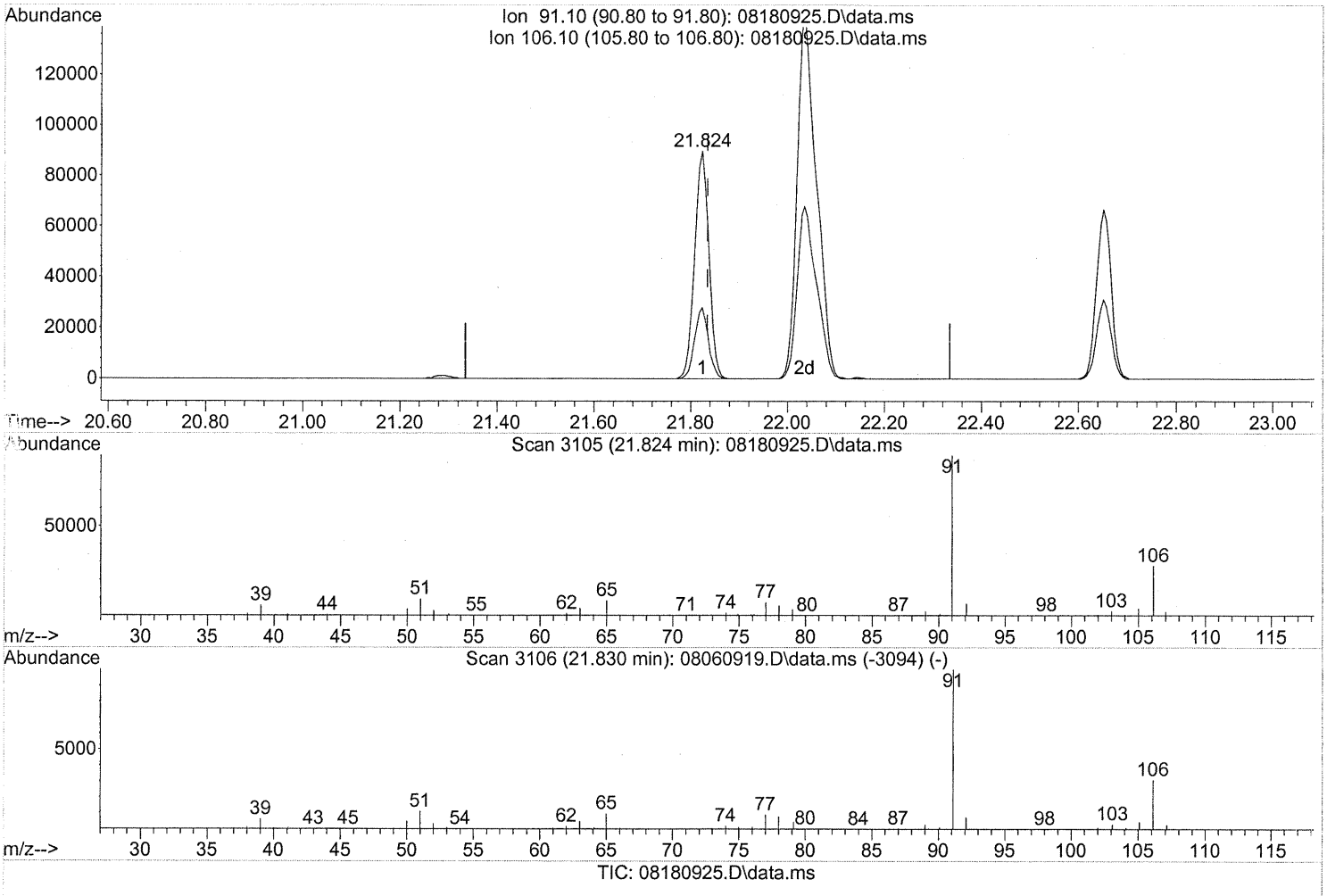
| Ion | Exp% | Act% |
|---|---|---|
| 165.90 | 100 | 100 |
| 163.90 | 77.80 | 77.93 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

117

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(66) Ethylbenzene (T)

21.824min (-0.011) 2.85ng

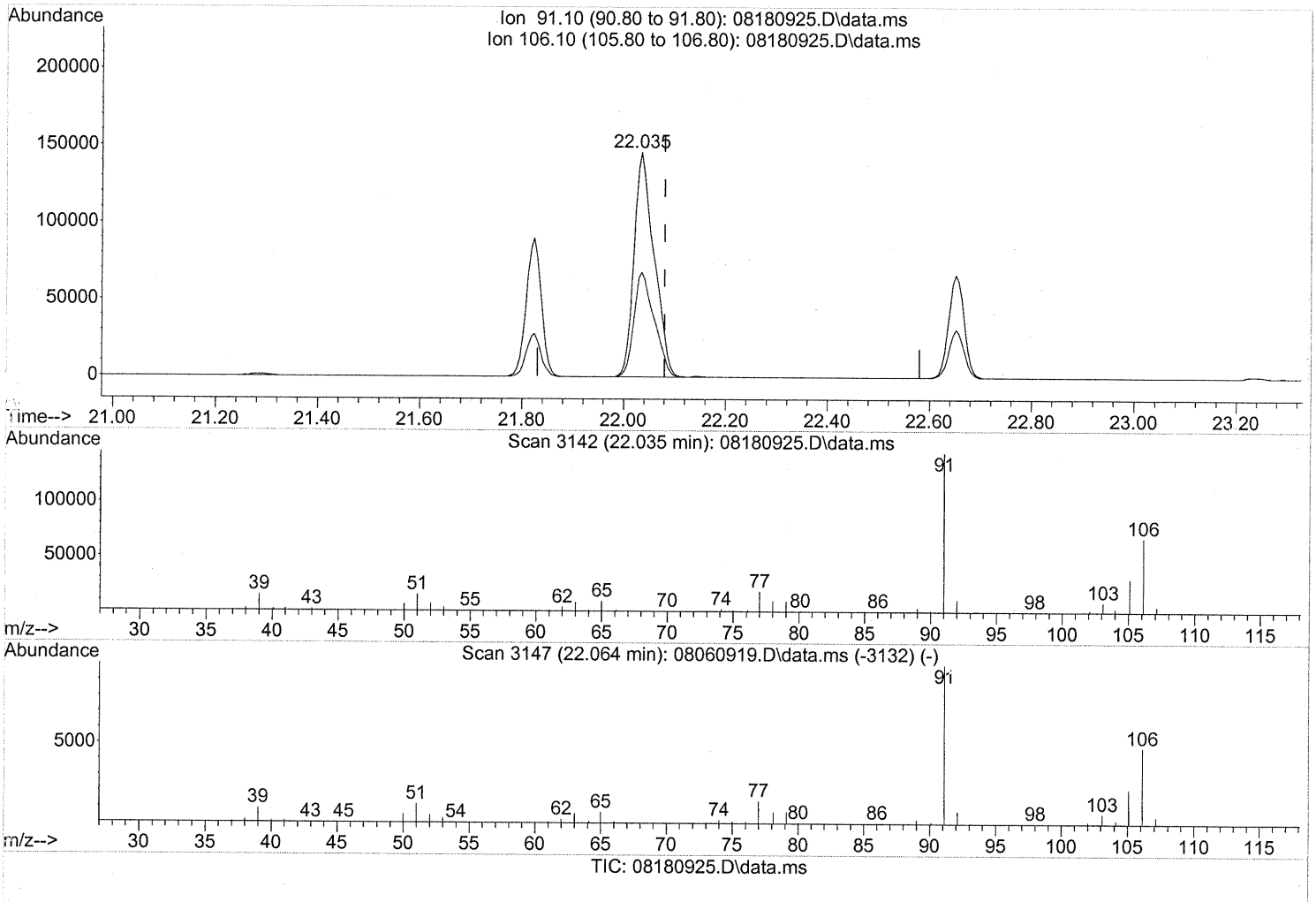
response 183845

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 30.10 | 29.96 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(67) m- & p-Xylenes (T)

22.035min (-0.046) 7.65ng

response 398539

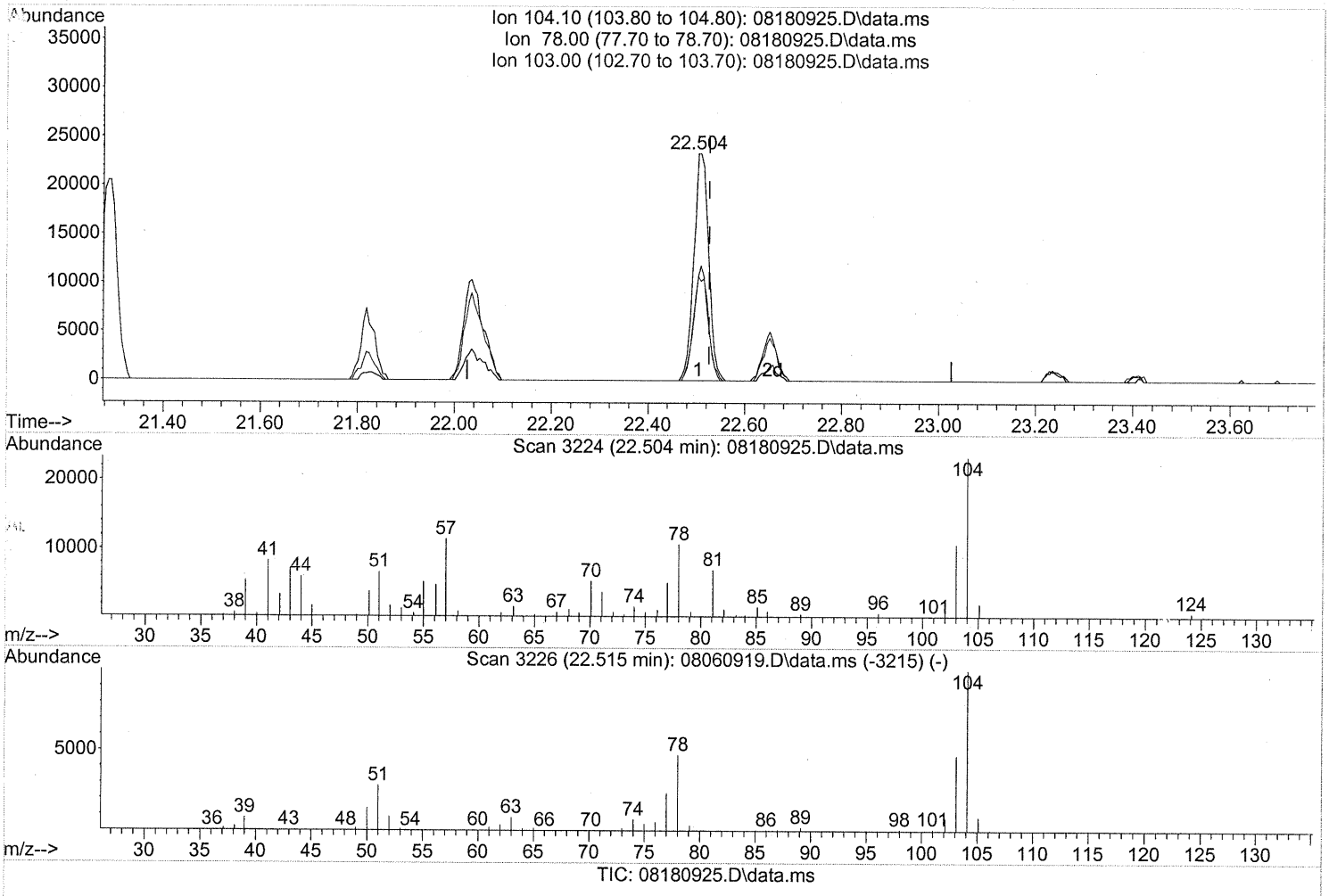
| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 46.90 | 47.29 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

119

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(69) Styrene (T)

22.504min (-0.023) 1.32ng

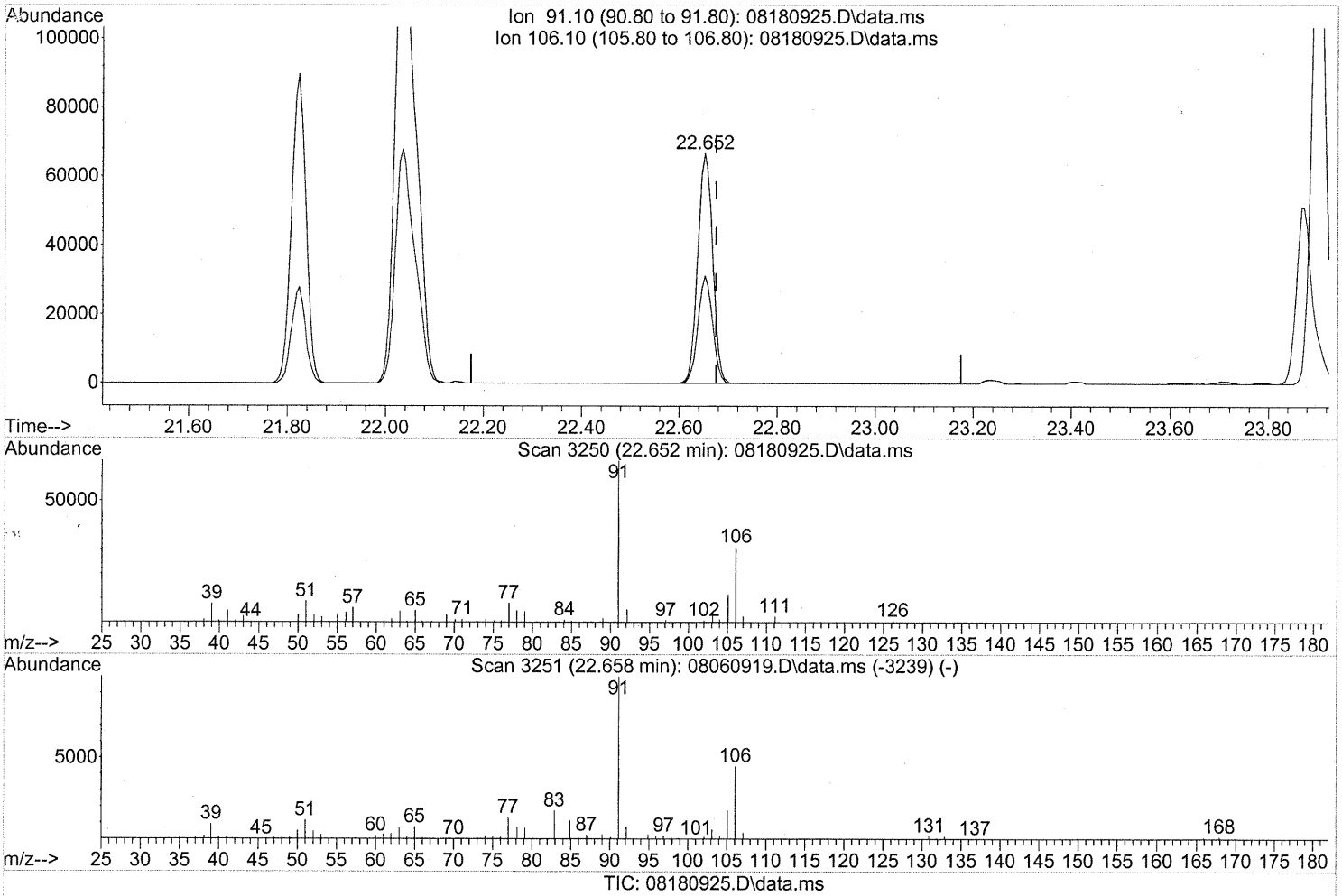
response 49612

| Ion | Exp% | Act% |
|---|---|---|
| 104.10 | 100 | 100 |
| 78.00 | 47.10 | 47.51 |
| 103.00 | 46.20 | 47.18 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(70) o-Xylene (T)

22.652min (-0.023) 2.70ng

response 140859

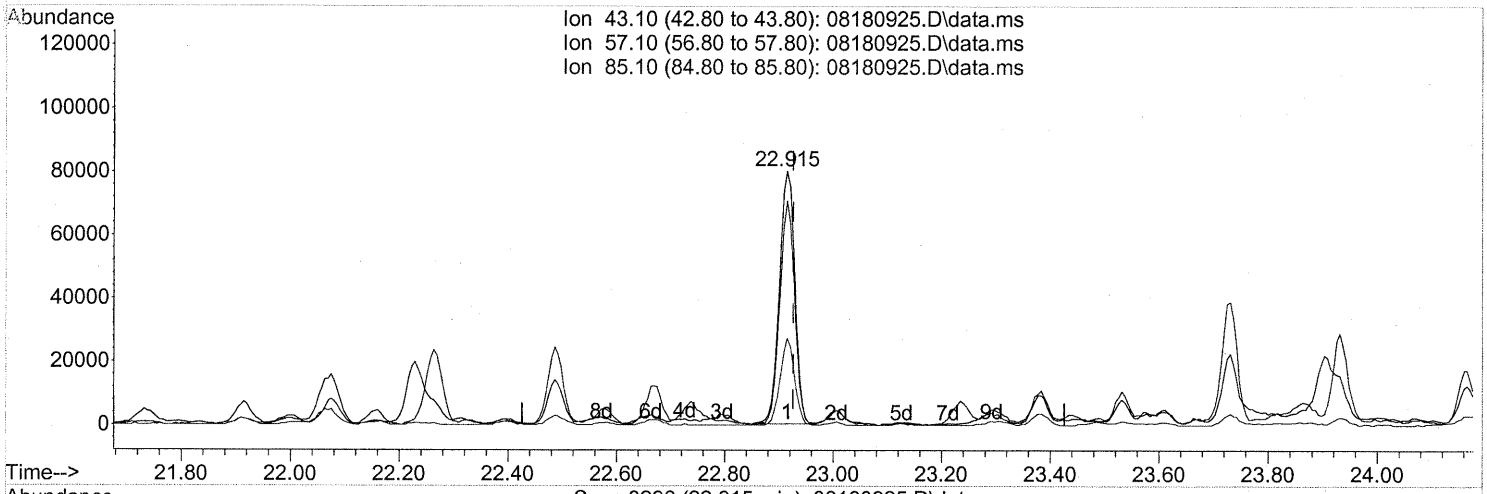
| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 44.10 | 45.73 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

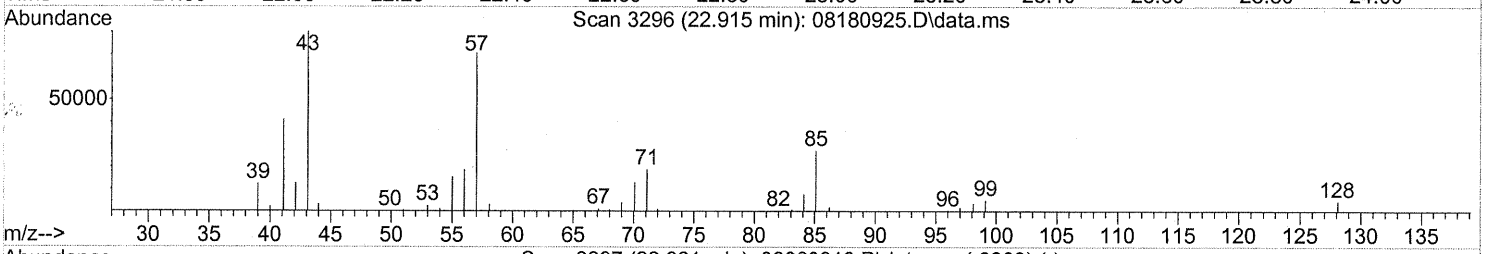
121

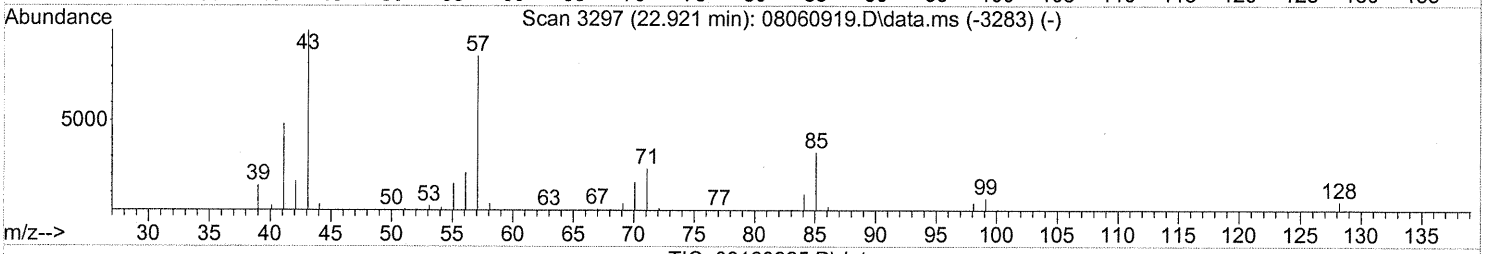
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(71) n-Nonane (T)

22.915min (-0.011) 4.51ng

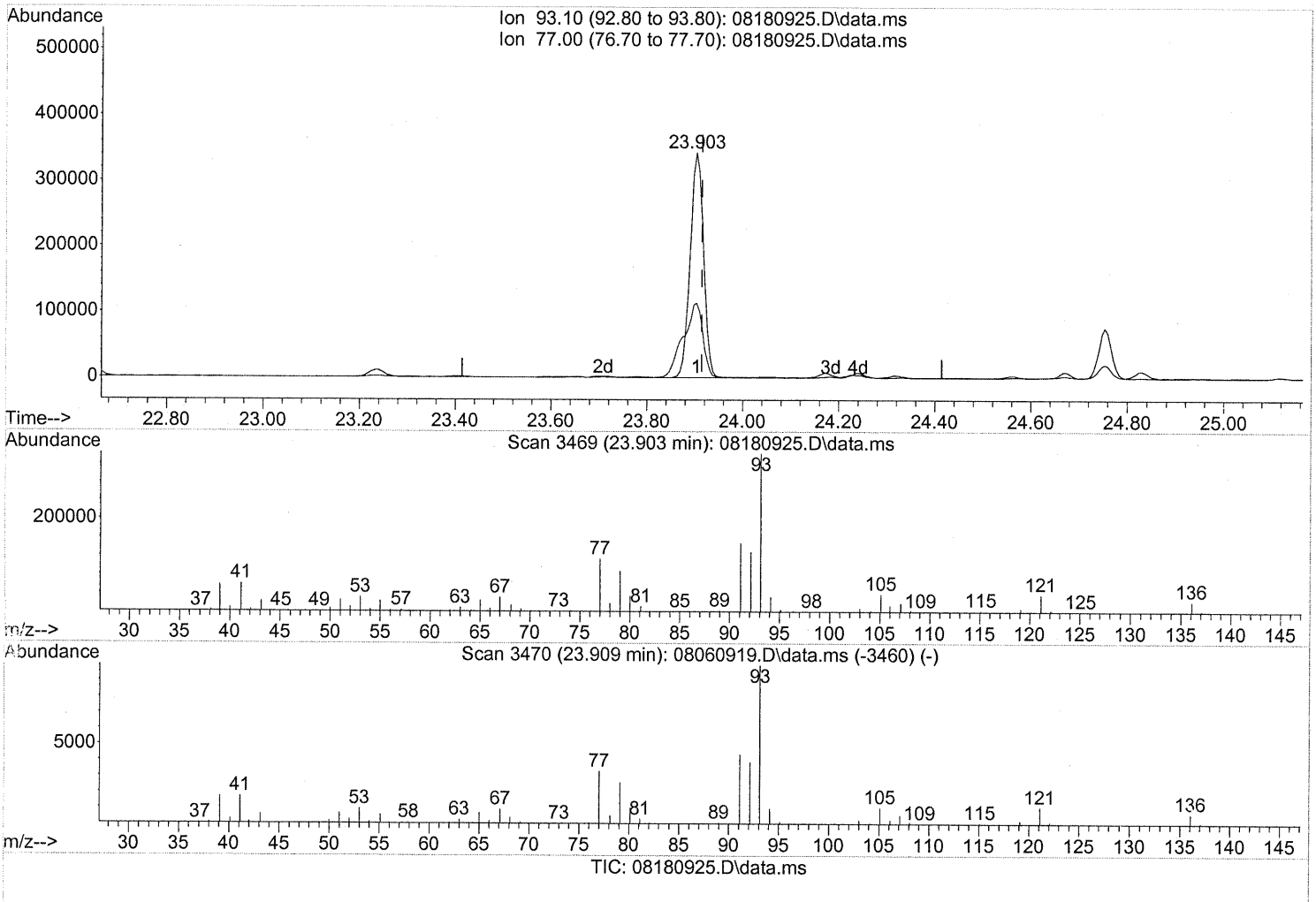
response 156413

| Ion | Exp% | Act% |
|---|---|---|
| 43.10 | 100 | 100 |
| 57.10 | 84.90 | 85.78 |
| 85.10 | 30.40 | 31.71 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(75) alpha-Pinene (T)

23.903min (-0.011) 19.40ng

response 656433

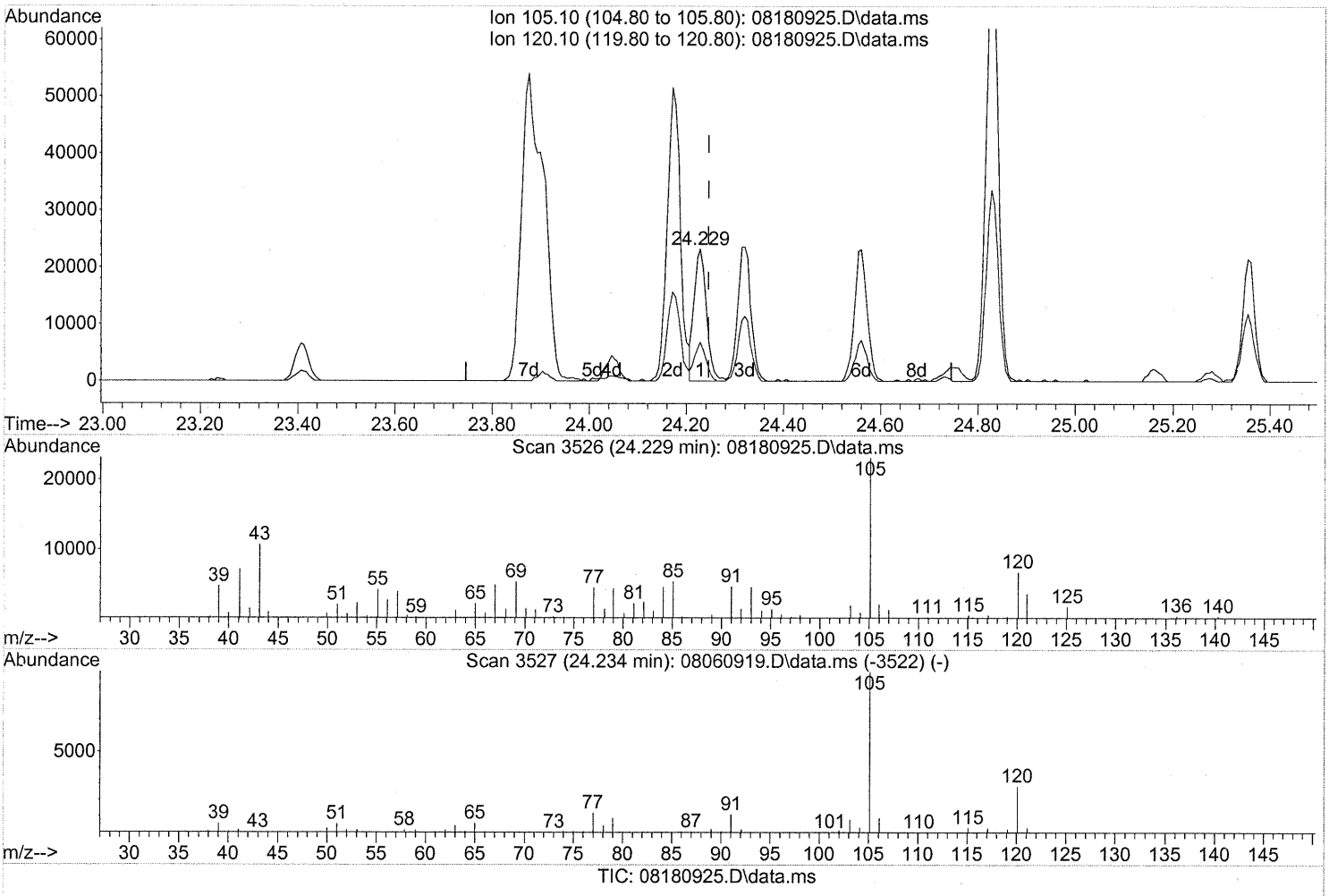
| Ion | Exp% | Act% |
|---|---|---|
| 93.10 | 100 | 100 |
| 77.00 | 32.40 | 49.14 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

123

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(78) 4-Ethyltoluene (T)

24.229min (-0.017) 0.66ng

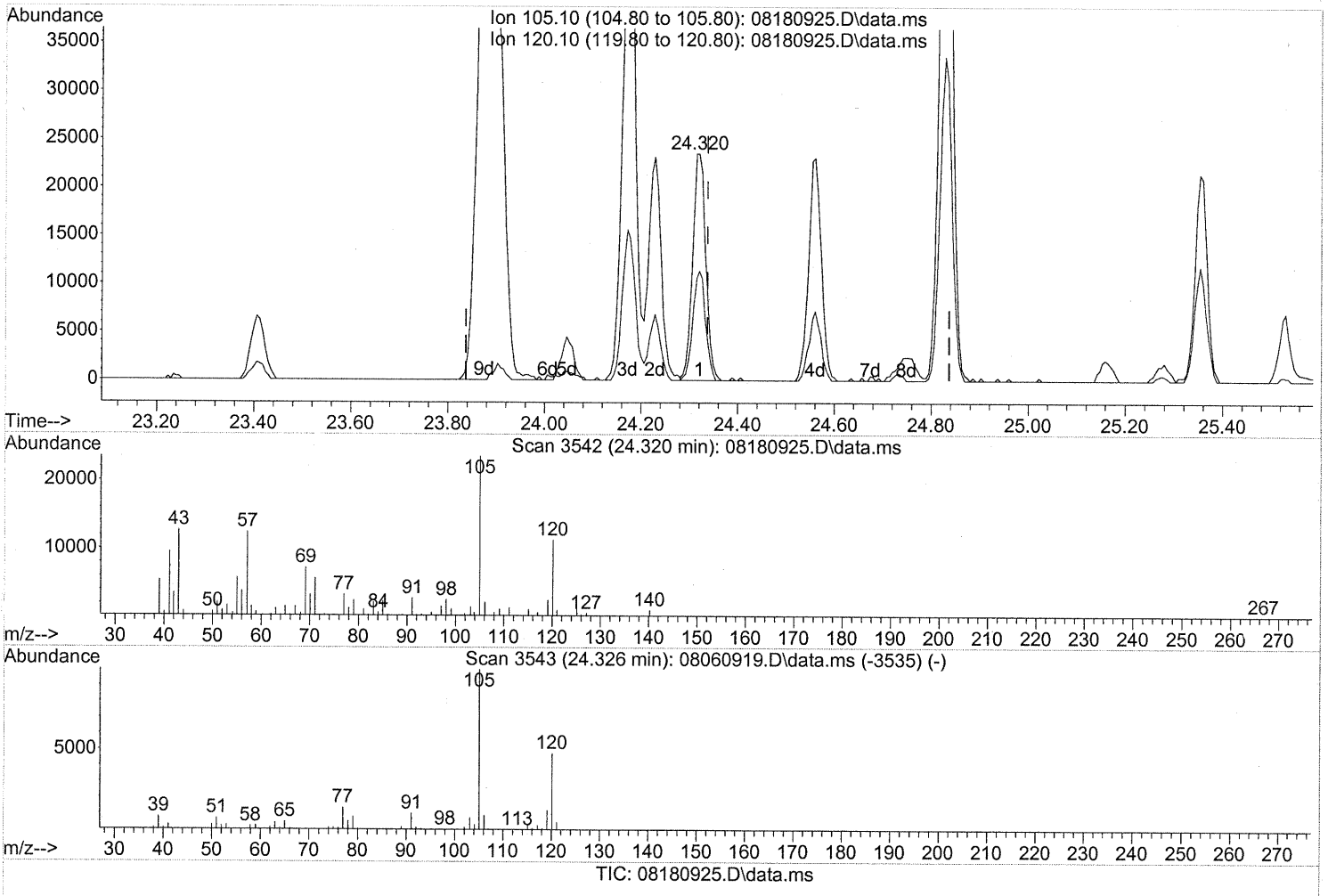
response 40528

| Ion | Exp% | Act% |
|---|---|---|
| 105.10 | 100 | 100 |
| 120.10 | 28.40 | 26.90 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(79) 1,3,5-Trimethylbenzene (T)

24.320min (-0.017) 0.86ng

response 44342

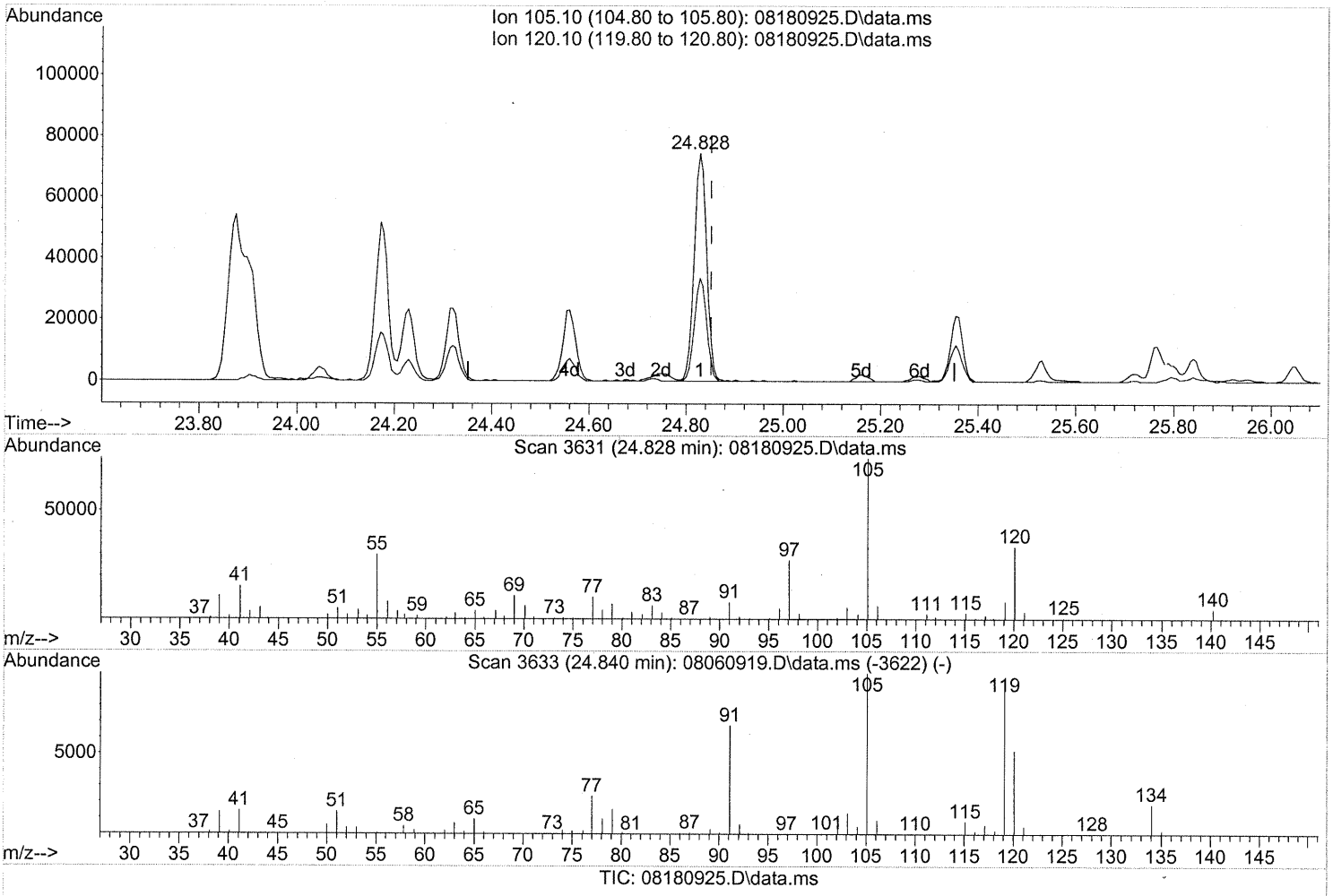
| Ion | Exp% | Act% |
|---|---|---|
| 105.10 | 100 | 100 |
| 120.10 | 46.80 | 46.54 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

125

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(82) 1,2,4-Trimethylbenzene (T)

24.828min (-0.023) 2.52ng

response 132225

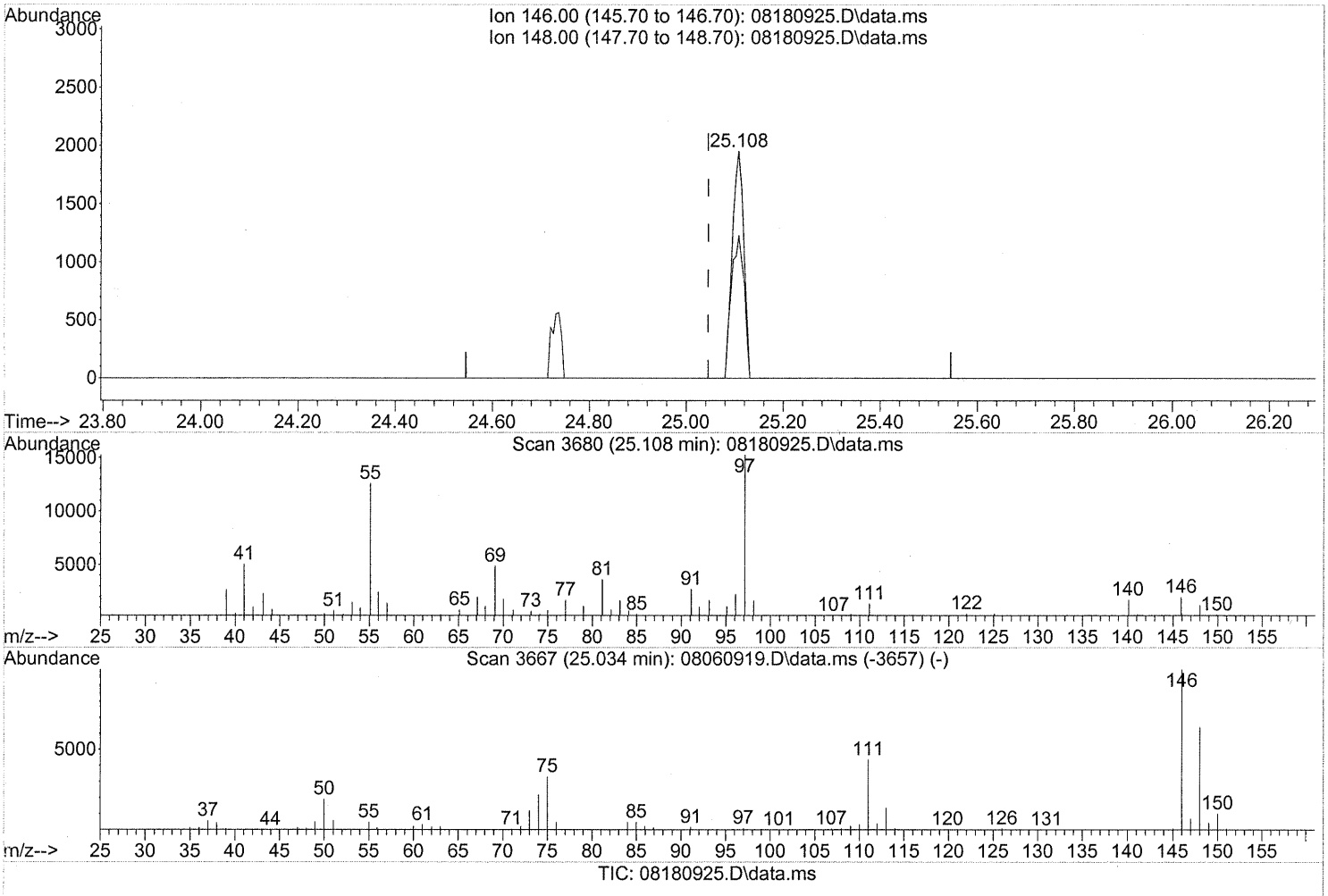
| Ion | Exp% | Act% |
|---|---|---|
| 105.10 | 100 | 100 |
| 120.10 | 52.60 | 44.58 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

126

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(85) 1,3-Dichlorobenzene (T)

25.108min (+0.063) 0.12ng

response 3213

| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 61.60 | 69.41 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

TP

JDA 8/22/09 Em 8/25/09

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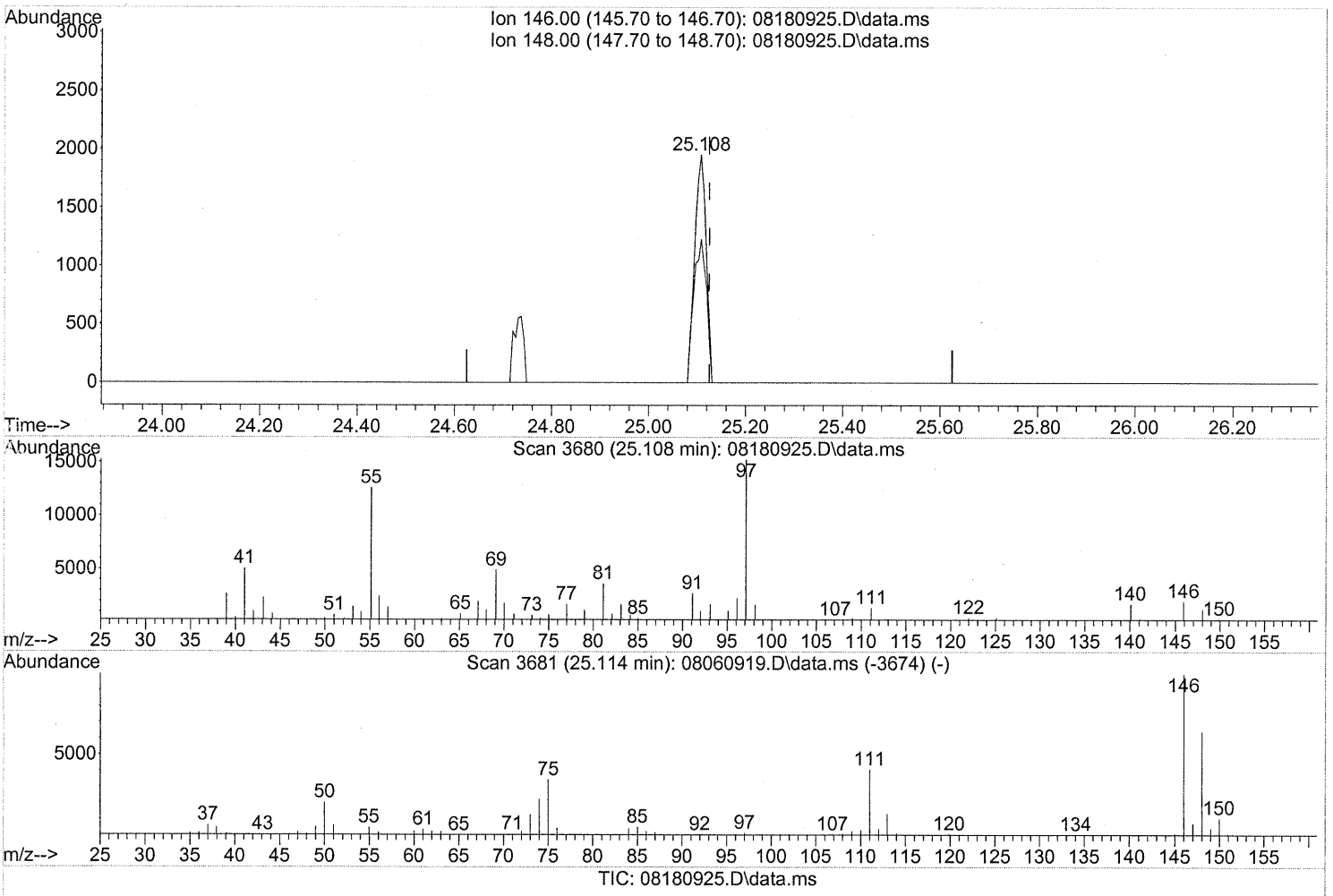
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.108min (-0.017) 0.11ng

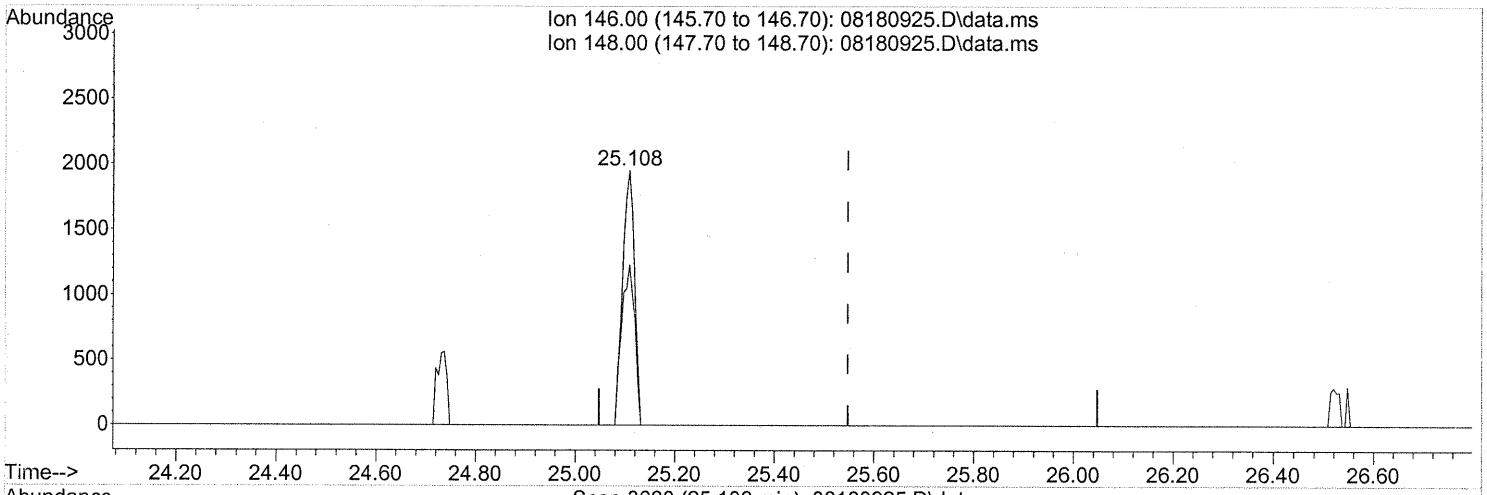
response 3213

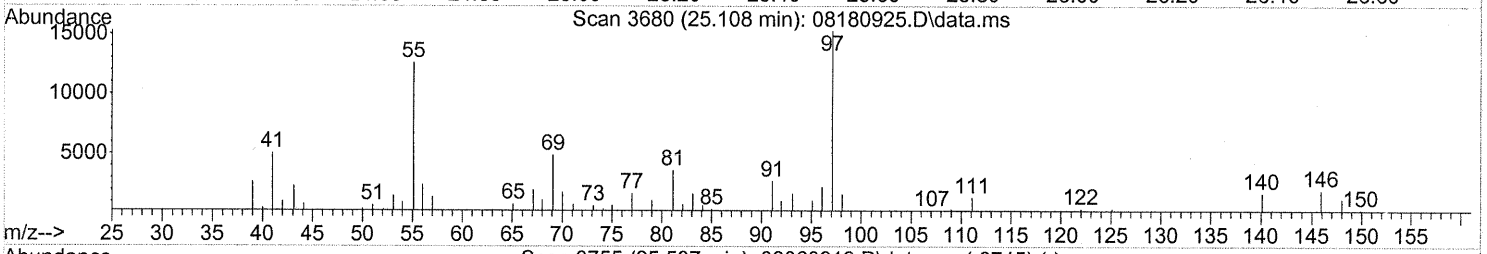
| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 62.20 | 69.41 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

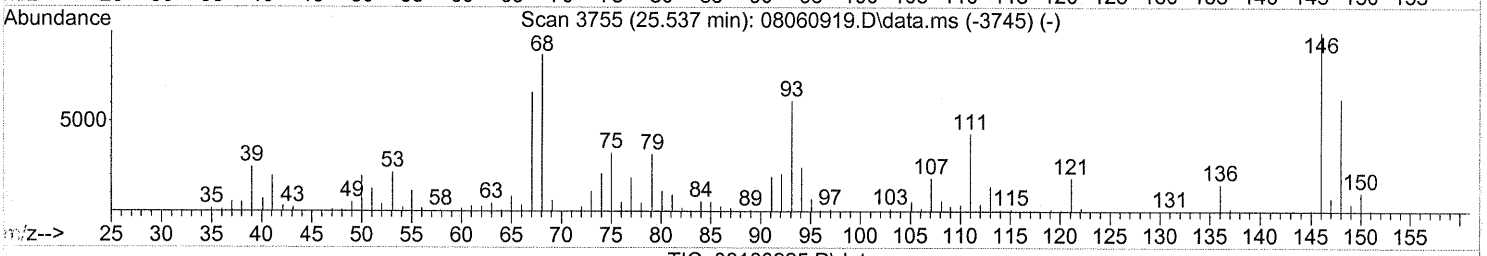
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(90) 1,2-Dichlorobenzene (T)

25.108min (-0.440) 0.13ng

response 3213

| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 63.70 | 69.41 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

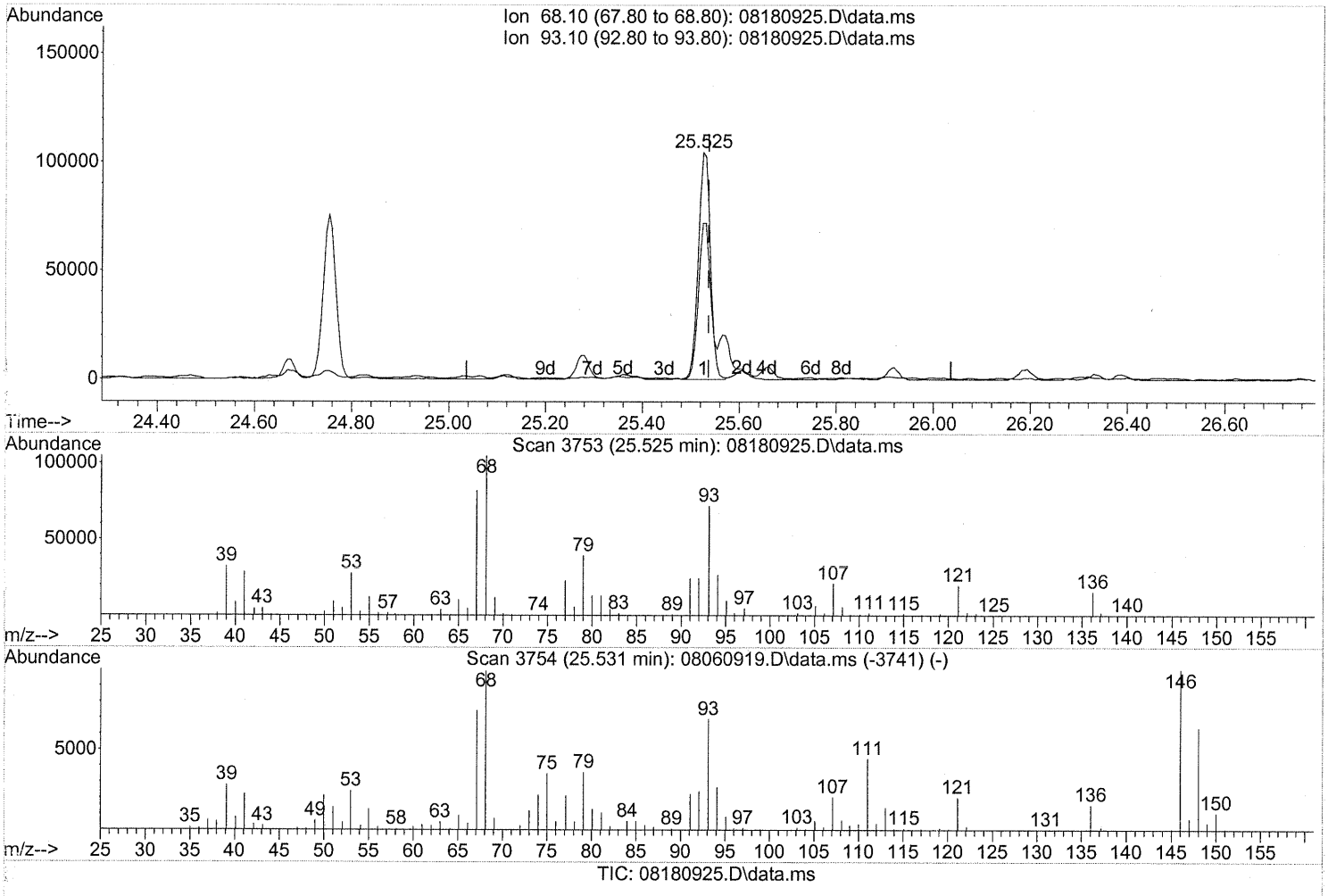
VOA 8/22/09 Env 8/25/09

129

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180925.D
Acq On : 19 Aug 2009 7:19
Operator : WA
Sample : P0902766-003 (1000mL)
Misc : Env. Health & Engineering 101162
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 19 10:12:04 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180925.D\data.ms

(91) d-Limonene (T)

25.525min (-0.011) 8.02ng

response 179303

| Ion | Exp% | Act% |
|---|---|---|
| 68.10 | 100 | 100 |
| 93.10 | 67.90 | 92.96# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101163**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00631

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/19/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.2 Final Pressure (psig): 3.6

Canister Dilution Factor: 1.36

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 115-07-1 | **Propene** | **0.97** | 0.68 | **0.56** | 0.40 | |
| 75-71-8 | **Dichlorodifluoromethane (CFC 12)** | **3.2** | 0.68 | **0.66** | 0.14 | |
| 74-87-3 | **Chloromethane** | **0.57** | 0.14 | **0.28** | 0.066 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | ND | 0.68 | ND | 0.097 | |
| 75-01-4 | Vinyl Chloride | ND | 0.14 | ND | 0.053 | |
| 106-99-0 | 1,3-Butadiene | ND | 0.14 | ND | 0.062 | |
| 74-83-9 | Bromomethane | ND | 0.14 | ND | 0.035 | |
| 75-00-3 | Chloroethane | ND | 0.14 | ND | 0.052 | |
| 64-17-5 | **Ethanol** | **13** | 6.8 | **7.1** | 3.6 | |
| 75-05-8 | **Acetonitrile** | **1.4** | 0.68 | **0.82** | 0.41 | |
| 107-02-8 | **Acrolein** | **1.0** | 0.68 | **0.45** | 0.30 | |
| 67-64-1 | **Acetone** | **45** | 6.8 | **19** | 2.9 | |
| 75-69-4 | **Trichlorofluoromethane** | **1.4** | 0.14 | **0.26** | 0.024 | |
| 67-63-0 | **2-Propanol (Isopropyl Alcohol)** | **1.2** | 0.68 | **0.50** | 0.28 | |
| 107-13-1 | Acrylonitrile | ND | 0.68 | ND | 0.31 | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.14 | ND | 0.034 | |
| 75-09-2 | Methylene Chloride | ND | 0.68 | ND | 0.20 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | ND | 0.14 | ND | 0.043 | |
| 76-13-1 | **Trichlorotrifluoroethane** | **0.73** | 0.14 | **0.096** | 0.018 | |
| 75-15-0 | Carbon Disulfide | ND | 0.68 | ND | 0.22 | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.14 | ND | 0.034 | |
| 75-34-3 | 1,1-Dichloroethane | ND | 0.14 | ND | 0.034 | |
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 0.14 | ND | 0.038 | |
| 108-05-4 | Vinyl Acetate | ND | 6.8 | ND | 1.9 | |
| 78-93-3 | **2-Butanone (MEK)** | **2.3** | 0.68 | **0.79** | 0.23 | |

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: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101163**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00631

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/19/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.2 Final Pressure (psig): 3.6

Canister Dilution Factor: 1.36

| 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 | 0.034 | |
| 141-78-6 | Ethyl Acetate | ND | 0.68 | ND | 0.19 | |
| 110-54-3 | n-Hexane | ND | 0.68 | ND | 0.19 | |
| 67-66-3 | **Chloroform** | **0.21** | 0.14 | **0.043** | 0.028 | |
| 109-99-9 | Tetrahydrofuran (THF) | ND | 0.68 | ND | 0.23 | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.14 | ND | 0.034 | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.14 | ND | 0.025 | |
| 71-43-2 | **Benzene** | **0.48** | 0.14 | **0.15** | 0.043 | |
| 56-23-5 | **Carbon Tetrachloride** | **0.59** | 0.14 | **0.093** | 0.022 | |
| 110-82-7 | Cyclohexane | ND | 0.68 | ND | 0.20 | |
| 78-87-5 | 1,2-Dichloropropane | ND | 0.14 | ND | 0.029 | |
| 75-27-4 | Bromodichloromethane | ND | 0.14 | ND | 0.020 | |
| 79-01-6 | Trichloroethene | ND | 0.14 | ND | 0.025 | |
| 123-91-1 | 1,4-Dioxane | ND | 0.68 | ND | 0.19 | |
| 80-62-6 | Methyl Methacrylate | ND | 0.68 | ND | 0.17 | |
| 142-82-5 | n-Heptane | ND | 0.68 | ND | 0.17 | |
| 10061-01-5 | cis-1,3-Dichloropropene | ND | 0.68 | ND | 0.15 | |
| 108-10-1 | 4-Methyl-2-pentanone | ND | 0.68 | ND | 0.17 | |
| 10061-02-6 | trans-1,3-Dichloropropene | ND | 0.68 | ND | 0.15 | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.14 | ND | 0.025 | |
| 108-88-3 | **Toluene** | **1.8** | 0.68 | **0.47** | 0.18 | |
| 591-78-6 | 2-Hexanone | ND | 0.68 | ND | 0.17 | |
| 124-48-1 | Dibromochloromethane | ND | 0.14 | ND | 0.016 | |
| 106-93-4 | 1,2-Dibromoethane | ND | 0.14 | ND | 0.018 | |
| 123-86-4 | n-Butyl Acetate | ND | 0.68 | ND | 0.14 | |

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: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101163**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC00631

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/19/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.2 Final Pressure (psig): 3.6

Canister Dilution Factor: 1.36

| CAS # | Compound | Result µg/m³ | MRL µg/m³ | Result ppbV | MRL ppbV | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | n-Octane | ND | 0.68 | ND | 0.15 | |
| 127-18-4 | **Tetrachloroethene** | **0.67** | 0.14 | **0.098** | 0.020 | |
| 108-90-7 | Chlorobenzene | ND | 0.14 | ND | 0.030 | |
| 100-41-4 | Ethylbenzene | ND | 0.68 | ND | 0.16 | |
| 179601-23-1 | **m,p-Xylenes** | **1.1** | 0.68 | **0.24** | 0.16 | |
| 75-25-2 | Bromoform | ND | 0.68 | ND | 0.066 | |
| 100-42-5 | Styrene | ND | 0.68 | ND | 0.16 | |
| 95-47-6 | o-Xylene | ND | 0.68 | ND | 0.16 | |
| 111-84-2 | n-Nonane | ND | 0.68 | ND | 0.13 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | ND | 0.14 | ND | 0.020 | |
| 98-82-8 | Cumene | ND | 0.68 | ND | 0.14 | |
| 80-56-8 | alpha-Pinene | ND | 0.68 | ND | 0.12 | |
| 103-65-1 | n-Propylbenzene | ND | 0.68 | ND | 0.14 | |
| 622-96-8 | 4-Ethyltoluene | ND | 0.68 | ND | 0.14 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | ND | 0.68 | ND | 0.14 | |
| 95-63-6 | 1,2,4-Trimethylbenzene | ND | 0.68 | ND | 0.14 | |
| 100-44-7 | Benzyl Chloride | ND | 0.14 | ND | 0.026 | |
| 541-73-1 | 1,3-Dichlorobenzene | ND | 0.14 | ND | 0.023 | |
| 106-46-7 | **1,4-Dichlorobenzene** | **0.14** | 0.14 | **0.023** | 0.023 | |
| 95-50-1 | 1,2-Dichlorobenzene | ND | 0.14 | ND | 0.023 | |
| 5989-27-5 | **d-Limonene** | **0.70** | 0.68 | **0.13** | 0.12 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | ND | 0.68 | ND | 0.070 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | ND | 0.68 | ND | 0.092 | |
| 91-20-3 | Naphthalene | ND | 0.68 | ND | 0.13 | |
| 87-68-3 | Hexachlorobutadiene | ND | 0.68 | ND | 0.064 | |

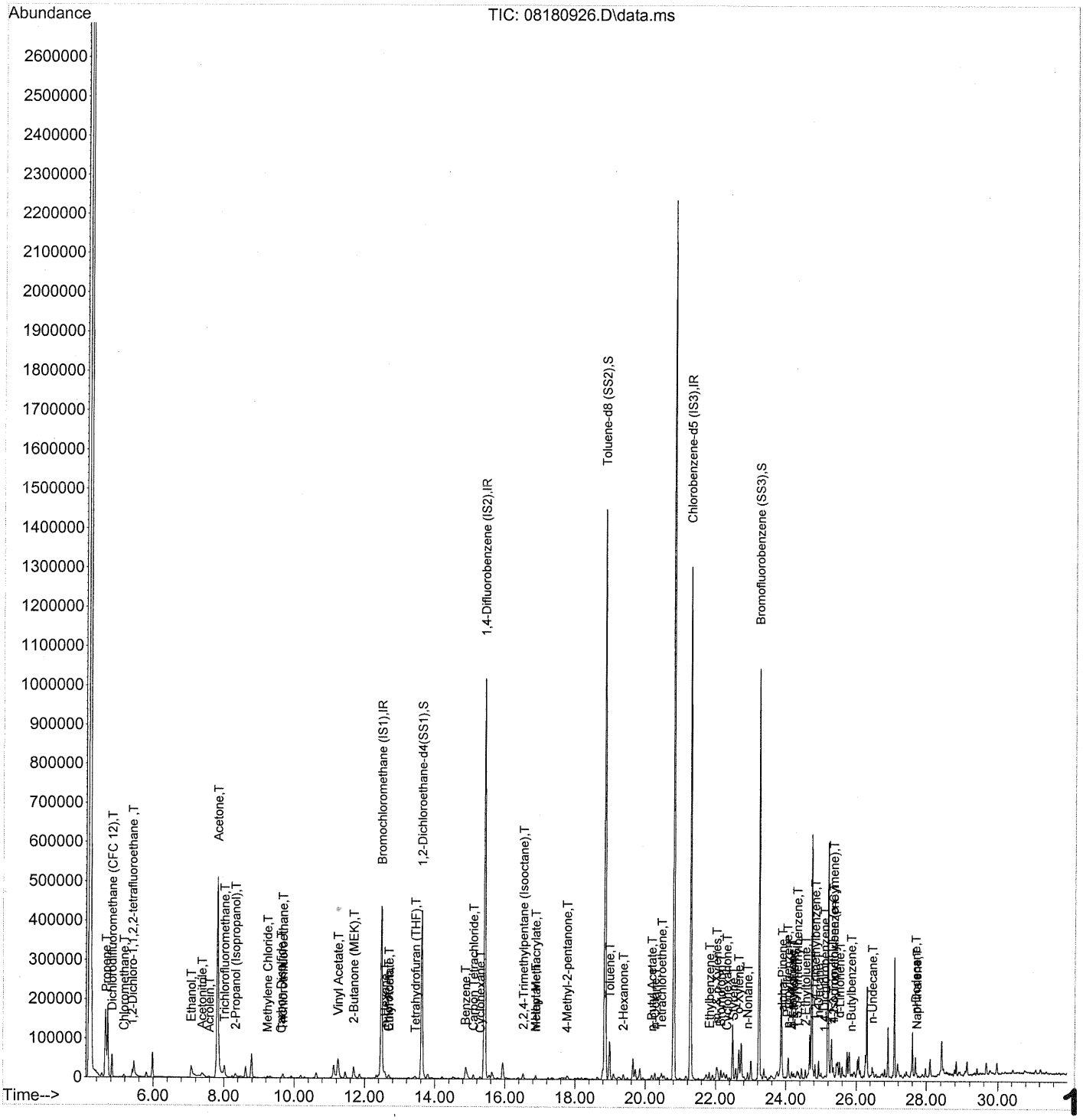
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 8/25/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 21 16:50:26 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
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Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
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Quant Time: Aug 21 16:50:26 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 228042 | 25.000 | ng | | -0.03 |
| 37) 1,4-Difluorobenzene (IS2) | 15.42 | 114 | 1152604 | 25.000 | ng | | -0.02 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 547187 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 460756 | 23.246 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery = 93.00% | | | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1252412 | 26.195 | ng | | -0.02 |
| Spiked Amount 25.000 | | | Recovery = 104.76% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.23 | 174 | 329790 | 26.156 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = 104.64% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.67 | 42 | 11162 | 0.713 | ng | # | 53 |
| 3) Dichlorodifluoromethan... | 4.84 | 85 | 60941 | 2.383 | ng | | 98 |
| 4) Chloromethane | 5.18 | 50 | 7240 | 0.421 | ng | | 88 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.41 | 135 | 792 | 0.076 | ng | # | 44 |
| 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 | 7.07 | 45 | 97788 | 9.858 | ng | | 99 |
| 11) Acetonitrile | 7.38 | 41 | 29241 | 1.007 | ng | | 94 |
| 12) Acrolein | 7.59 | 56 | 5666 | 0.750 | ng | | 98 |
| 13) Acetone | 7.82 | 58 | 308104 | 32.920 | ng | # | 84 |
| 14) Trichlorofluoromethane | 8.02 | 101 | 24541 | 1.061 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.33 | 45 | 33065m | 0.899 | ng | | |
| 16) Acrylonitrile | 8.61 | 53 | 202 | N.D. | | | |
| 17) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.32 | 59 | 1188 | N.D. | | | |
| 19) Methylene Chloride | 9.25 | 84 | 2039 | 0.162 | ng | | 94 |
| 20) 3-Chloro-1-propene (Al... | 9.34 | 41 | 694 | N.D. | | | |
| 21) Trichlorotrifluoroethane | 9.67 | 151 | 4530 | 0.539 | ng | | 97 |
| 22) Carbon Disulfide | 9.63 | 76 | 2860 | 0.065 | ng | # | 74 |
| 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 | 11.22 | 73 | 303 | N.D. | | | |
| 26) Vinyl Acetate | 11.24 | 86 | 8439 | 4.431 | ng | # | 59 |
| 27) 2-Butanone (MEK) | 11.70 | 72 | 14400 | 1.704 | ng | | 97 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 0.00 | 87 | 0 | N.D. | | | |
| 30) Ethyl Acetate | 12.70 | 61 | 1081 | 0.246 | ng | | 98 |
| 31) n-Hexane | 12.58 | 57 | 7054 | 0.313 | ng | | 89 |



8/22/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 21 16:50:26 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.68 | 83 | 3051 | 0.154 | ng | | 89 |
| 34) Tetrahydrofuran (THF) | 13.44 | 72 | 1330 | 0.148 | ng | # | 45 |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | | |
| 36) 1,2-Dichloroethane | 13.78 | 62 | 366 | N.D. | | | |
| 38) 1,1,1-Trichloroethane | 14.18 | 97 | 434 | N.D. | | | |
| 39) Isopropyl Acetate | 0.00 | 61 | 0 | N.D. | | | |
| 40) 1-Butanol | 15.01 | 56 | 297 | N.D. | | | |
| 41) Benzene | 14.87 | 78 | 17843 | 0.352 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.10 | 117 | 6964 | 0.431 | ng | | 96 |
| 43) Cyclohexane | 15.29 | 84 | 1714 | 0.092 | ng | # | 80 |
| 44) tert-Amyl Methyl Ether | 16.11 | 73 | 317 | N.D. | | | |
| 45) 1,2-Dichloropropane | 15.93 | 63 | 282 | 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... | 16.52 | 57 | 15559 | 0.261 | ng | | 88 |
| 50) Methyl Methacrylate | 16.88 | 100 | 476 | 0.102 | ng | # | 1 |
| 51) n-Heptane | 16.88 | 71 | 2225 | 0.164 | ng | | 90 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | | |
| 53) 4-Methyl-2-pentanone | 17.77 | 58 | 1808 | 0.148 | ng | | 81 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. | d | | |
| 58) Toluene | 18.98 | 91 | 61244 | 1.303 | ng | | 99 |
| 59) 2-Hexanone | 19.37 | 43 | 12493 | 0.400 | ng | | 88 |
| 60) Dibromochloromethane | 0.00 | 129 | 0 | N.D. | | | |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | | |
| 62) n-Butyl Acetate | 20.18 | 43 | 8393 | 0.228 | ng | | 85 |
| 63) n-Octane | 20.27 | 57 | 3295 | 0.290 | ng | # | 92 |
| 64) Tetrachloroethene | 20.46 | 166 | 5331 | 0.490 | ng | | 100 |
| 65) Chlorobenzene | 0.00 | 112 | 0 | N.D. | | | |
| 66) Ethylbenzene | 21.82 | 91 | 16564 | 0.308 | ng | | 97 |
| 67) m- & p-Xylenes | 22.03 | 91 | 33947 | 0.781 | ng | | 99 |
| 68) Bromoform | 22.15 | 173 | 1480 | 0.160 | ng | | 79 |
| 69) Styrene | 22.51 | 104 | 4888 | 0.156 | ng | | 95 |
| 70) o-Xylene | 22.65 | 91 | 12765 | 0.293 | ng | | 97 |
| 71) n-Nonane | 22.91 | 43 | 8905 | 0.308 | ng | | 95 |
| 72) 1,1,2,2-Tetrachloroethane | 22.65 | 83 | 451 | N.D. | | | |
| 74) Cumene | 23.41 | 105 | 1280 | N.D. | | | |
| 75) alpha-Pinene | 23.90 | 93 | 11037 | 0.391 | ng | # | 42 |
| 76) n-Propylbenzene | 24.05 | 91 | 4657 | 0.067 | ng | # | 81 |
| 77) 3-Ethyltoluene | 24.17 | 105 | 9776 | 0.186 | ng | | 93 |
| 78) 4-Ethyltoluene | 24.22 | 105 | 4928 | 0.097 | ng | | 100 |
| 79) 1,3,5-Trimethylbenzene | 24.32 | 105 | 3070 | 0.071 | ng | | 91 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 21 16:50:26 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

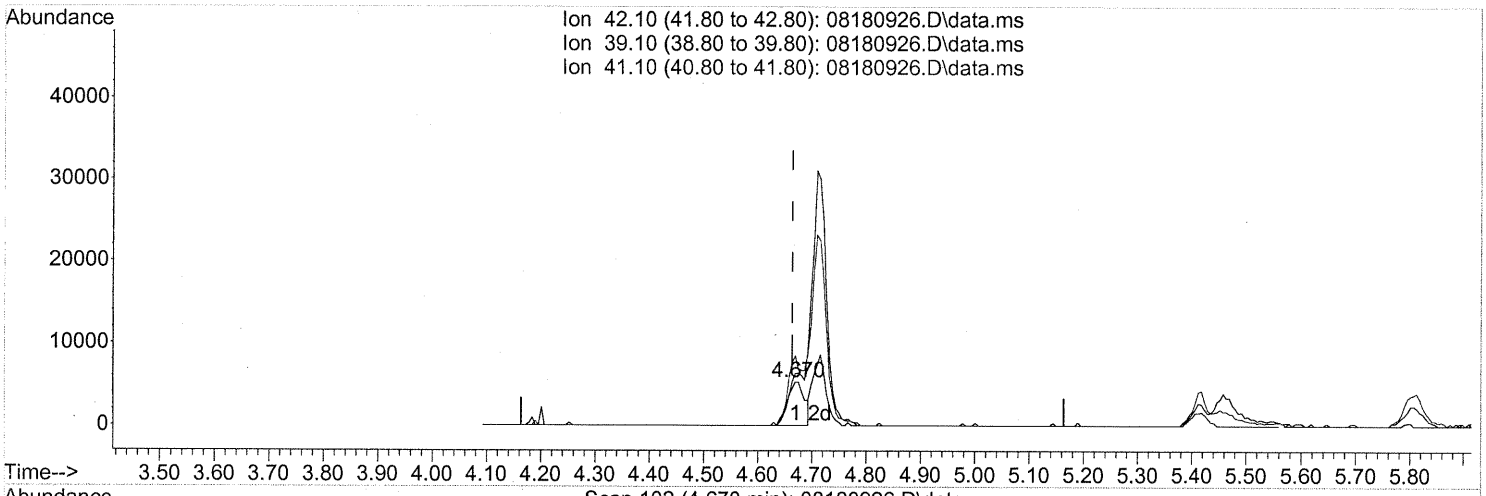
| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 464 | N.D. | | |
| 81) 2-Ethyltoluene | 24.56 | 105 | 4295 | 0.081 ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 11690 | 0.267 ng | | 80 |
| 83) n-Decane | 24.93 | 57 | 19252 | 0.676 ng | | 86 |
| 84) Benzyl Chloride | 25.00 | 91 | 94 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 0.00 | 146 | 0 | N.D. d | | |
| 86) 1,4-Dichlorobenzene | 25.10 | 146 | 2438 | 0.103 ng | | 94 |
| 87) sec-Butylbenzene | 25.18 | 105 | 308 | N.D. | | |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 2817 | 0.053 ng | # | 56 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 3383 | 0.076 ng | | 95 |
| 90) 1,2-Dichlorobenzene | 0.00 | 146 | 0 | N.D. d | | |
| 91) d-Limonene | 25.53 | 68 | 9590 | 0.515 ng | | 91 |
| 92) 1,2-Dibromo-3-Chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 93) n-Undecane | 26.46 | 57 | 10953 | 0.361 ng | # | 75 |
| 94) 1,2,4-Trichlorobenzene | 27.58 | 180 | 535 | N.D. | | |
| 95) Naphthalene | 27.73 | 128 | 8895 | 0.149 ng | | 98 |
| 96) n-Dodecane | 27.70 | 57 | 17318 | 0.492 ng | | 93 |
| 97) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |
| 98) Cyclohexanone | 22.32 | 55 | 7443 | 0.382 ng | | 93 |
| 99) tert-Butylbenzene | 24.83 | 119 | 1286 | N.D. | | |
| 100) n-Butylbenzene | 25.86 | 91 | 2610 | 0.053 ng | # | 56 |

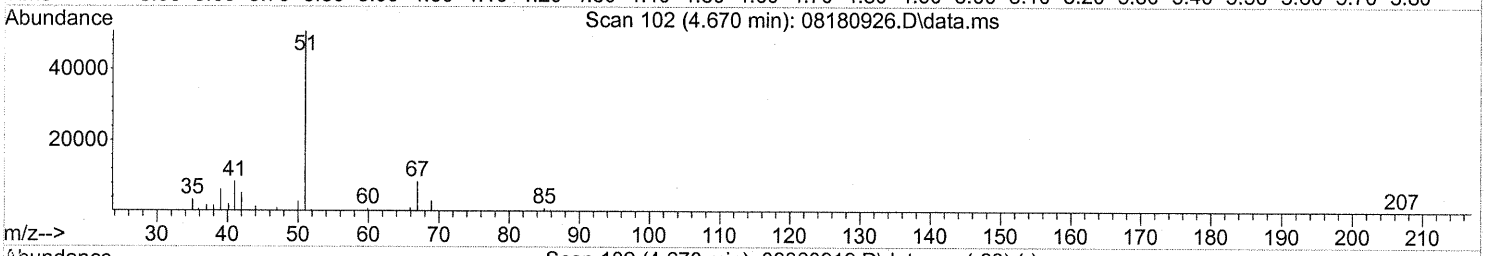
(#) = qualifier out of range (m) = manual integration (+) = signals summed

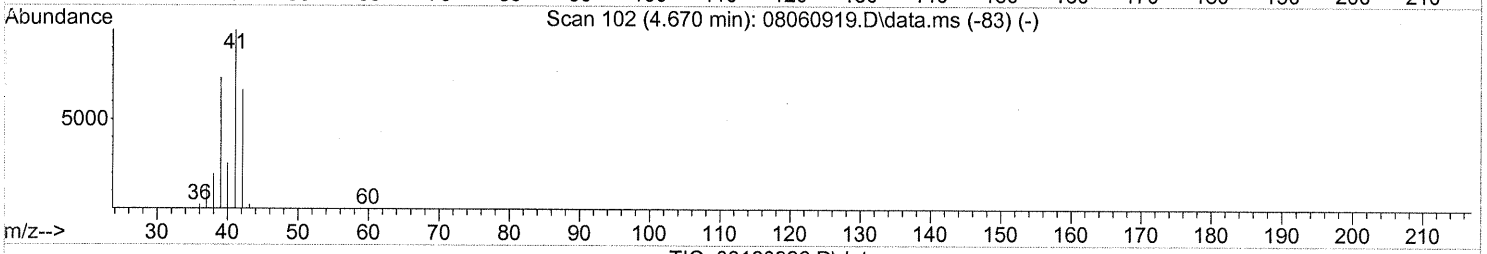
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(2) Propene (T)

4.670min (+0.006) 0.71ng

response 11162

| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 111.90 | 0.00# |
| 41.10 | 150.20 | 145.66 |
| 0.00 | 0.00 | 0.00 |

before

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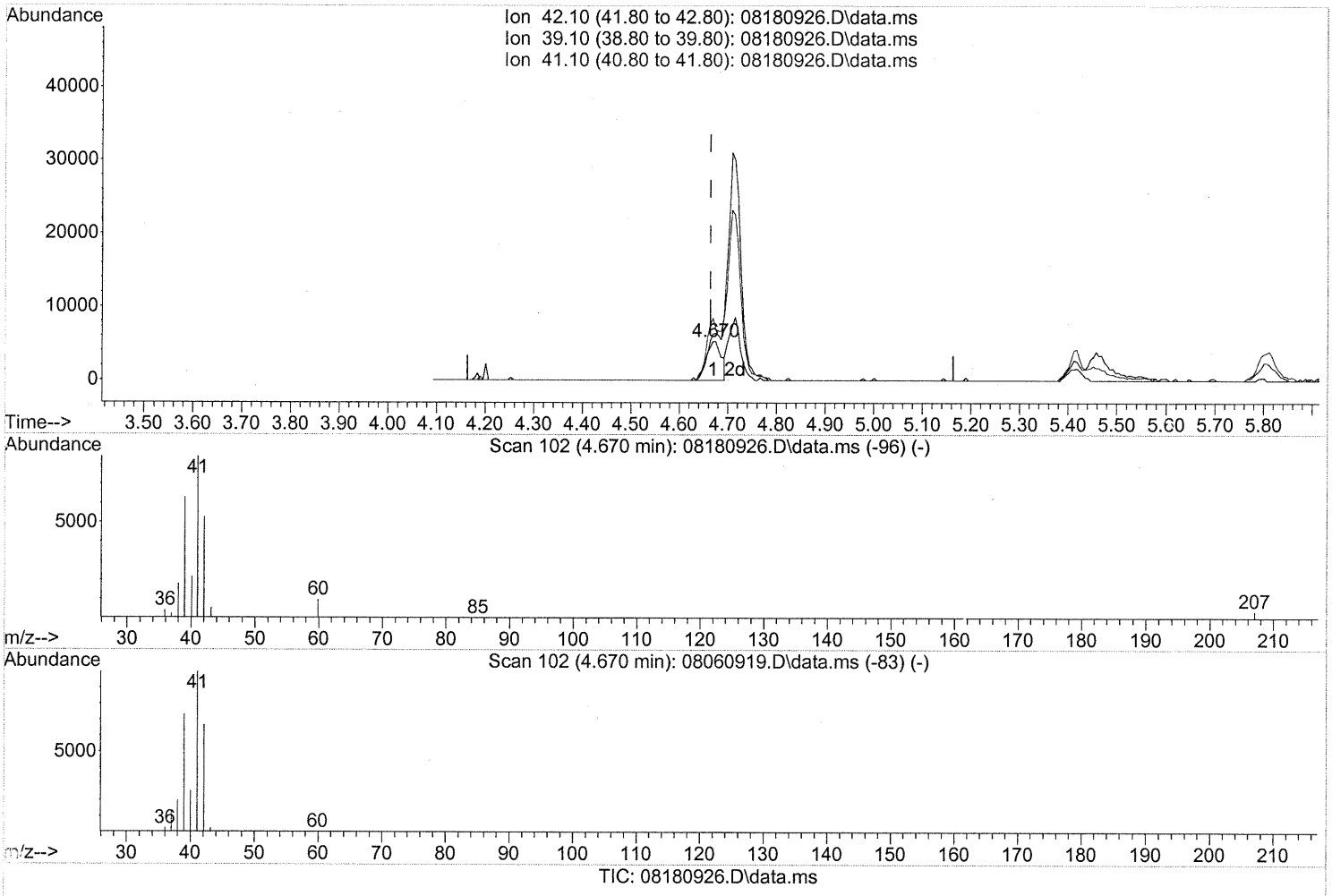
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(2) Propene (T)

4.670min (+0.006) 0.71ng

response 11162

after substr.

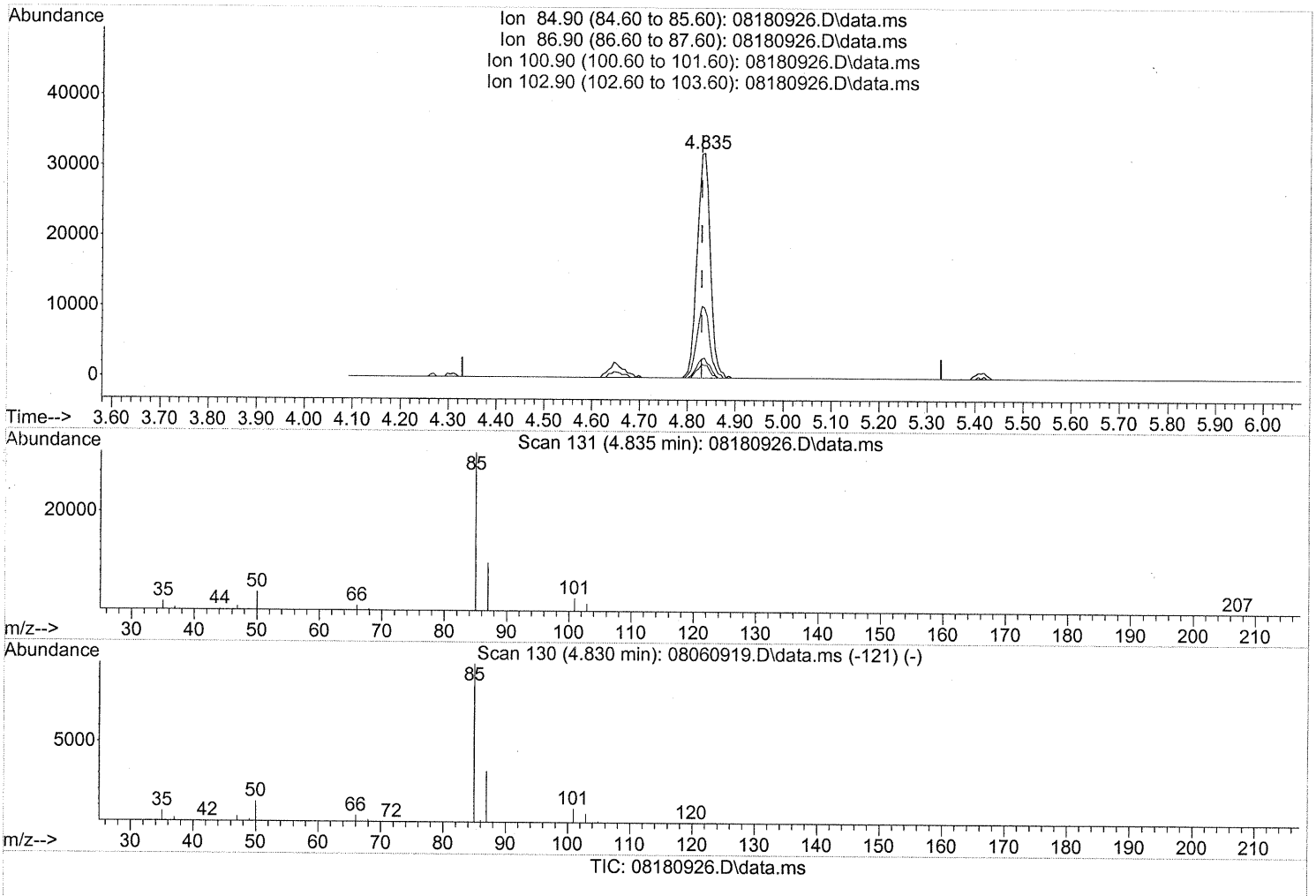
| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 111.90 | 0.00# |
| 41.10 | 150.20 | 145.66 |
| 0.00 | 0.00 | 0.00 |

139

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(3) Dichlorodifluoromethane (CFC 12) (T)

4.835min (+0.006) 2.38ng

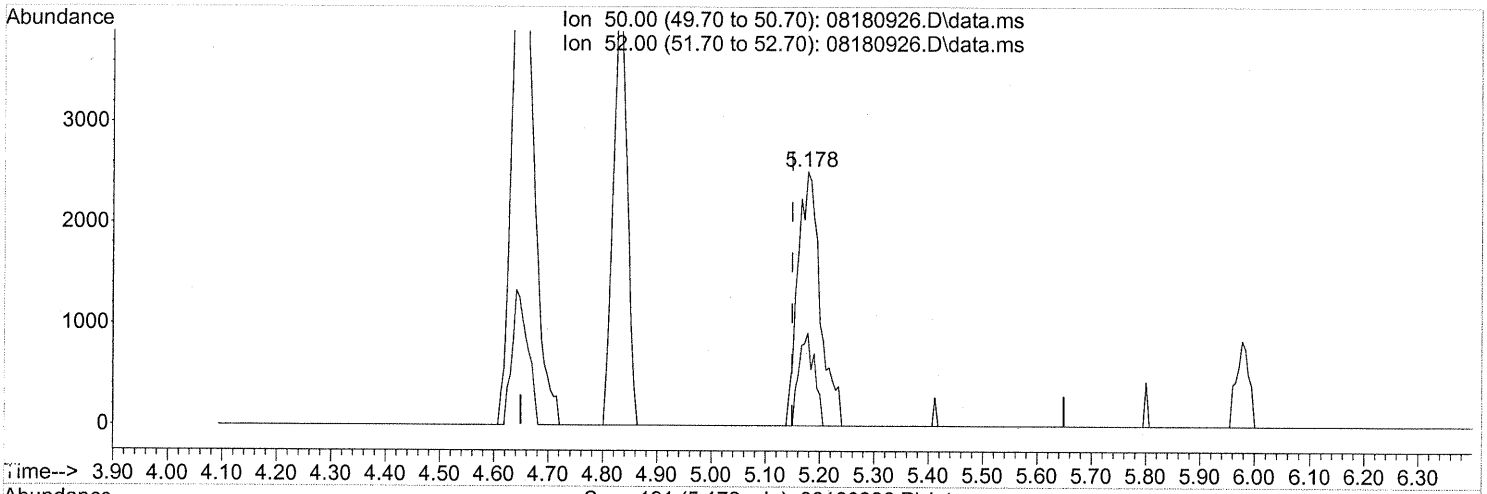
response 60941

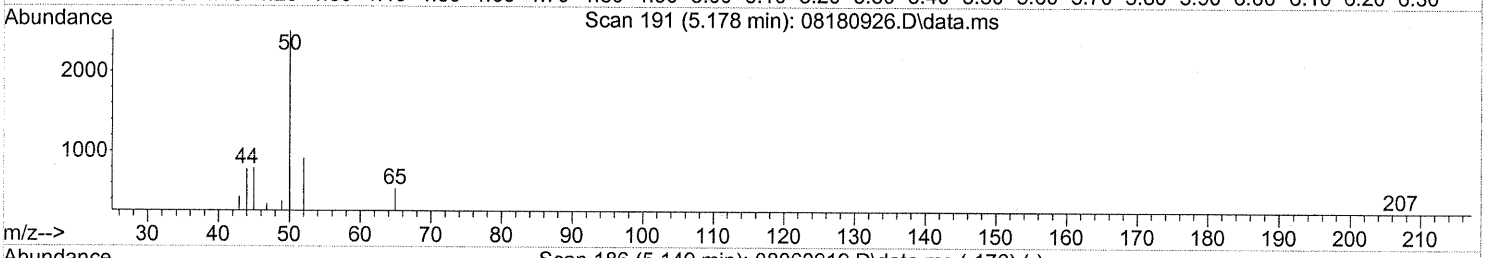
| Ion | Exp% | Act% |
|---|---|---|
| 84.90 | 100 | 100 |
| 86.90 | 32.80 | 31.34 |
| 100.90 | 8.80 | 8.53 |
| 102.90 | 5.20 | 5.50 |

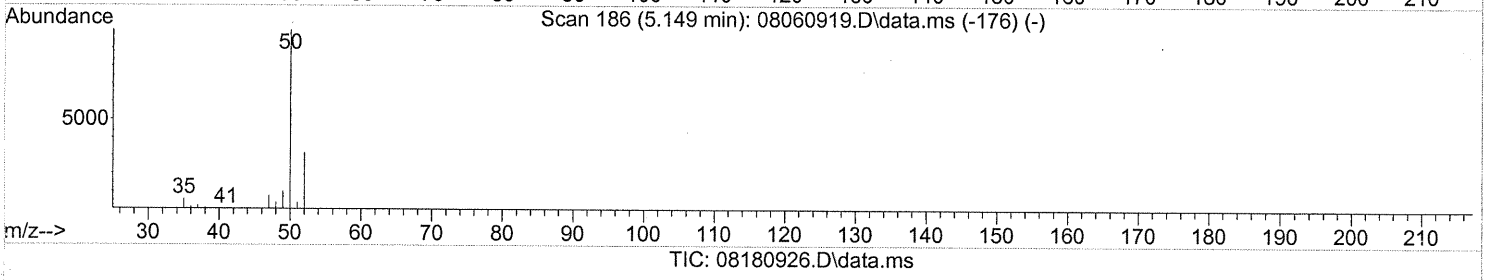
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(4) Chloromethane (T)

5.178min (+0.029) 0.42ng

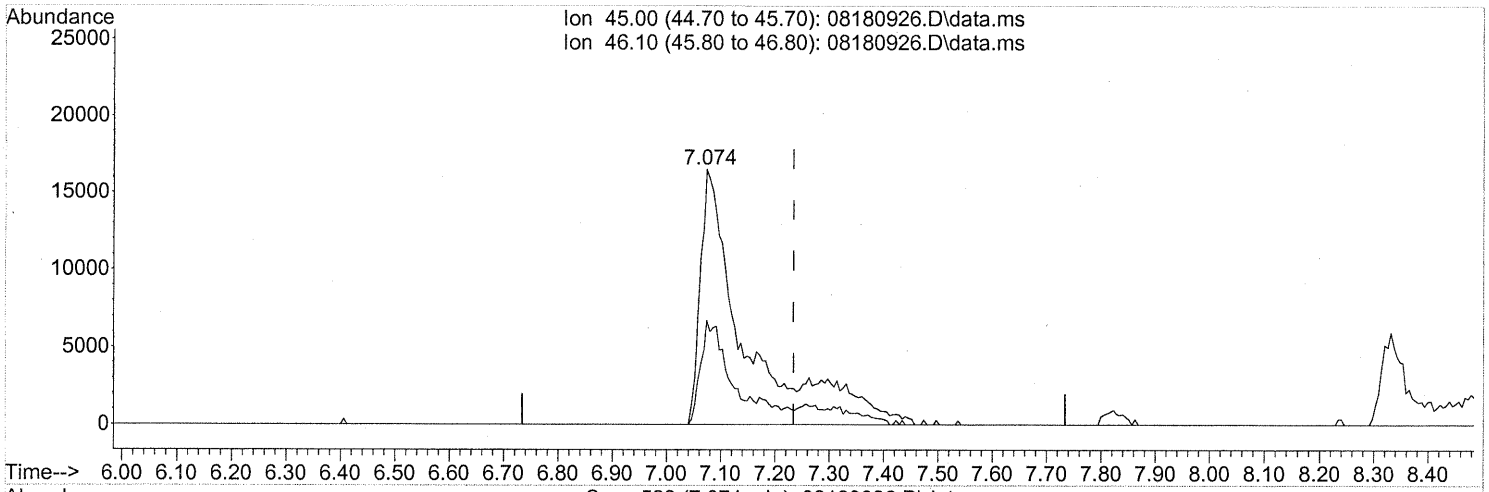
response 7240

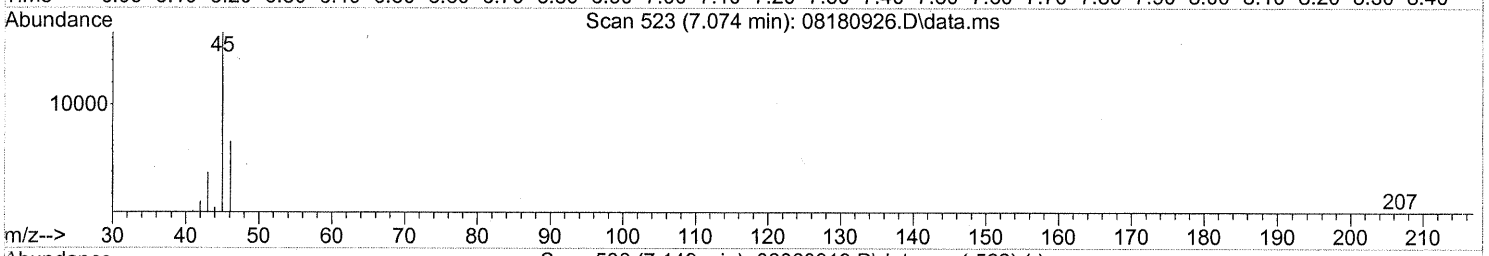
| Ion | Exp% | Act% |
|---|---|---|
| 50.00 | 100 | 100 |
| 52.00 | 31.60 | 25.04 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

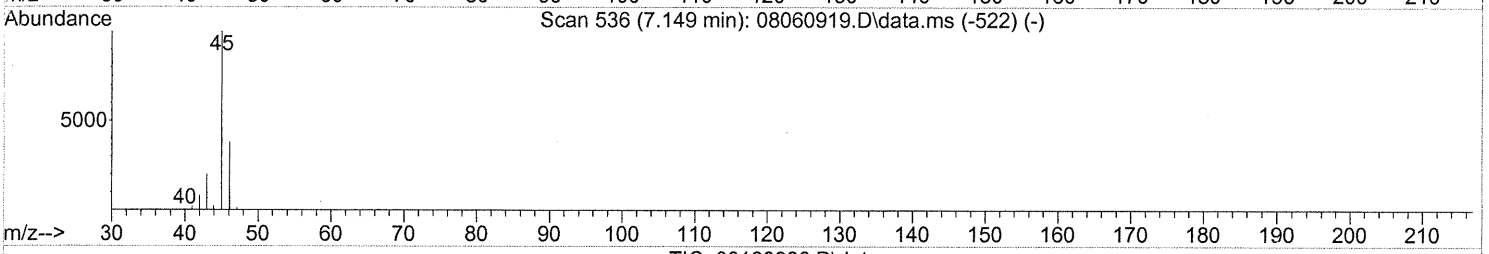
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(10) Ethanol (T)

7.074min (-0.160) 9.86ng

response 97788

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.82 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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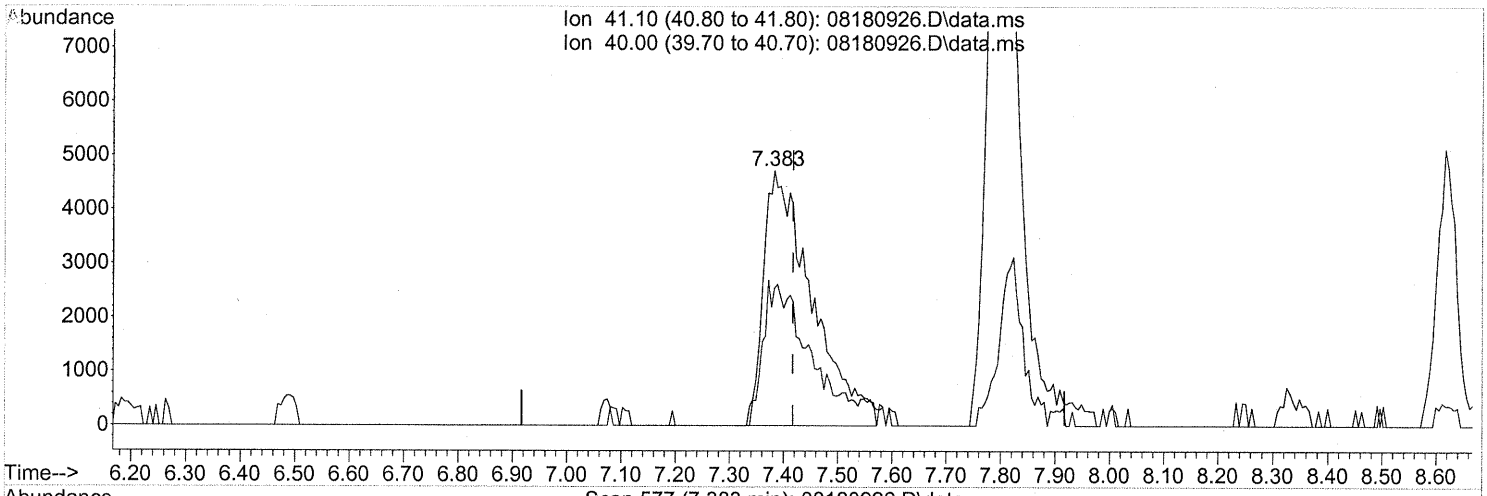
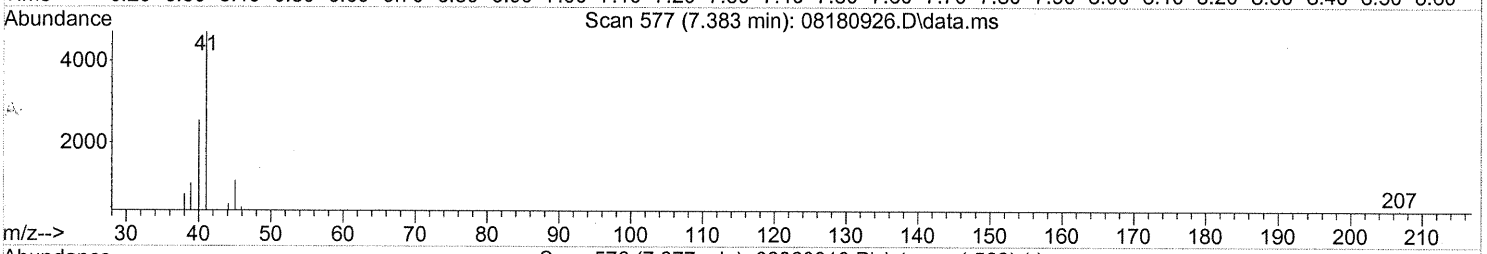
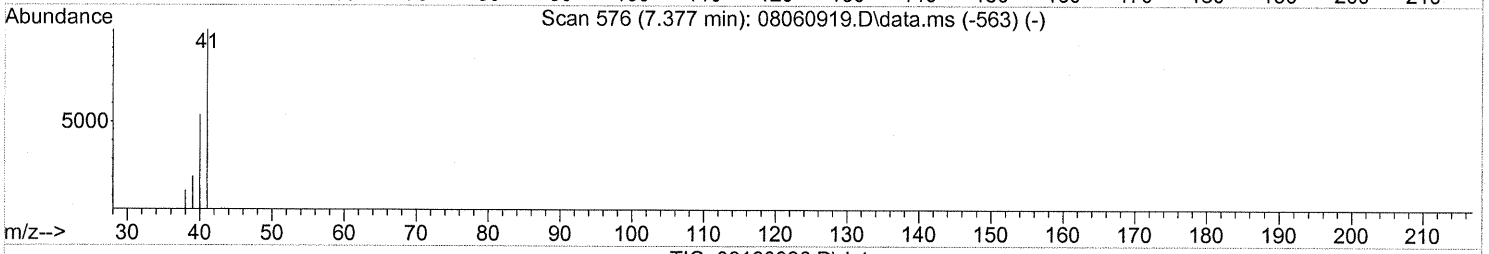
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(11) Acetonitrile (T)

7.383min (-0.034) 1.01ng

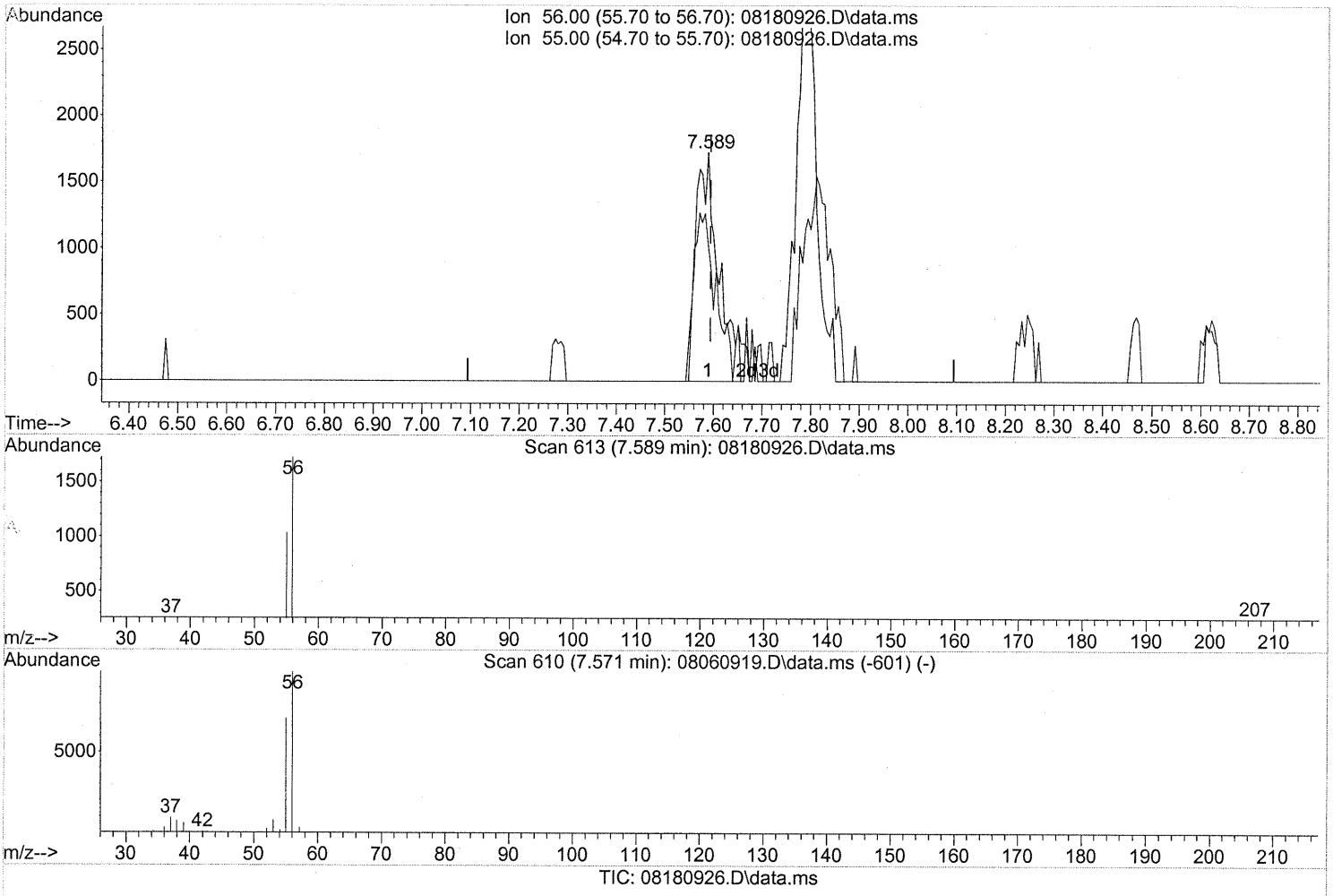
response 29241

| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 40.00 | 53.70 | 57.82 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(12) Acrolein (T)

7.589min (-0.006) 0.75ng

response 5666

| Ion | Exp% | Act% |
|---|---|---|
| 56.00 | 100 | 100 |
| 55.00 | 68.10 | 69.54 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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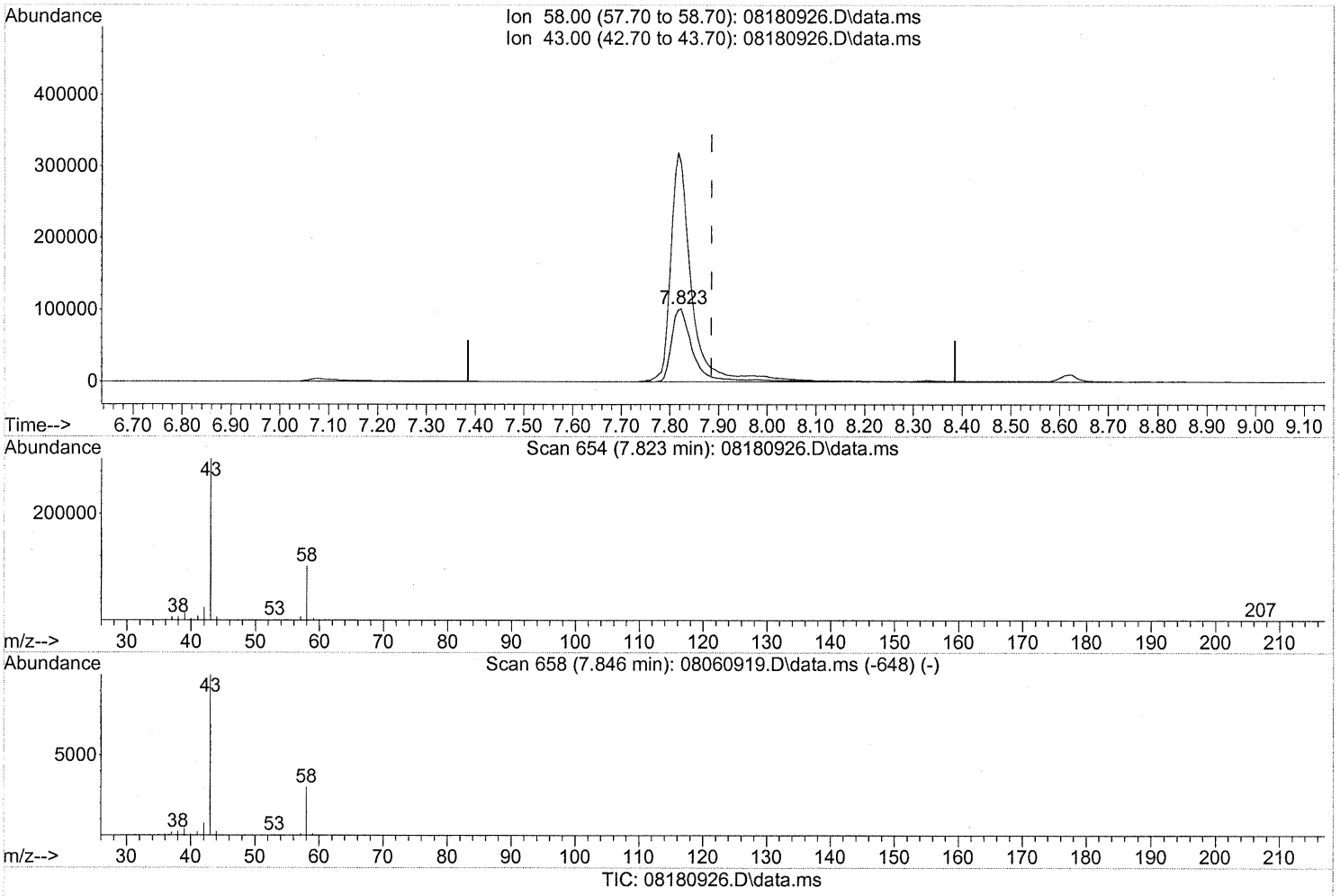
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(13) Acetone (T)

7.823min (-0.063) 32.92ng

response 308104

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 340.40 | 306.51# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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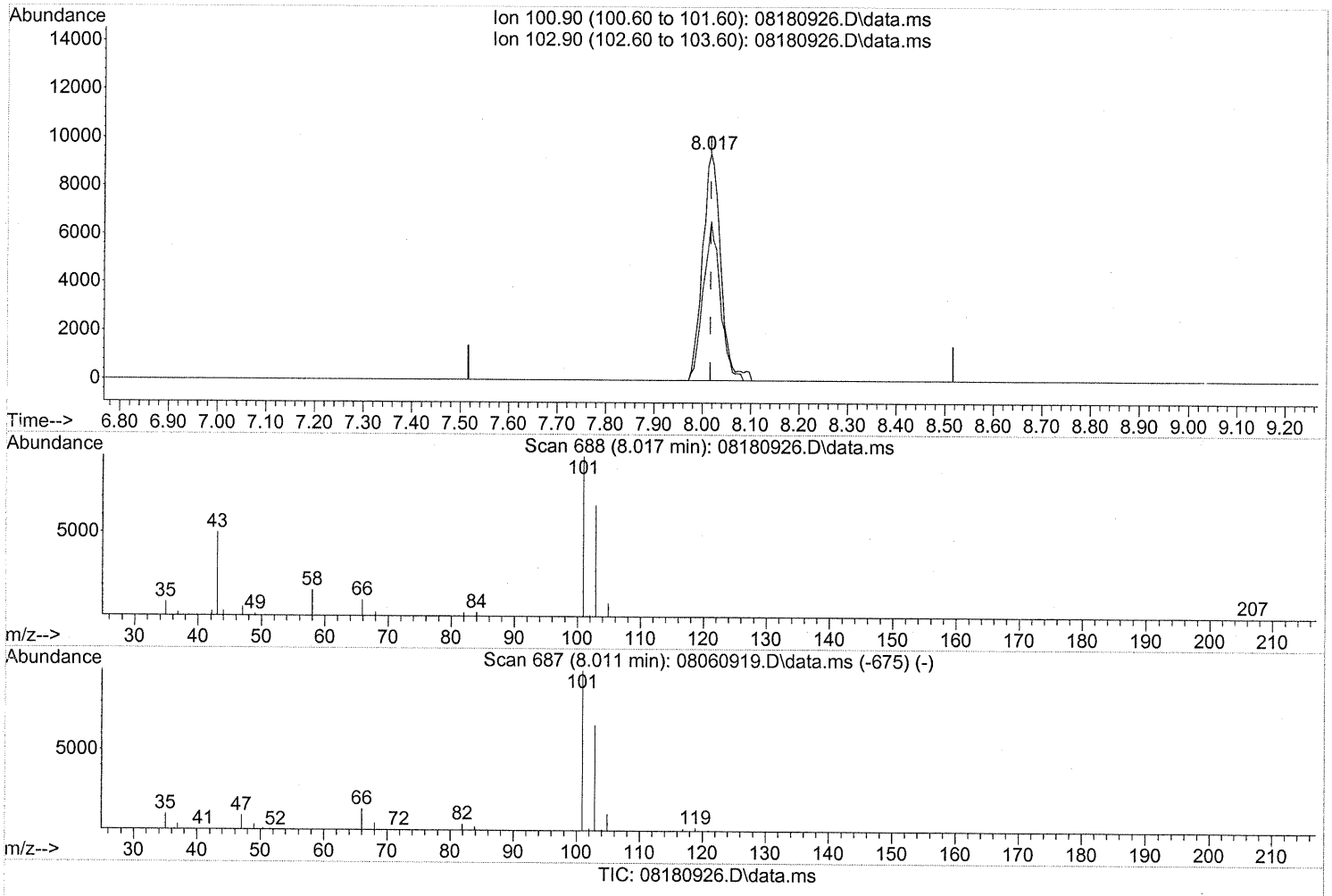
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(14) Trichlorofluoromethane (T)

8.017min (+0.000) 1.06ng

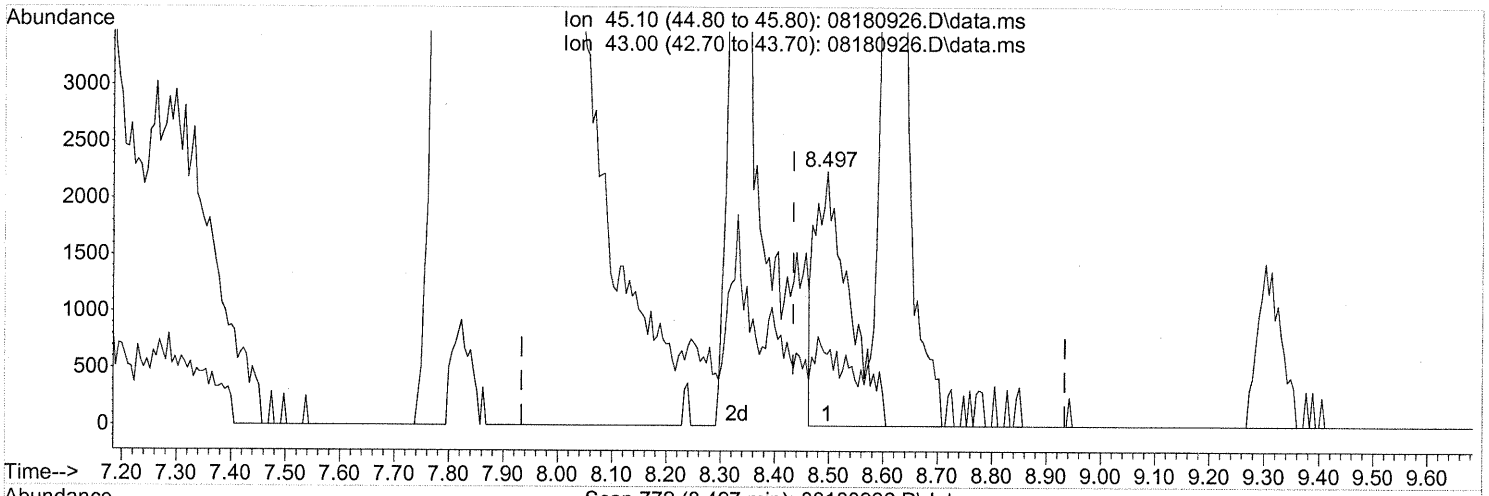
response 24541

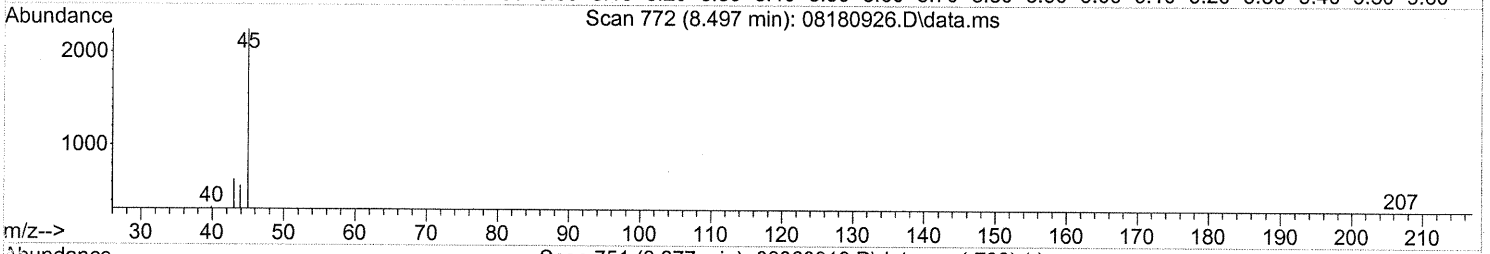
| Ion | Exp% | Act% |
|---|---|---|
| 100.90 | 100 | 100 |
| 102.90 | 64.40 | 65.89 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

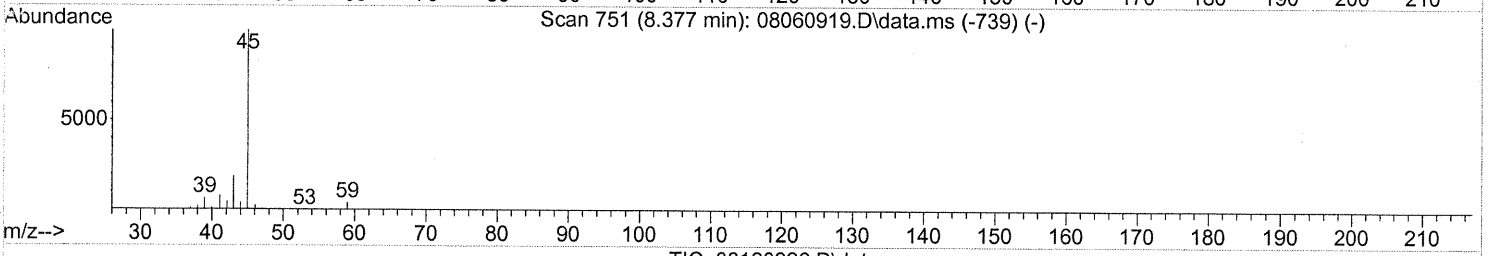
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

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

8.497min (+0.063) 0.26ng

response 9657

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.00 | 19.44 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP

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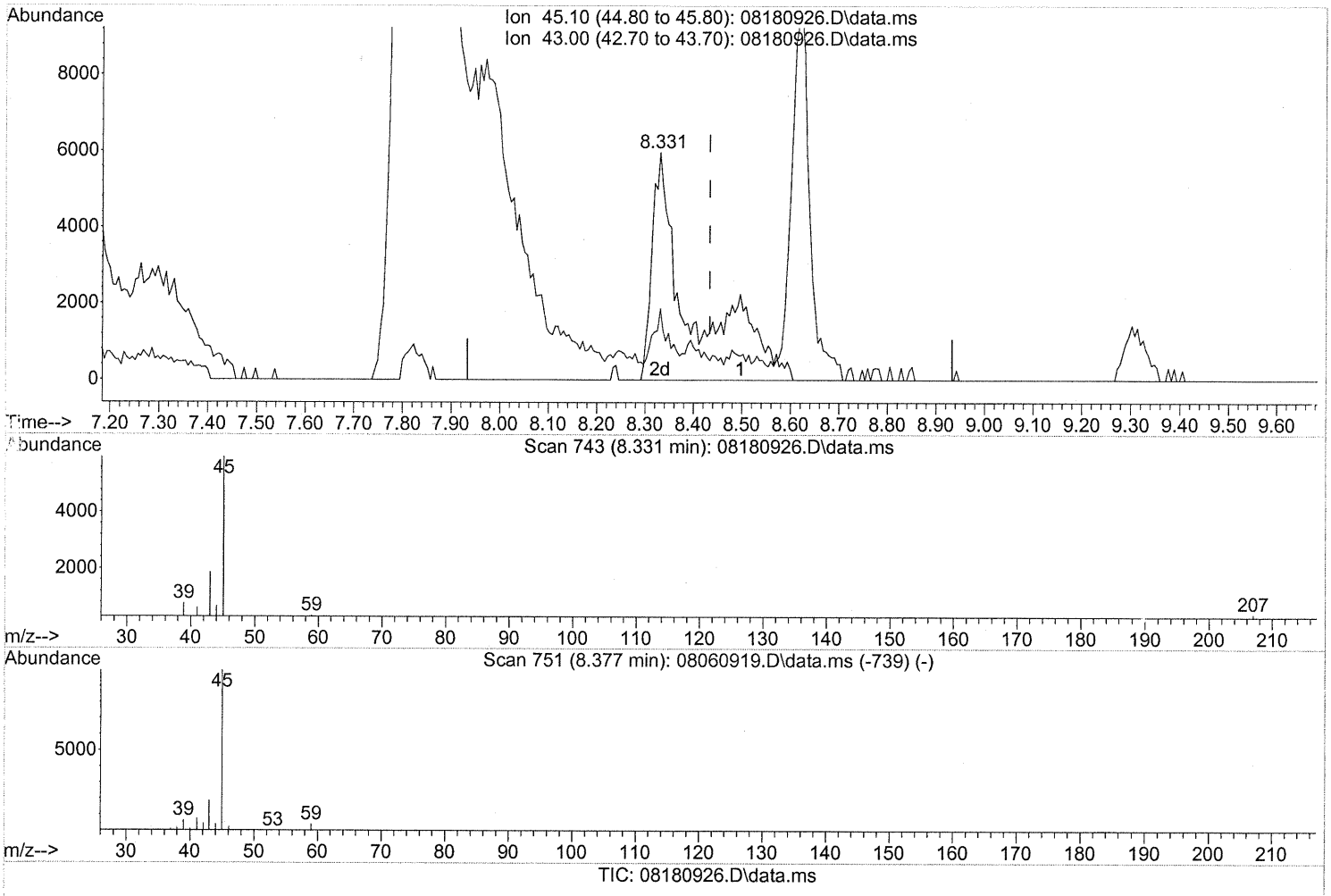
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

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

8.331min (-0.103) 0.90ng m

response 33065

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.00 | 5.68 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

SP—71C

DA 8/22/09

Sam 8/25/09

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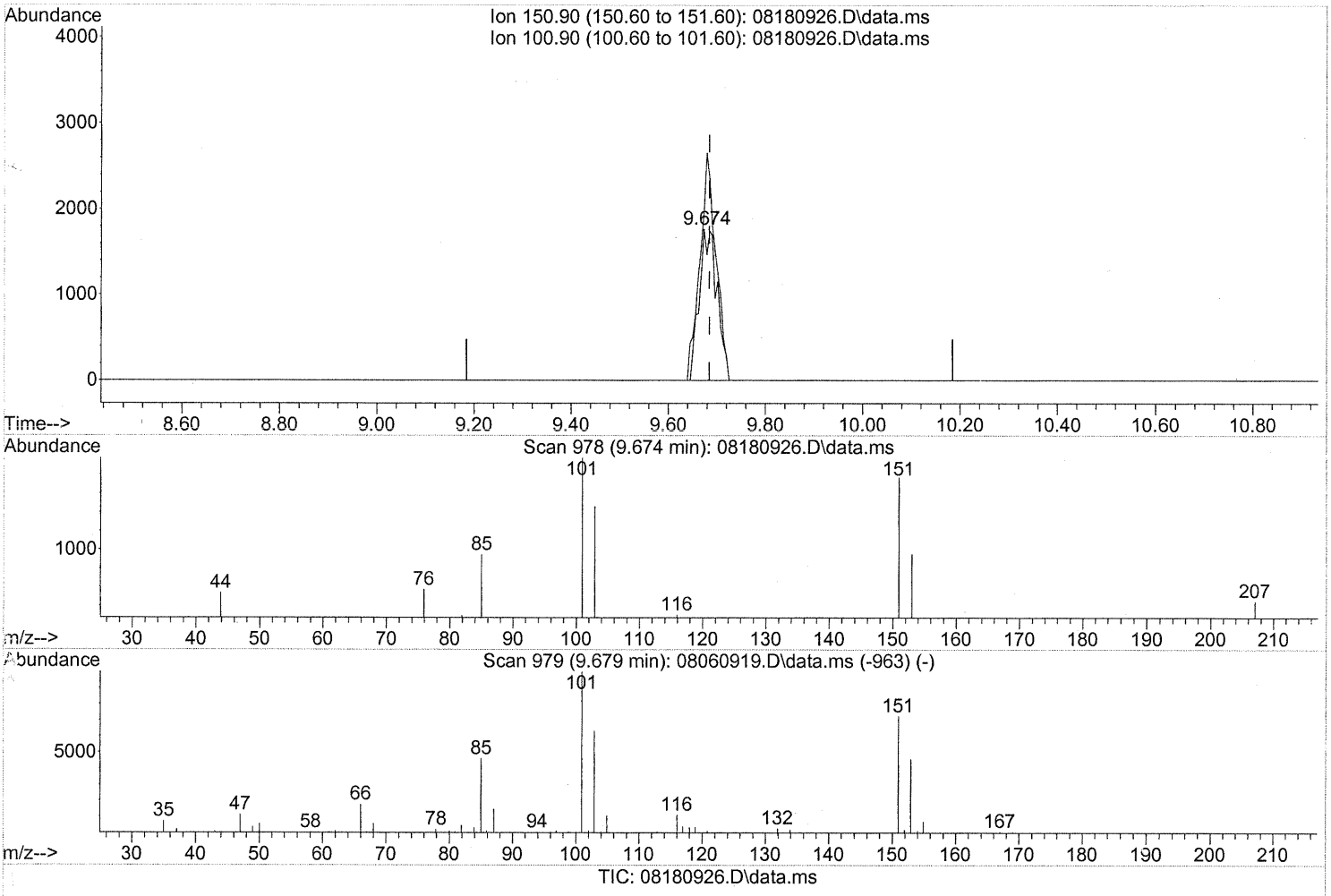
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.674min (-0.011) 0.54ng

response 4530

| Ion | Exp% | Act% |
|---|---|---|
| 150.90 | 100 | 100 |
| 100.90 | 138.40 | 135.30 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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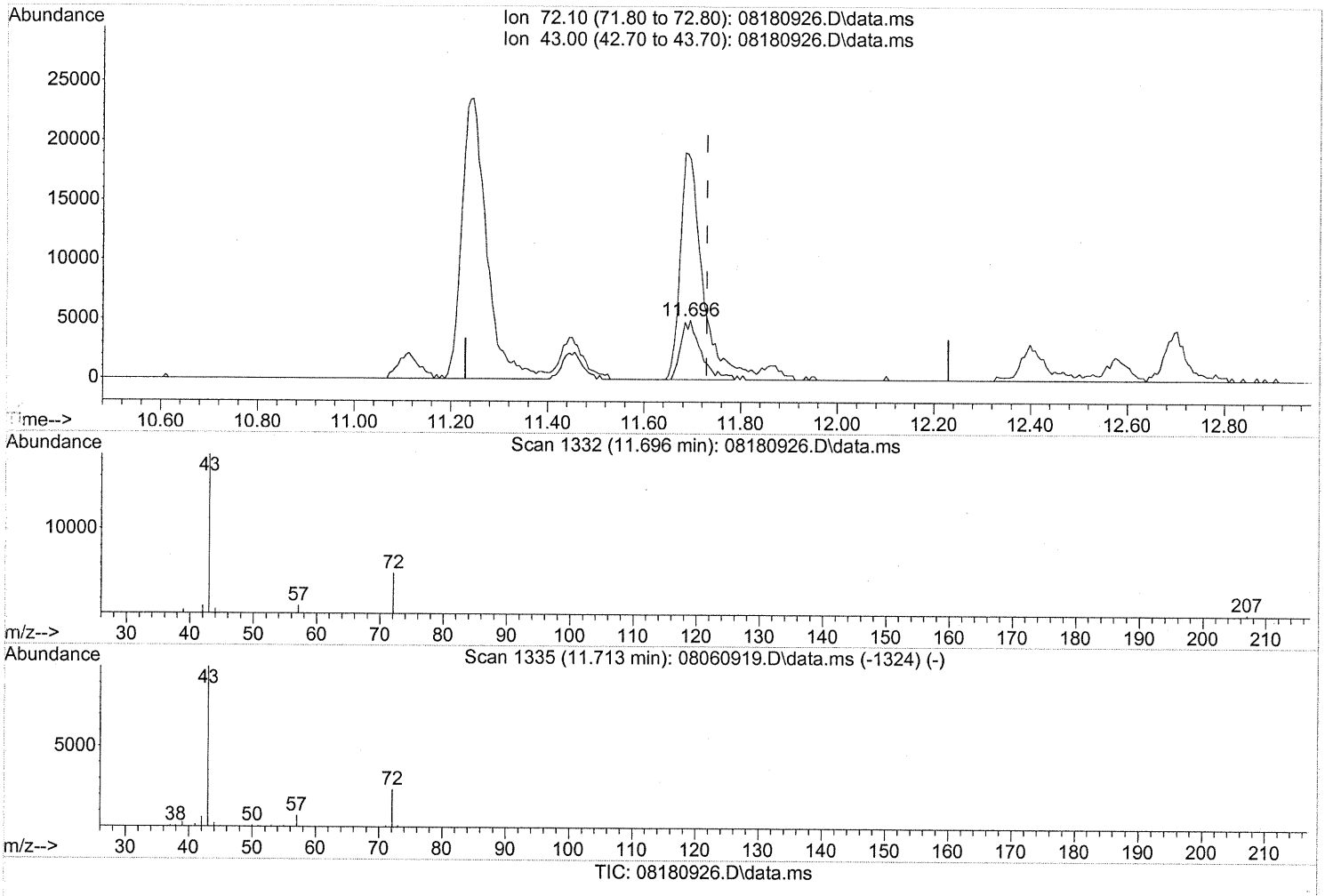
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(27) 2-Butanone (MEK) (T)

11.696min (-0.034) 1.70ng

response 14400

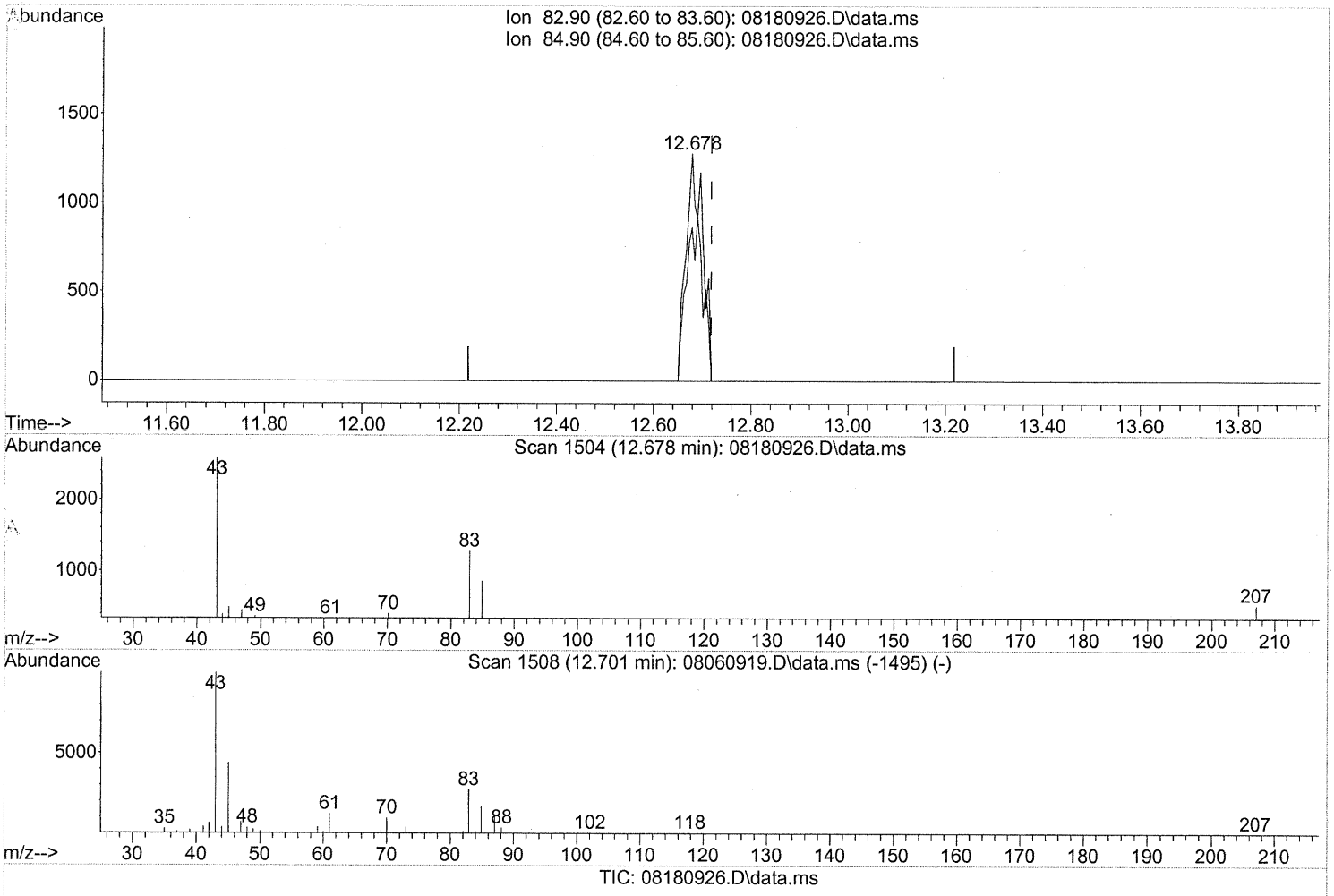
| Ion | Exp% | Act% |
|---|---|---|
| 72.10 | 100 | 100 |
| 43.00 | 437.40 | 429.69 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

150

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(32) Chloroform (T)

12.678min (-0.040) 0.15ng

response 3051

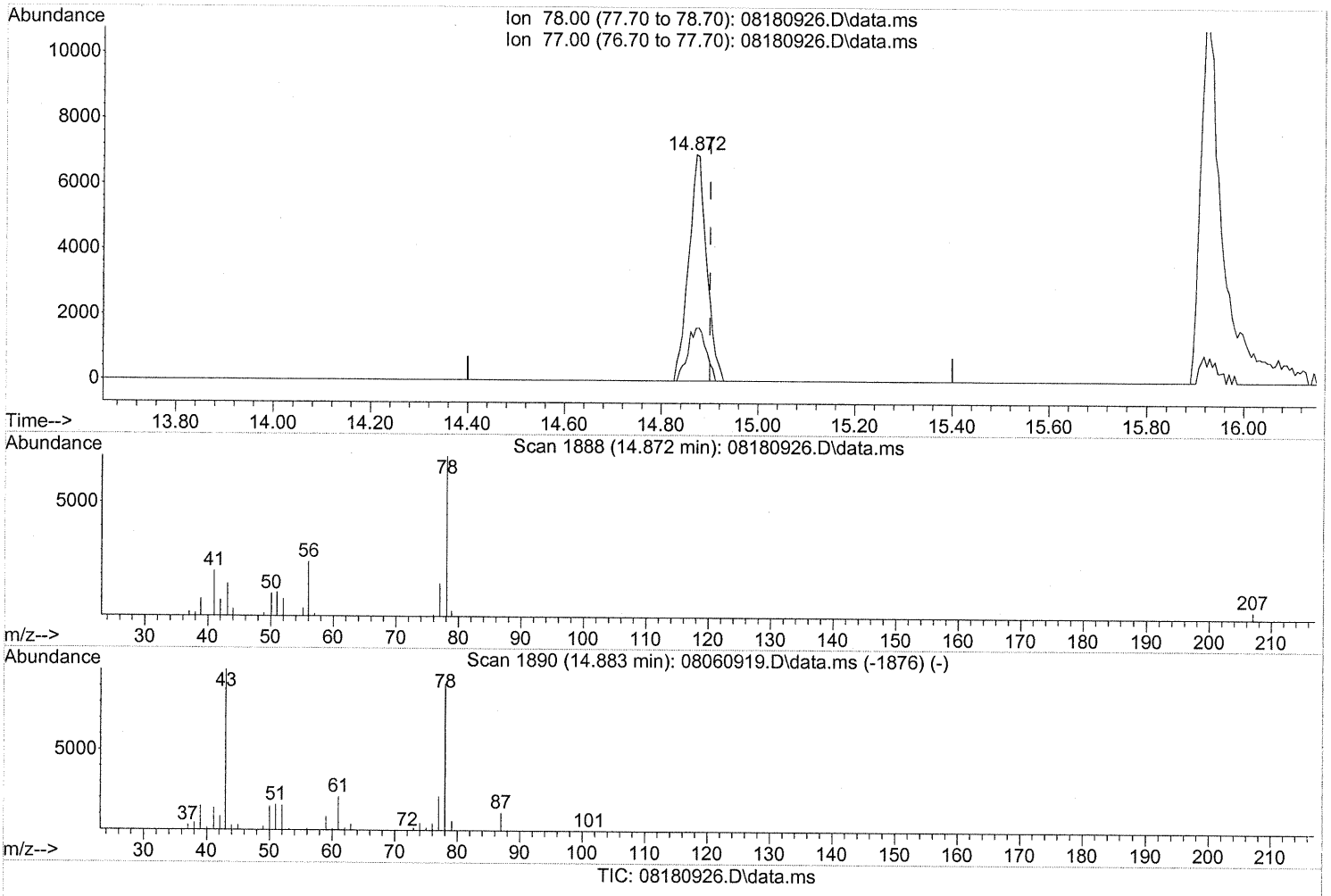
| Ion | Exp% | Act% |
|---|---|---|
| 82.90 | 100 | 100 |
| 84.90 | 64.30 | 72.73 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

151

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(41) Benzene (T)

14.872min (-0.029) 0.35ng

response 17843

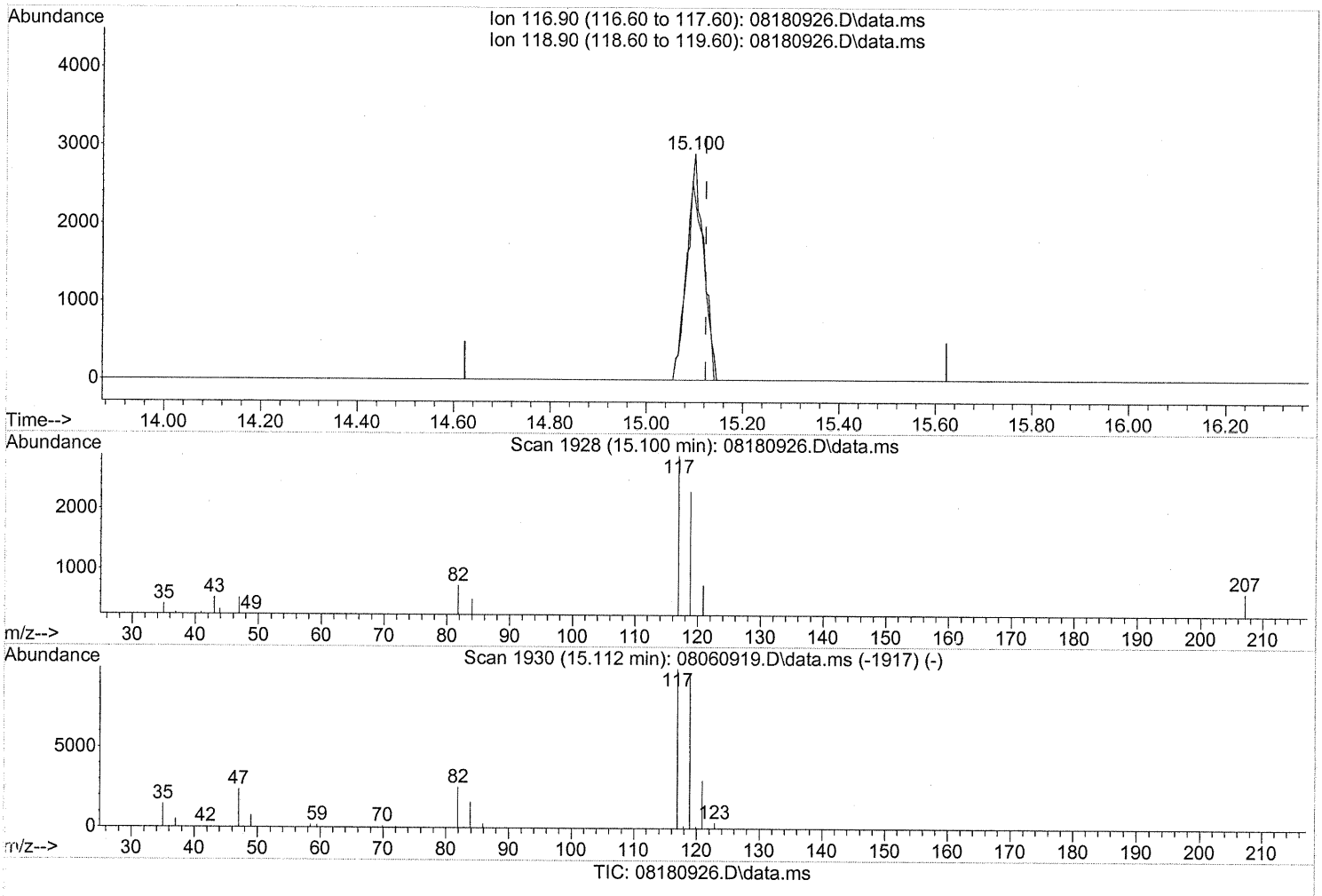
| Ion | Exp% | Act% |
|---|---|---|
| 78.00 | 100 | 100 |
| 77.00 | 23.60 | 24.07 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

152

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(42) Carbon Tetrachloride (T)

15.100min (-0.023) 0.43ng

response 6964

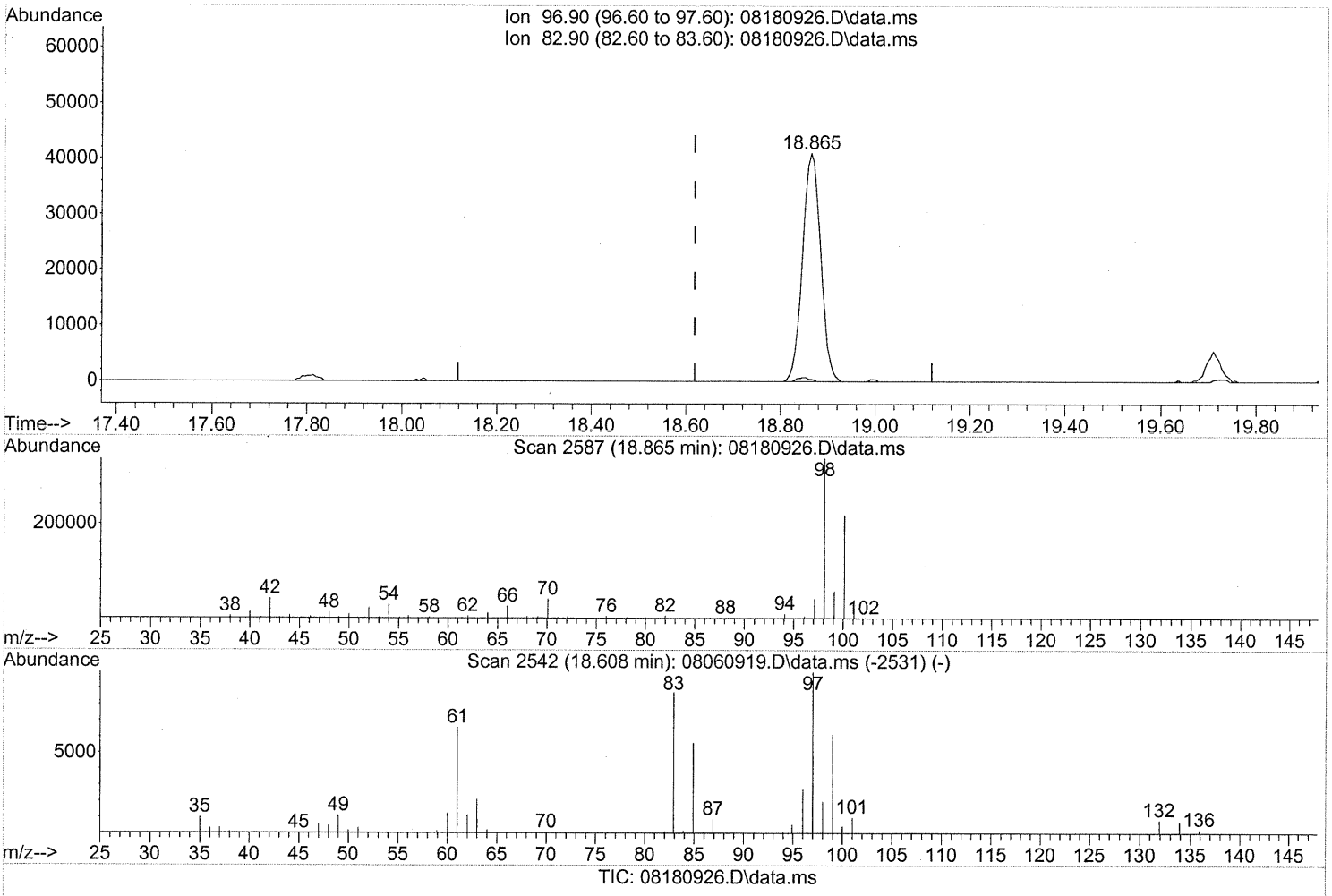
| Ion | Exp% | Act% |
|---|---|---|
| 116.90 | 100 | 100 |
| 118.90 | 97.10 | 92.71 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

153

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(55) 1,1,2-Trichloroethane (T)

18.865min (+0.246) 9.75ng

response 108519

| Ion | Exp% | Act% |
|---|---|---|
| 96.90 | 100 | 100 |
| 82.90 | 90.30 | 1.19# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

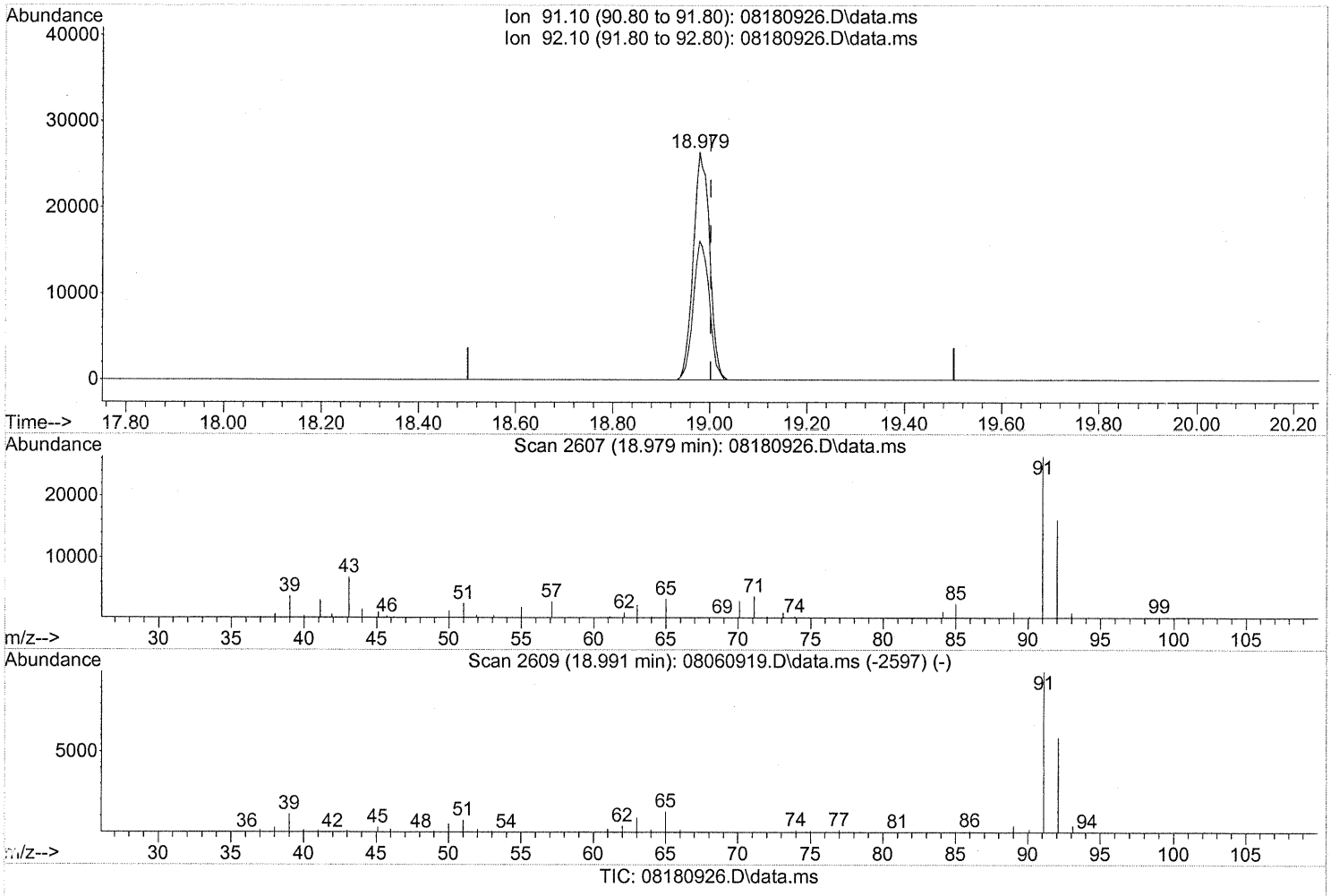
DA 8/22/09 EM 8/25/09

154

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(58) Toluene (T)

18.979min (-0.023) 1.30ng

response 61244

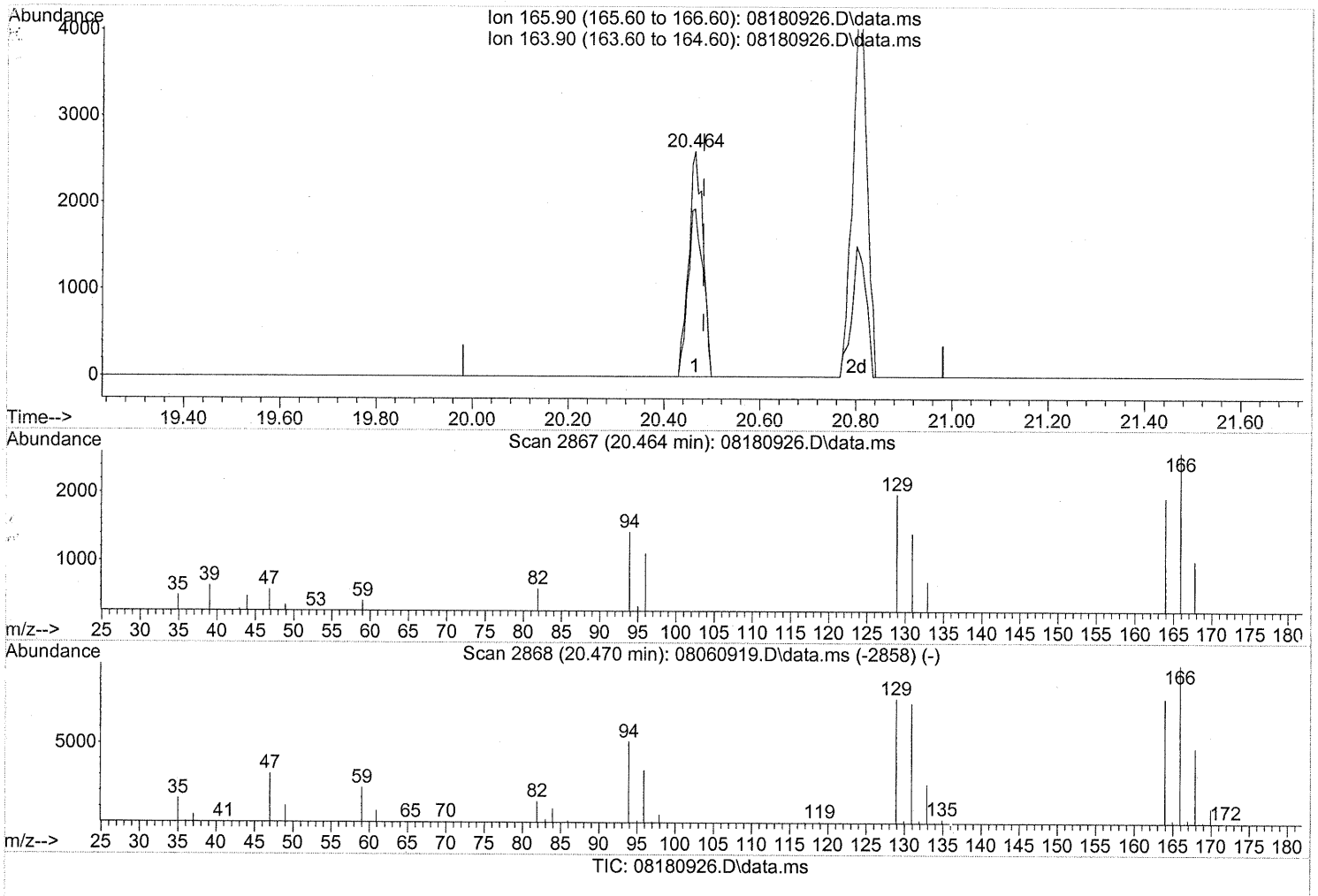
| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 92.10 | 58.60 | 59.70 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

155

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(64) Tetrachloroethene (T)

20.464min (-0.017) 0.49ng

response 5331

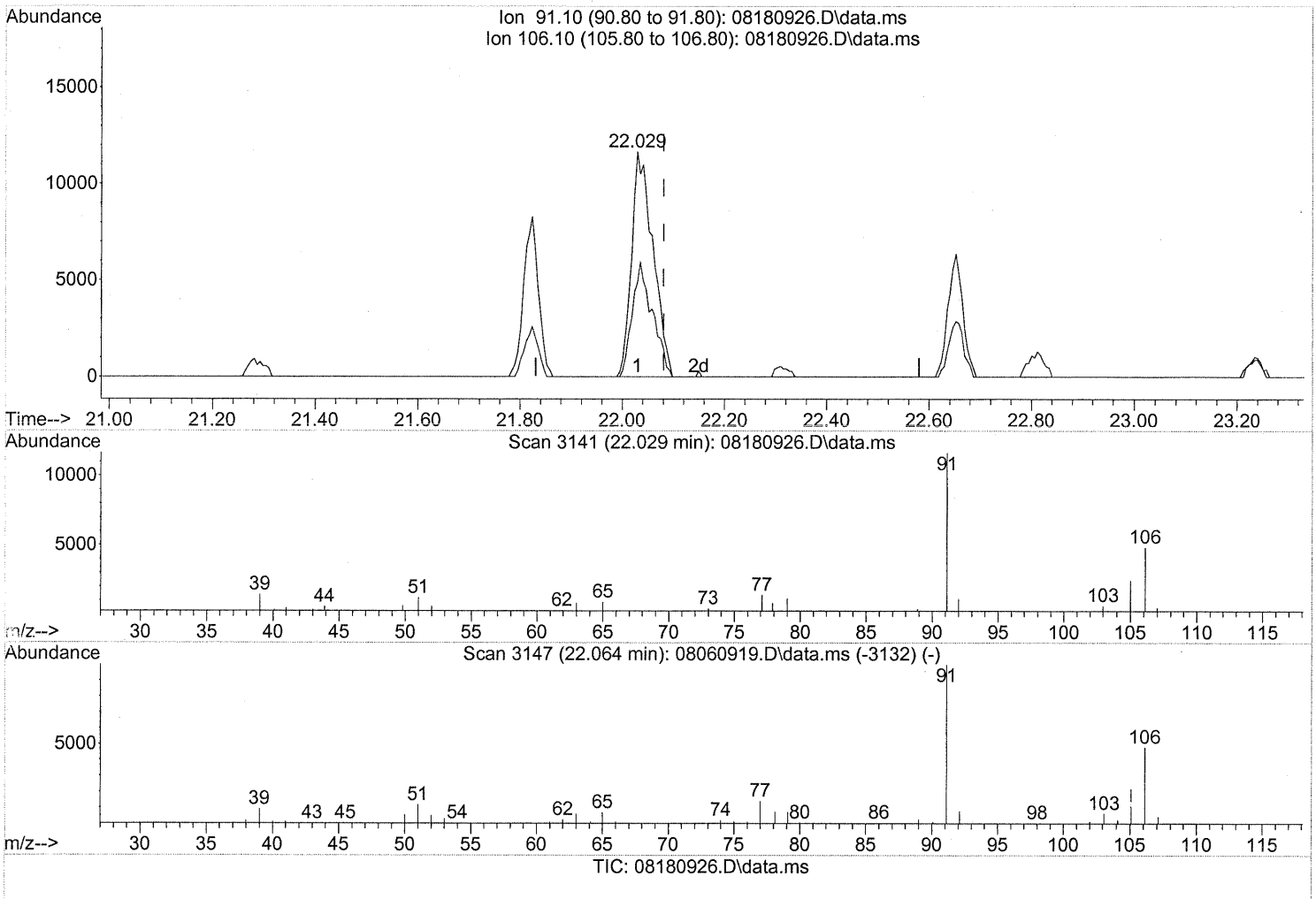
| Ion | Exp% | Act% |
|---|---|---|
| 165.90 | 100 | 100 |
| 163.90 | 77.80 | 78.00 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

156

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(67) m- & p-Xylenes (T)

22.029min (-0.051) 0.78ng

response 33947

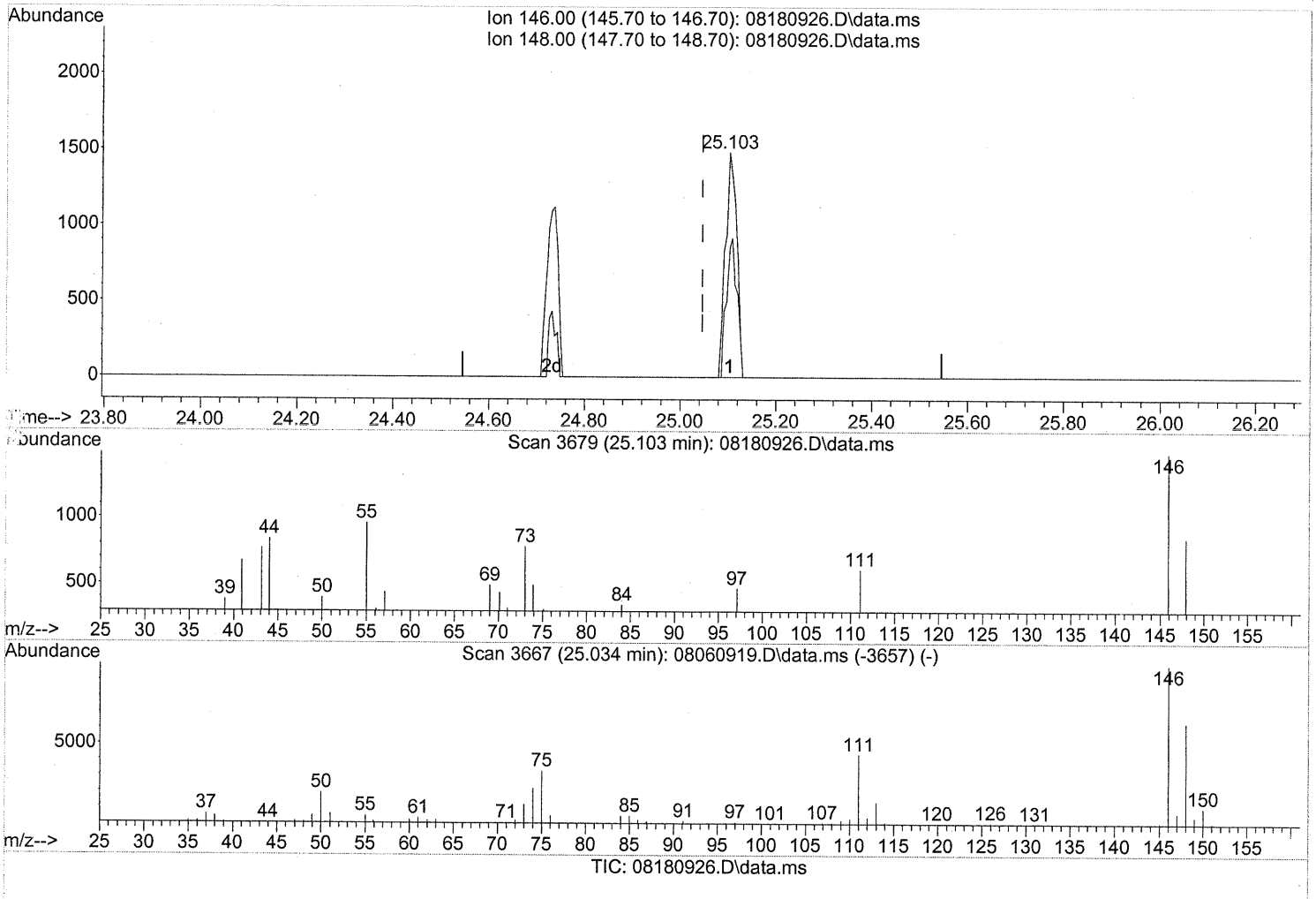
| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 46.90 | 47.89 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

157

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(85) 1,3-Dichlorobenzene (T)

25.103min (+0.057) 0.11ng

response 2438

| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 61.60 | 57.83 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

TP

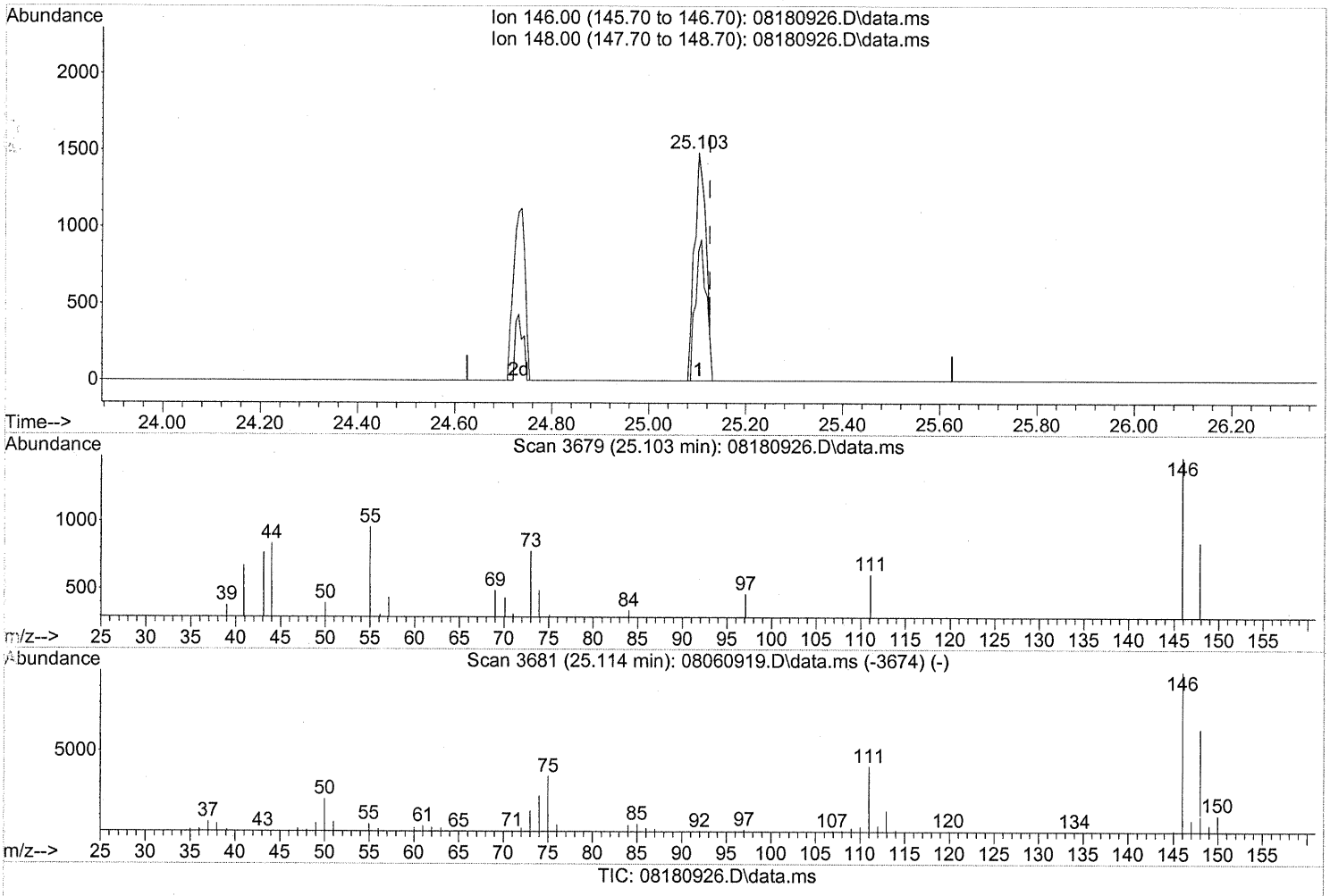
8/22/09 8/25/09

158

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.103min (-0.023) 0.10ng

response 2438

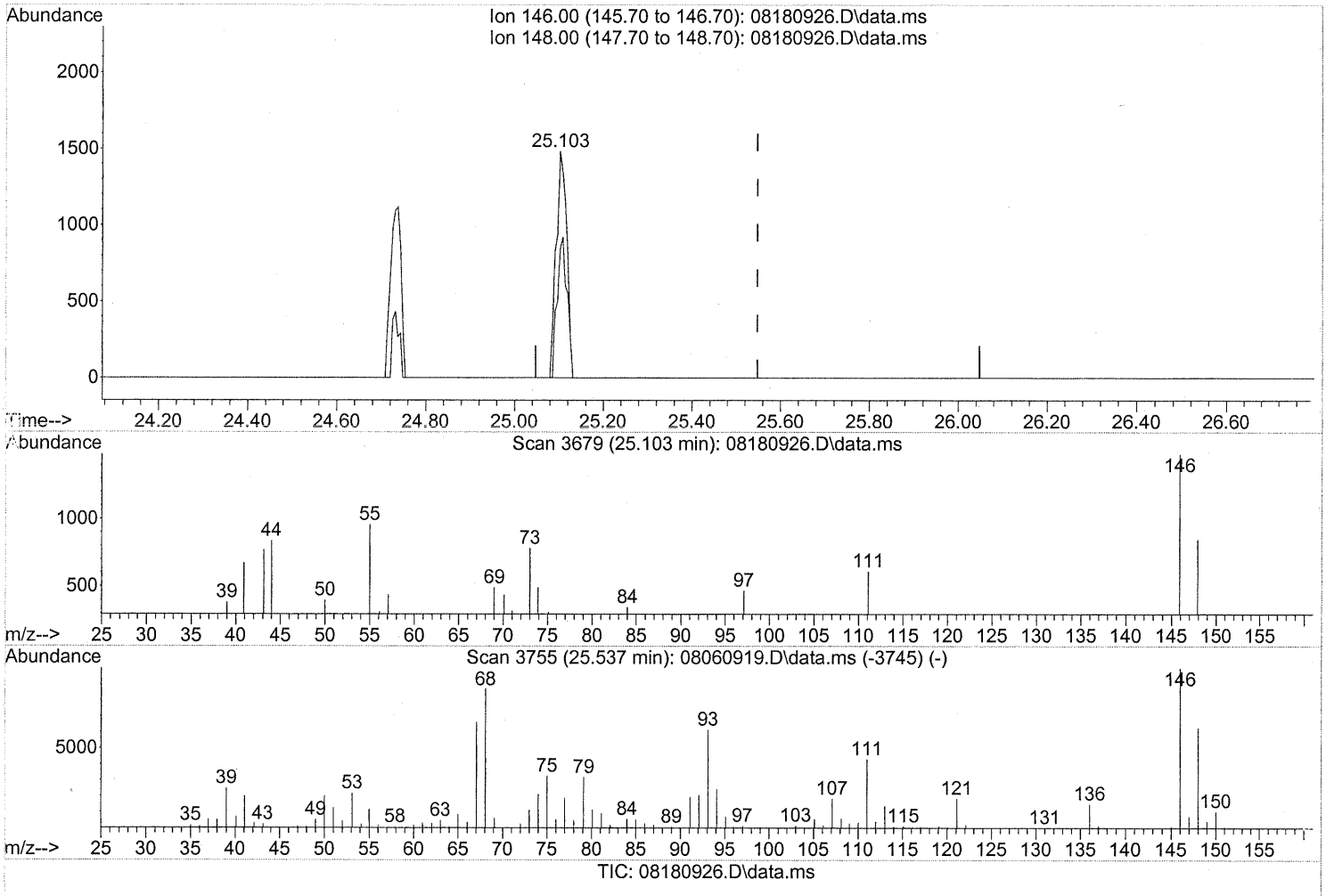
| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 62.20 | 57.83 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

159

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(90) 1,2-Dichlorobenzene (T)

25.103min (-0.446) 0.12ng

response 2438

| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 63.70 | 57.83 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

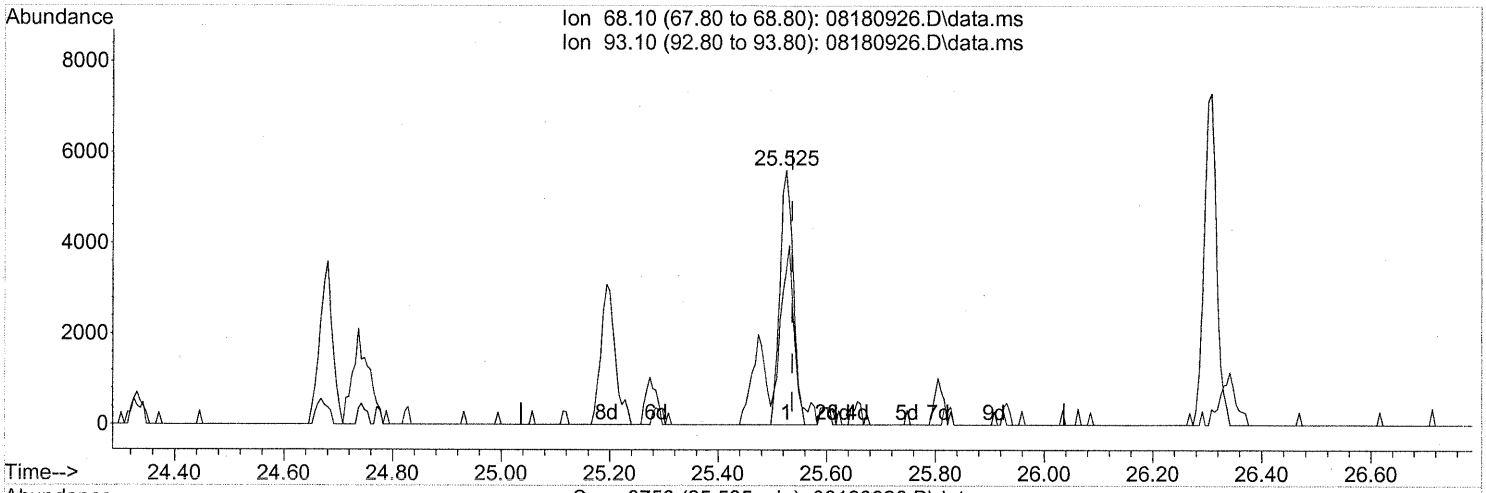
8/22/09 8/25/09

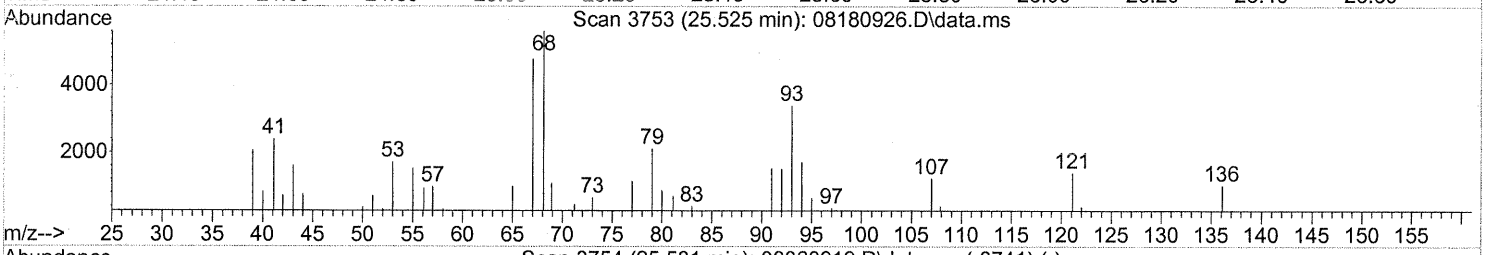
160

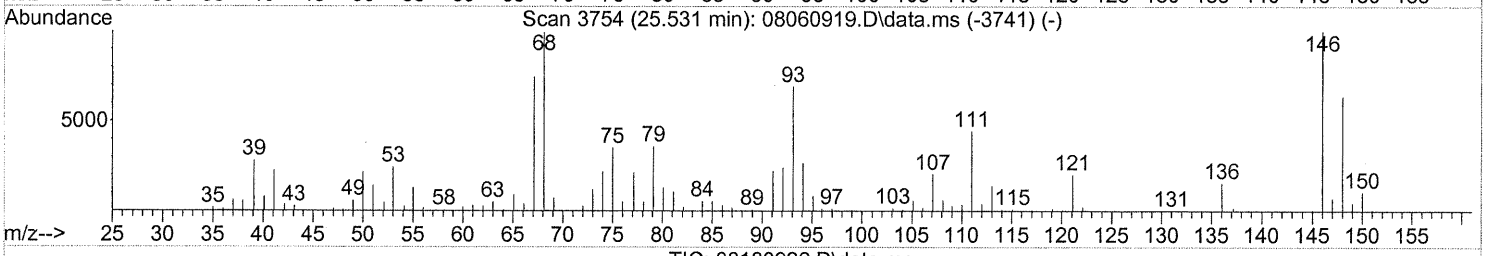
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180926.D
Acq On : 19 Aug 2009 8:01
Operator : WA
Sample : P0902766-004 (1000mL)
Misc : Env. Health & Engineering 101163
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 19 10:12:08 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180926.D\data.ms

(91) d-Limonene (T)

25.525min (-0.011) 0.51ng

response 9590

| Ion | Exp% | Act% |
|---|---|---|
| 68.10 | 100 | 100 |
| 93.10 | 67.90 | 75.56 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Method Blank**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P090818-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 8/18/09
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 | 0.10 | ND | 0.048 | |
| 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 | 0.10 | ND | 0.045 | |
| 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 | 0.50 | ND | 0.22 | |
| 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 | 0.50 | ND | 0.20 | |
| 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 | 0.50 | ND | 0.16 | |
| 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 | 0.50 | 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: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Method Blank**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P090818-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 8/18/09
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: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Method Blank**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P090818-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 8/18/09
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 | 0.10 | ND | 0.019 | |
| 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 | |

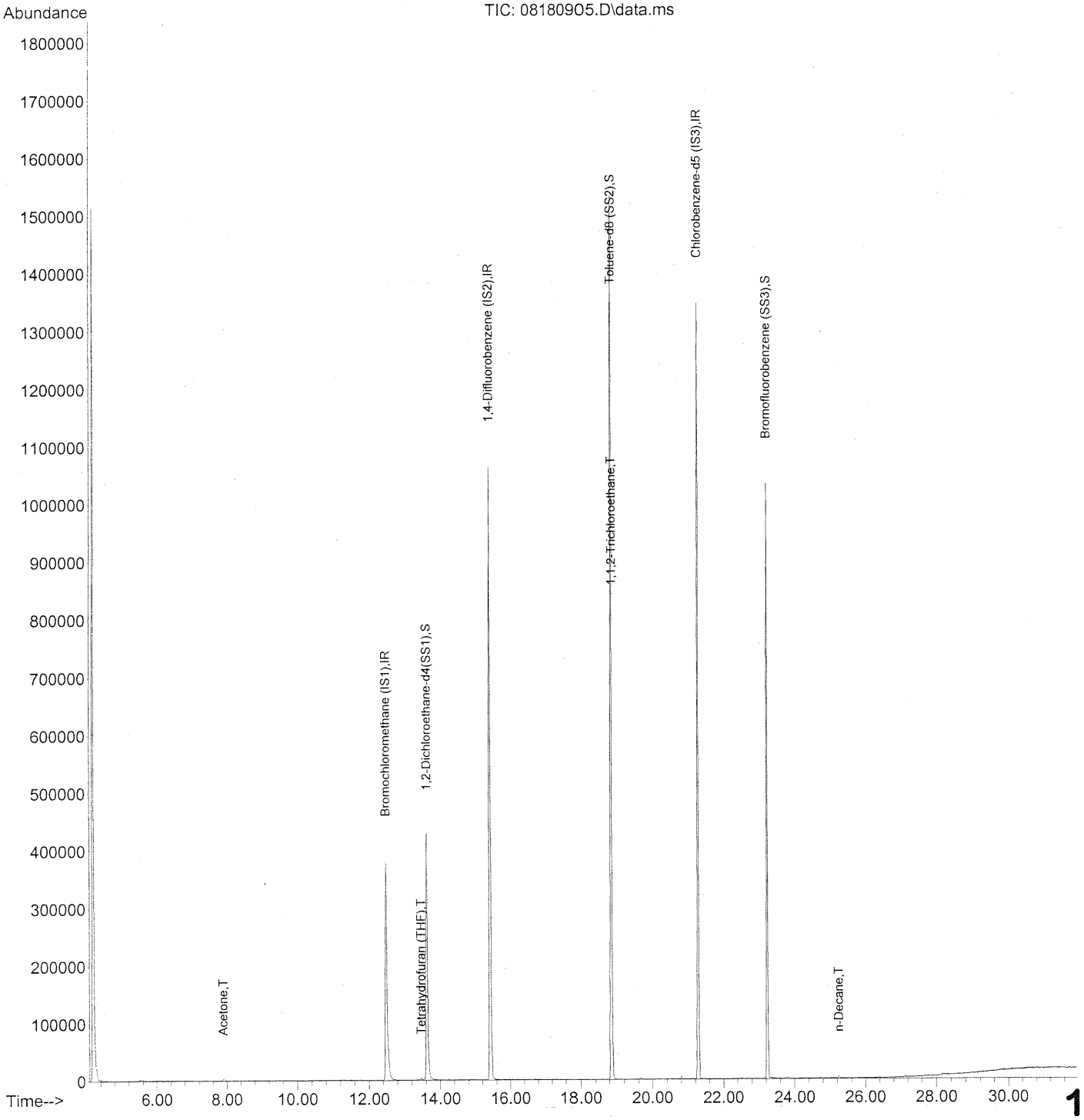
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: _____ Date: 8/25/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180905.D
Acq On : 18 Aug 2009 17:22
Operator : WA
Sample : TO-15 Method Blank (1000mL)
Misc : S20-08140906
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 17:57:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180905.D
Acq On : 18 Aug 2009 17:22
Operator : WA
Sample : TO-15 Method Blank (1000mL)
Misc : S20-08140906
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 17:57:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 236105 | 25.000 | ng | -0.03 |
| 37) 1,4-Difluorobenzene (IS2) | 15.42 | 114 | 1203686 | 25.000 | ng | -0.02 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 561375 | 25.000 | ng | -0.01 |
| **System Monitoring Compounds** | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 478272 | 23.306 | ng | -0.03 |
| Spiked Amount 25.000 | | | Recovery = | 93.24% | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1294113 | 26.383 | ng | -0.01 |
| Spiked Amount 25.000 | | | Recovery = | 105.52% | | |
| 73) Bromofluorobenzene (SS3) | 23.23 | 174 | 330455 | 25.546 | ng | -0.01 |
| Spiked Amount 25.000 | | | Recovery = | 102.20% | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) Propene | 0.00 | 42 | 0 | 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 | 7.15 | 45 | 87 | N.D. | | |
| 11) Acetonitrile | 0.00 | 41 | 0 | N.D. | | |
| 12) Acrolein | 0.00 | 56 | 0 | N.D. | | |
| 13) Acetone | 7.90 | 58 | 2381 | 0.246 ng | # | 85 |
| 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 | 0.00 | 84 | 0 | 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 | 0.00 | 76 | 0 | 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) | 0.00 | 72 | 0 | 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. | | |



8/19/09

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180905.D
Acq On : 18 Aug 2009 17:22
Operator : WA
Sample : TO-15 Method Blank (1000mL)
Misc : S20-08140906
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 17:57:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
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) | 13.47 | 72 | 1109 | 0.119 | ng | # | 80 |
| 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 | 14.96 | 56 | 151 | N.D. | | | |
| 41) Benzene | 14.88 | 78 | 1018 | N.D. | | | |
| 42) Carbon Tetrachloride | 0.00 | 117 | 0 | N.D. | | | |
| 43) Cyclohexane | 15.41 | 84 | 729 | 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 | 18.87 | 97 | 110795 | ~~9.535~~ | ~~ng~~ | ~~??~~# | 4 |
| 58) Toluene | 18.98 | 91 | 91 | N.D. | | | |
| 59) 2-Hexanone | 19.39 | 43 | 94 | 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 | 0.00 | 112 | 0 | N.D. | | | |
| 66) Ethylbenzene | 22.03 | 91 | 113 | N.D. | | | |
| 67) m- & p-Xylenes | 22.03 | 91 | 113 | 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 | 22.50 | 43 | 453 | N.D. | | | |
| 72) 1,1,2,2-Tetrachloroethane | 0.00 | 83 | 0 | N.D. | | | |
| 74) Cumene | 23.34 | 105 | 86 | N.D. | | | |
| 75) alpha-Pinene | 0.00 | 93 | 0 | N.D. | | | |
| 76) n-Propylbenzene | 24.03 | 91 | 86 | N.D. | | | |
| 77) 3-Ethyltoluene | 24.18 | 105 | 103 | N.D. | | | |
| 78) 4-Ethyltoluene | 24.23 | 105 | 333 | N.D. | | | |
| 79) 1,3,5-Trimethylbenzene | 24.32 | 105 | 148 | N.D. | | | |

**167**

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180905.D
Acq On : 18 Aug 2009 17:22
Operator : WA
Sample : TO-15 Method Blank (1000mL)
Misc : S20-08140906
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 17:57:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
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 | 24.56 | 105 | 86 | N.D. | | |
| 82) 1,2,4-Trimethylbenzene | 24.56 | 105 | 86 | N.D. | | |
| 83) n-Decane | 25.25 | 57 | 3350 | 0.115 ng | # | 42 |
| 84) Benzyl Chloride | 24.95 | 91 | 93 | 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 | 0.00 | 105 | 0 | N.D. | | |
| 88) 4-Isopropyltoluene (p-... | 0.00 | 119 | 0 | N.D. | | |
| 89) 1,2,3-Trimethylbenzene | 0.00 | 105 | 0 | 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 | 26.40 | 57 | 100 | N.D. | | |
| 94) 1,2,4-Trichlorobenzene | 0.00 | 180 | 0 | N.D. | | |
| 95) Naphthalene | 27.77 | 128 | 1948 | N.D. | | |
| 96) n-Dodecane | 27.70 | 57 | 326 | N.D. | | |
| 97) Hexachlorobutadiene | 28.15 | 225 | 96 | N.D. | | |
| 98) Cyclohexanone | 22.33 | 55 | 575 | N.D. | | |
| 99) tert-Butylbenzene | 0.00 | 119 | 0 | N.D. | | |
| 100) n-Butylbenzene | 0.00 | 91 | 0 | 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:** **16512** CAS Project ID: P0902766

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 8/11/09
Date(s) Received: 8/12/09
Date(s) Analyzed: 8/18 - 8/19/09

| Client Sample ID | CAS Sample ID | 1,2-Dichloroethane-d4 | | Toluene-d8 | | Bromofluorobenzene | | Data Qualifier |
|---|---|---|---|---|---|---|---|---|
| | | % Recovered | Acceptance Limits | % Recovered | Acceptance Limits | % Recovered | Acceptance Limits | |
| Method Blank | P090818-MB | **93** | 70-130 | **106** | 70-130 | **102** | 70-130 | |
| Lab Control Sample | P090818-LCS | **92** | 70-130 | **105** | 70-130 | **105** | 70-130 | |
| 101160 | P0902766-001 | **94** | 70-130 | **105** | 70-130 | **104** | 70-130 | |
| 101160 | P0902766-001DUP | **92** | 70-130 | **106** | 70-130 | **106** | 70-130 | |
| 101161 | P0902766-002 | **93** | 70-130 | **104** | 70-130 | **104** | 70-130 | |
| 101162 | P0902766-003 | **94** | 70-130 | **103** | 70-130 | **104** | 70-130 | |
| 101163 | P0902766-004 | **93** | 70-130 | **105** | 70-130 | **105** | 70-130 | |

Verified By: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Lab Control Sample**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P090818-LCS

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 8/18/09
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 | **24.6** | **94** | 58-134 | |
| 75-71-8 | Dichlorodifluoromethane (CFC 12) | 26.0 | **24.1** | **93** | 61-118 | |
| 74-87-3 | Chloromethane | 25.0 | **25.4** | **102** | 46-132 | |
| 76-14-2 | 1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114) | 26.0 | **26.3** | **101** | 65-122 | |
| 75-01-4 | Vinyl Chloride | 25.3 | **24.8** | **98** | 57-132 | |
| 106-99-0 | 1,3-Butadiene | 26.8 | **27.0** | **101** | 66-161 | |
| 74-83-9 | Bromomethane | 25.8 | **28.9** | **112** | 67-130 | |
| 75-00-3 | Chloroethane | 25.5 | **24.6** | **96** | 68-123 | |
| 64-17-5 | Ethanol | 130 | **121** | **93** | 50-155 | |
| 75-05-8 | Acetonitrile | 26.0 | **21.8** | **84** | 48-148 | |
| 107-02-8 | Acrolein | 26.3 | **24.3** | **92** | 67-138 | |
| 67-64-1 | Acetone | 132 | **127** | **96** | 59-121 | |
| 75-69-4 | Trichlorofluoromethane | 26.3 | **25.3** | **96** | 67-132 | |
| 67-63-0 | 2-Propanol (Isopropyl Alcohol) | 48.0 | **39.0** | **81** | 54-126 | |
| 107-13-1 | Acrylonitrile | 25.8 | **26.5** | **103** | 65-134 | |
| 75-35-4 | 1,1-Dichloroethene | 27.5 | **28.7** | **104** | 70-123 | |
| 75-09-2 | Methylene Chloride | 26.8 | **24.6** | **92** | 66-121 | |
| 107-05-1 | 3-Chloro-1-propene (Allyl Chloride) | 27.0 | **21.6** | **80** | 63-149 | |
| 76-13-1 | Trichlorotrifluoroethane | 27.5 | **30.2** | **110** | 69-126 | |
| 75-15-0 | Carbon Disulfide | 26.0 | **25.4** | **98** | 66-115 | |
| 156-60-5 | trans-1,2-Dichloroethene | 25.5 | **25.4** | **100** | 69-125 | |
| 75-34-3 | 1,1-Dichloroethane | 26.5 | **25.6** | **97** | 72-130 | |
| 1634-04-4 | Methyl tert-Butyl Ether | 26.3 | **25.8** | **98** | 72-132 | |
| 108-05-4 | Vinyl Acetate | 126 | **93.1** | **74** | 73-158 | |
| 78-93-3 | 2-Butanone (MEK) | 26.8 | **26.4** | **99** | 68-126 | |

Verified By: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Lab Control Sample** CAS Project ID: P0902766
**Client Project ID:** **16512** CAS Sample ID: P090818-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 8/18/09
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 |
|---|---|---|---|---|---|---|
| 156-59-2 | cis-1,2-Dichloroethene | 27.0 | **26.5** | **98** | 69-124 | |
| 141-78-6 | Ethyl Acetate | 52.0 | **52.2** | **100** | 65-126 | |
| 110-54-3 | n-Hexane | 26.0 | **23.9** | **92** | 63-125 | |
| 67-66-3 | Chloroform | 27.5 | **27.5** | **100** | 68-126 | |
| 109-99-9 | Tetrahydrofuran (THF) | 26.5 | **24.2** | **91** | 65-124 | |
| 107-06-2 | 1,2-Dichloroethane | 26.3 | **25.2** | **96** | 61-129 | |
| 71-55-6 | 1,1,1-Trichloroethane | 26.0 | **25.9** | **100** | 69-127 | |
| 71-43-2 | Benzene | 25.8 | **24.6** | **95** | 68-122 | |
| 56-23-5 | Carbon Tetrachloride | 26.3 | **27.6** | **105** | 68-137 | |
| 110-82-7 | Cyclohexane | 51.8 | **51.8** | **100** | 68-121 | |
| 78-87-5 | 1,2-Dichloropropane | 26.0 | **26.0** | **100** | 69-128 | |
| 75-27-4 | Bromodichloromethane | 26.3 | **26.5** | **101** | 71-131 | |
| 79-01-6 | Trichloroethene | 25.8 | **28.5** | **110** | 72-122 | |
| 123-91-1 | 1,4-Dioxane | 26.0 | **26.8** | **103** | 73-127 | |
| 80-62-6 | Methyl Methacrylate | 52.8 | **56.6** | **107** | 80-133 | |
| 142-82-5 | n-Heptane | 25.8 | **25.0** | **97** | 69-126 | |
| 10061-01-5 | cis-1,3-Dichloropropene | 24.5 | **24.5** | **100** | 73-122 | |
| 108-10-1 | 4-Methyl-2-pentanone | 26.8 | **25.8** | **96** | 67-122 | |
| 10061-02-6 | trans-1,3-Dichloropropene | 27.0 | **27.3** | **101** | 75-131 | |
| 79-00-5 | 1,1,2-Trichloroethane | 26.0 | **26.7** | **103** | 76-125 | |
| 108-88-3 | Toluene | 26.8 | **27.8** | **104** | 74-119 | |
| 591-78-6 | 2-Hexanone | 27.0 | **26.0** | **96** | 64-118 | |
| 124-48-1 | Dibromochloromethane | 28.3 | **32.4** | **114** | 79-129 | |
| 106-93-4 | 1,2-Dibromoethane | 26.3 | **29.6** | **113** | 79-125 | |
| 123-86-4 | n-Butyl Acetate | 27.5 | **23.0** | **84** | 70-136 | |

Verified By: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **Lab Control Sample** CAS Project ID: P0902766
**Client Project ID:** **16512** CAS Sample ID: P090818-LCS

Test Code: EPA TO-15 Date Collected: NA
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: NA
Analyst: Wida Ang Date Analyzed: 8/18/09
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: NA Liter(s)
Test Notes:

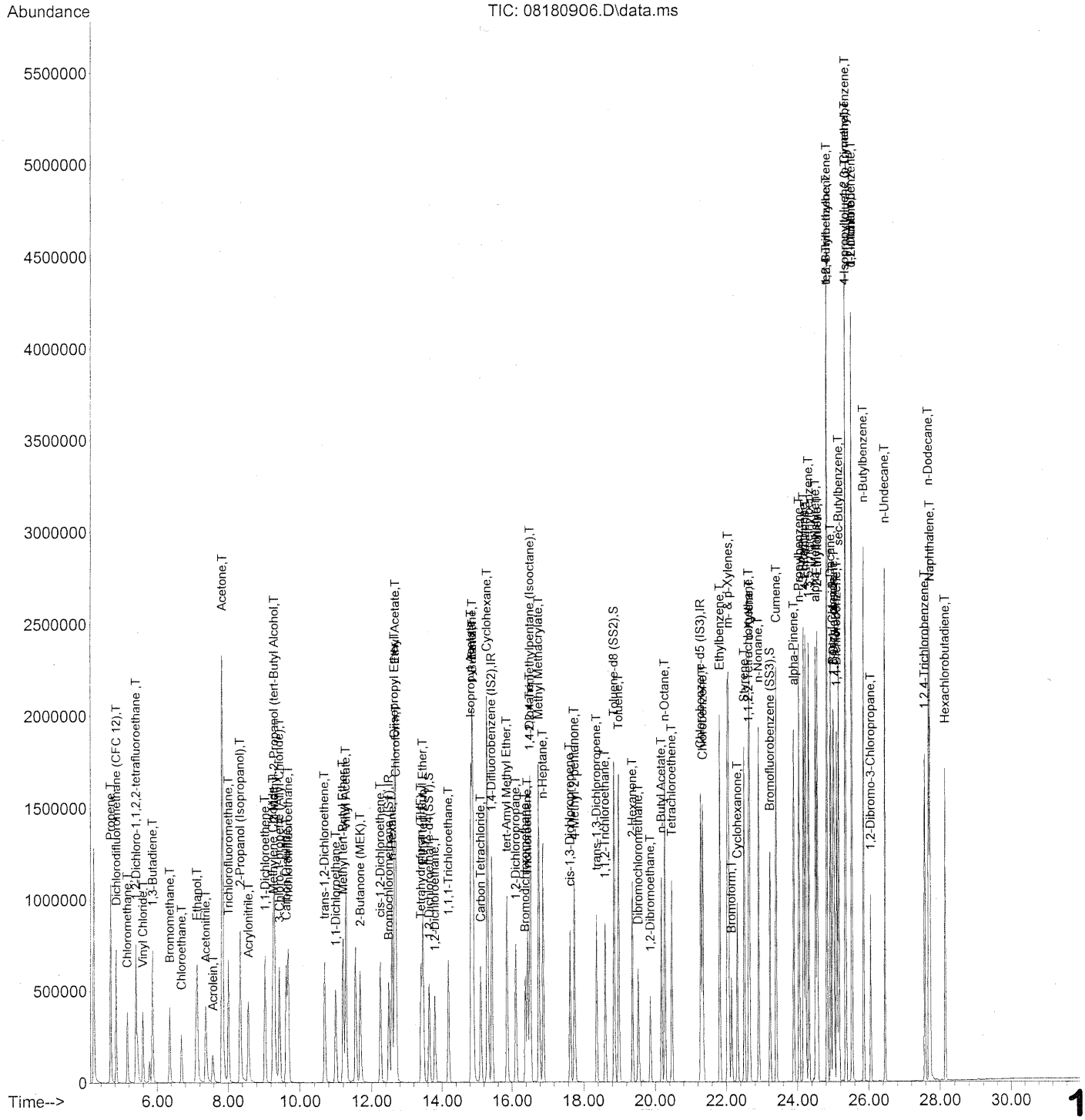
| CAS # | Compound | Spike Amount ng | Result ng | % Recovery | CAS Acceptance Limits | Data Qualifier |
|---|---|---|---|---|---|---|
| 111-65-9 | n-Octane | 26.3 | **26.4** | **100** | 75-126 | |
| 127-18-4 | Tetrachloroethene | 25.3 | **29.4** | **116** | 72-125 | |
| 108-90-7 | Chlorobenzene | 26.5 | **29.1** | **110** | 74-121 | |
| 100-41-4 | Ethylbenzene | 26.3 | **28.0** | **106** | 76-120 | |
| 179601-23-1 | m,p-Xylenes | 51.5 | **53.9** | **105** | 75-120 | |
| 75-25-2 | Bromoform | 26.5 | **30.5** | **115** | 76-143 | |
| 100-42-5 | Styrene | 26.3 | **29.3** | **111** | 78-124 | |
| 95-47-6 | o-Xylene | 26.0 | **27.8** | **107** | 76-121 | |
| 111-84-2 | n-Nonane | 25.8 | **24.5** | **95** | 69-129 | |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 27.0 | **29.0** | **107** | 77-126 | |
| 98-82-8 | Cumene | 25.3 | **26.9** | **106** | 78-125 | |
| 80-56-8 | alpha-Pinene | 24.8 | **26.5** | **107** | 78-125 | |
| 103-65-1 | n-Propylbenzene | 25.3 | **27.0** | **107** | 80-127 | |
| 622-96-8 | 4-Ethyltoluene | 26.3 | **27.9** | **106** | 75-123 | |
| 108-67-8 | 1,3,5-Trimethylbenzene | 26.5 | **29.1** | **110** | 76-124 | |
| 95-63-6 | 1,2,4-Trimethylbenzene | 25.5 | **28.6** | **112** | 76-123 | |
| 100-44-7 | Benzyl Chloride | 26.8 | **28.4** | **106** | 80-137 | |
| 541-73-1 | 1,3-Dichlorobenzene | 26.0 | **30.2** | **116** | 74-125 | |
| 106-46-7 | 1,4-Dichlorobenzene | 26.3 | **29.2** | **111** | 74-126 | |
| 95-50-1 | 1,2-Dichlorobenzene | 25.8 | **30.1** | **117** | 75-124 | |
| 5989-27-5 | d-Limonene | 26.5 | **28.1** | **106** | 66-129 | |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 27.0 | **33.6** | **124** | 79-144 | |
| 120-82-1 | 1,2,4-Trichlorobenzene | 27.3 | **33.7** | **123** | 70-139 | |
| 91-20-3 | Naphthalene | 25.0 | **29.1** | **116** | 69-141 | |
| 87-68-3 | Hexachlorobutadiene | 26.8 | **29.5** | **110** | 68-138 | |

Verified By: _____ Date: 8/25/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180906.D
Acq On : 18 Aug 2009 18:02
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-08140906/S20-07270906
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 18 20:05:36 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180906.D
Acq On : 18 Aug 2009 18:02
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-08140906/S20-07270906
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 18 20:05:36 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.50 | 130 | 278885 | 25.000 | ng | | -0.01 |
| 37) 1,4-Difluorobenzene (IS2) | 15.43 | 114 | 1403311 | 25.000 | ng | | -0.02 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 663251 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.64 | 65 | 555373 | 22.912 | ng | | -0.02 |
| Spiked Amount 25.000 | | | Recovery = 91.64% | | | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1515977 | 26.159 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = 104.64% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 401738 | 26.287 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 105.16% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.67 | 42 | 470904 | 24.606 | ng | | 100 |
| 3) Dichlorodifluoromethan... | 4.84 | 85 | 755155 | 24.142 | ng | | 99 |
| 4) Chloromethane | 5.15 | 50 | 533305 | 25.376 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.39 | 135 | 334021 | 26.283 | ng | | 99 |
| 6) Vinyl Chloride | 5.59 | 62 | 501615 | 24.844 | ng | | 97 |
| 7) 1,3-Butadiene | 5.87 | 54 | 390910 | 27.012 | ng | | 100 |
| 8) Bromomethane | 6.35 | 94 | 355819 | 28.949 | ng | | 98 |
| 9) Chloroethane | 6.69 | 64 | 288769 | 24.606 | ng | | 98 |
| 10) Ethanol | 7.13 | 45 | 1469522 | 121.139 | ng | | 100 |
| 11) Acetonitrile | 7.37 | 41 | 772755 | 21.752 | ng | | 99 |
| 12) Acrolein | 7.57 | 56 | 224526 | 24.315 | ng | | 97 |
| 13) Acetone | 7.83 | 58 | 1449235 | 126.616 | ng | | 95 |
| 14) Trichlorofluoromethane | 8.01 | 101 | 714621 | 25.270 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.34 | 45 | 1752309 | 38.958 | ng | | 99 |
| 16) Acrylonitrile | 8.57 | 53 | 548227 | 26.508 | ng | | 99 |
| 17) 1,1-Dichloroethene | 9.03 | 96 | 376387 | 28.664 | ng | # | 86 |
| 18) 2-Methyl-2-Propanol (t... | 9.29 | 59 | 1978847 | 49.565 | ng | | 99 |
| 19) Methylene Chloride | 9.26 | 84 | 378823 | 24.645 | ng | | 93 |
| 20) 3-Chloro-1-propene (Al... | 9.43 | 41 | 639758 | 21.591 | ng | | 96 |
| 21) Trichlorotrifluoroethane | 9.68 | 151 | 310570 | 30.204 | ng | | 96 |
| 22) Carbon Disulfide | 9.63 | 76 | 1376479 | 25.399 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 10.68 | 61 | 590405 | 25.411 | ng | | 93 |
| 24) 1,1-Dichloroethane | 11.00 | 63 | 722505 | 25.643 | ng | | 99 |
| 25) Methyl tert-Butyl Ether | 11.20 | 73 | 1118894 | 25.836 | ng | | 100 |
| 26) Vinyl Acetate | 11.28 | 86 | 216898 | 93.117 | ng | # | 89 |
| 27) 2-Butanone (MEK) | 11.68 | 72 | 272943 | 26.410 | ng | | 95 |
| 28) cis-1,2-Dichloroethene | 12.25 | 61 | 573520 | 26.518 | ng | | 93 |
| 29) Diisopropyl Ether | 12.66 | 87 | 379059 | 27.408 | ng | # | 1 |
| 30) Ethyl Acetate | 12.68 | 61 | 281015 | 52.197 | ng | | 99 |
| 31) n-Hexane | 12.59 | 57 | 658444 | 23.908 | ng | | 99 |





DT 8/19/09

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180906.D
Acq On : 18 Aug 2009 18:02
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-08140906/S20-07270906
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 18 20:05:36 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.70 | 83 | 667787 | 27.541 | ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.40 | 72 | 266392 | 24.182 | ng | | 96 |
| 35) Ethyl tert-Butyl Ether | 13.46 | 87 | 440627 | 24.627 | ng | | 93 |
| 36) 1,2-Dichloroethane | 13.80 | 62 | 558727 | 25.214 | ng | | 97 |
| 38) 1,1,1-Trichloroethane | 14.19 | 97 | 616715 | 25.907 | ng | | 98 |
| 39) Isopropyl Acetate | 14.84 | 61 | 520314 | 49.982 | ng | # | 90 |
| 40) 1-Butanol | 14.89 | 56 | 819266 | 44.983 | ng | # | 74 |
| 41) Benzene | 14.88 | 78 | 1518422 | 24.611 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.11 | 117 | 542311 | 27.579 | ng | | 100 |
| 43) Cyclohexane | 15.30 | 84 | 1170081 | 51.778 | ng | | 94 |
| 44) tert-Amyl Methyl Ether | 15.86 | 73 | 1123548 | 24.249 | ng | | 98 |
| 45) 1,2-Dichloropropane | 16.12 | 63 | 403444 | 26.036 | ng | | 100 |
| 46) Bromodichloromethane | 16.38 | 83 | 538677 | 26.494 | ng | | 99 |
| 47) Trichloroethene | 16.45 | 130 | 396108 | 28.464 | ng | | 99 |
| 48) 1,4-Dioxane | 16.52 | 88 | 315529 | 26.759 | ng | | 79 |
| 49) 2,2,4-Trimethylpentane... | 16.52 | 57 | 1760979 | 24.231 | ng | | 96 |
| 50) Methyl Methacrylate | 16.77 | 100 | 321520 | 56.608 | ng | | 94 |
| 51) n-Heptane | 16.89 | 71 | 414394 | 25.026 | ng | | 96 |
| 52) cis-1,3-Dichloropropene | 17.65 | 75 | 629277 | 24.503 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 17.77 | 58 | 382843 | 25.818 | ng | | 99 |
| 54) trans-1,3-Dichloropropene | 18.36 | 75 | 666241 | 27.285 | ng | | 98 |
| 55) 1,1,2-Trichloroethane | 18.60 | 97 | 361214 | 26.665 | ng | | 99 |
| 58) Toluene | 18.99 | 91 | 1585586 | 27.839 | ng | | 99 |
| 59) 2-Hexanone | 19.37 | 43 | 983918 | 25.978 | ng | | 97 |
| 60) Dibromochloromethane | 19.53 | 129 | 436252 | 32.373 | ng | | 99 |
| 61) 1,2-Dibromoethane | 19.86 | 107 | 422553 | 29.577 | ng | | 98 |
| 62) n-Butyl Acetate | 20.18 | 43 | 1028456 | 23.038 | ng | | 99 |
| 63) n-Octane | 20.28 | 57 | 362851 | 26.352 | ng | | 92 |
| 64) Tetrachloroethene | 20.47 | 166 | 387490 | 29.400 | ng | | 98 |
| 65) Chlorobenzene | 21.34 | 112 | 1024129 | 29.063 | ng | | 100 |
| 66) Ethylbenzene | 21.82 | 91 | 1822653 | 27.994 | ng | | 99 |
| 67) m- & p-Xylenes | 22.06 | 91 | 2837502 | 53.875 | ng | | 97 |
| 68) Bromoform | 22.15 | 173 | 341480 | 30.519 | ng | | 99 |
| 69) Styrene | 22.51 | 104 | 1115214 | 29.295 | ng | | 99 |
| 70) o-Xylene | 22.66 | 91 | 1468614 | 27.811 | ng | | 97 |
| 71) n-Nonane | 22.91 | 43 | 859251 | 24.489 | ng | | 97 |
| 72) 1,1,2,2-Tetrachloroethane | 22.63 | 83 | 679392 | 28.991 | ng | | 99 |
| 74) Cumene | 23.41 | 105 | 1791976 | 26.864 | ng | | 100 |
| 75) alpha-Pinene | 23.90 | 93 | 906584 | 26.514 | ng | | 100 |
| 76) n-Propylbenzene | 24.05 | 91 | 2263204 | 26.990 | ng | | 99 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 1842457 | 28.902 | ng | | 100 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 1722527 | 27.886 | ng | | 97 |
| 79) 1,3,5-Trimethylbenzene | 24.32 | 105 | 1515208 | 29.085 | ng | | 98 |

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180906.D
Acq On : 18 Aug 2009 18:02
Operator : WA
Sample : 25ng TO-15 LCS STD
Misc : S20-08140906/S20-07270906
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 18 20:05:36 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 813978 | 29.184 | ng | 96 |
| 81) 2-Ethyltoluene | 24.56 | 105 | 1782971 | 27.735 | ng | 99 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 1521470 | 28.638 | ng | 100 |
| 83) n-Decane | 24.94 | 57 | 893103 | 25.855 | ng | 98 |
| 84) Benzyl Chloride | 25.01 | 91 | 1415027 | 28.413 | ng | 98 |
| 85) 1,3-Dichlorobenzene | 25.03 | 146 | 812400 | 30.214 | ng | 96 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 837918 | 29.227 | ng | 99 |
| 87) sec-Butylbenzene | 25.17 | 105 | 2011801 | 28.031 | ng | 99 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 1800648 | 28.136 | ng | 99 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 1537708 | 28.411 | ng | 97 |
| 90) 1,2-Dichlorobenzene | 25.53 | 146 | 766602 | 30.071 | ng | 100 |
| 91) d-Limonene | 25.53 | 68 | 635302 | 28.120 | ng | 97 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.06 | 157 | 294310 | 33.567 | ng | 86 |
| 93) n-Undecane | 26.46 | 57 | 965718 | 26.278 | ng | 97 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 589890 | 33.654 | ng | 100 |
| 95) Naphthalene | 27.73 | 128 | 2099531 | 29.099 | ng | 100 |
| 96) n-Dodecane | 27.70 | 57 | 996010 | 23.329 | ng | 99 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 328431 | 29.460 | ng | 99 |
| 98) Cyclohexanone | 22.32 | 55 | 533779 | 22.620 | ng | 97 |
| 99) tert-Butylbenzene | 24.83 | 119 | 1449940 | 28.198 | ng | 98 |
| 100) n-Butylbenzene | 25.86 | 91 | 1724074 | 29.134 | ng | 99 |

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

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY DUPLICATE SUMMARY RESULTS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101160**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-001DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01202

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/18/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.9 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.42

| 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 | ND | ND | ND | ND | - | - | 25 | |
| **Dichlorodifluoromethane (CFC 12)** | 3.16 | 0.640 | 3.09 | 0.625 | 3.125 | **2** | 25 | |
| **Chloromethane** | 1.10 | 0.533 | 1.07 | 0.521 | 1.085 | **3** | 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** | 432 | 230 | 437 | 232 | 434.5 | **1** | 25 | |
| **Acetonitrile** | 118 | 70.6 | 120 | 71.8 | 119 | **2** | 25 | |
| **Acrolein** | 6.99 | 3.05 | 6.64 | 2.90 | 6.815 | **5** | 25 | |
| **Acetone** | 74.8 | 31.5 | 69.4 | 29.2 | 72.1 | **7** | 25 | |
| **Trichlorofluoromethane** | 1.57 | 0.280 | 1.49 | 0.264 | 1.53 | **5** | 25 | |
| **2-Propanol (Isopropyl Alcohol)** | 12.6 | 5.12 | 12.0 | 4.87 | 12.3 | **5** | 25 | |
| Acrylonitrile | ND | ND | ND | ND | - | - | 25 | |
| 1,1-Dichloroethene | ND | ND | ND | ND | - | - | 25 | |
| **Methylene Chloride** | 0.794 | 0.229 | 0.775 | 0.223 | 0.7845 | **2** | 25 | |
| 3-Chloro-1-propene (Allyl Chloride) | ND | ND | ND | ND | - | - | 25 | |
| **Trichlorotrifluoroethane** | 0.791 | 0.103 | 0.719 | 0.0938 | 0.755 | **10** | 25 | |
| **Carbon Disulfide** | 2.03 | 0.653 | 1.96 | 0.628 | 1.995 | **4** | 25 | |
| trans-1,2-Dichloroethene | ND | ND | ND | ND | - | - | 25 | |
| 1,1-Dichloroethane | ND | ND | ND | ND | - | - | 25 | |
| **Methyl tert-Butyl Ether** | 1.25 | 0.346 | 1.20 | 0.334 | 1.225 | **4** | 25 | |
| Vinyl Acetate | ND | ND | ND | ND | - | - | 25 | |
| **2-Butanone (MEK)** | 6.72 | 2.28 | 6.07 | 2.06 | 6.395 | **10** | 25 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

Verified By: _____ Date: 8/25/09

## COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY DUPLICATE SUMMARY RESULTS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101160** CAS Project ID: P0902766
**Client Project ID:** **16512** CAS Sample ID: P0902766-001DUP

Test Code: EPA TO-15 Date Collected: 8/11/09
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Date Received: 8/12/09
Analyst: Wida Ang Date Analyzed: 8/18/09
Sampling Media: 6.0 L Summa Canister Volume(s) Analyzed: 1.00 Liter(s)
Test Notes:
Container ID: AC01202

Initial Pressure (psig): -1.9 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.42

| 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** | 2.42 | 0.671 | 2.27 | 0.632 | 2.345 | **6** | 25 | |
| **n-Hexane** | 2.24 | 0.636 | 2.13 | 0.603 | 2.185 | **5** | 25 | |
| **Chloroform** | 0.862 | 0.177 | 0.865 | 0.177 | 0.8635 | **0.3** | 25 | |
| **Tetrahydrofuran (THF)** | 3.39 | 1.15 | 3.47 | 1.18 | 3.43 | **2** | 25 | |
| **1,2-Dichloroethane** | 0.856 | 0.212 | 0.831 | 0.205 | 0.8435 | **3** | 25 | |
| 1,1,1-Trichloroethane | ND | ND | ND | ND | - | - | 25 | |
| **Benzene** | 2.41 | 0.754 | 2.39 | 0.749 | 2.4 | **0.8** | 25 | |
| **Carbon Tetrachloride** | 0.703 | 0.112 | 0.642 | 0.102 | 0.6725 | **9** | 25 | |
| **Cyclohexane** | 1.67 | 0.485 | 1.62 | 0.472 | 1.645 | **3** | 25 | |
| 1,2-Dichloropropane | ND | ND | ND | ND | - | - | 25 | |
| Bromodichloromethane | ND | ND | ND | ND | - | - | 25 | |
| Trichloroethene | ND | ND | ND | ND | - | - | 25 | |
| 1,4-Dioxane | ND | ND | ND | ND | - | - | 25 | |
| Methyl Methacrylate | ND | ND | ND | ND | - | - | 25 | |
| **n-Heptane** | 2.43 | 0.592 | 2.50 | 0.610 | 2.465 | **3** | 25 | |
| cis-1,3-Dichloropropene | ND | ND | ND | ND | - | - | 25 | |
| 4-Methyl-2-pentanone | ND | ND | ND | ND | - | - | 25 | |
| trans-1,3-Dichloropropene | ND | ND | ND | ND | - | - | 25 | |
| 1,1,2-Trichloroethane | ND | ND | ND | ND | - | - | 25 | |
| **Toluene** | 12.8 | 3.40 | 12.5 | 3.31 | 12.65 | **2** | 25 | |
| **2-Hexanone** | 1.03 | 0.251 | 0.723 | 0.177 | 0.8765 | **35** | 25 | **R** |
| **Dibromochloromethane** | 0.172 | 0.0202 | 0.151 | 0.0177 | 0.1615 | **13** | 25 | |
| 1,2-Dibromoethane | ND | ND | ND | ND | - | - | 25 | |
| **n-Butyl Acetate** | 3.14 | 0.662 | 3.21 | 0.676 | 3.175 | **2** | 25 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.
R = Duplicate precision not met.

Verified By: _____ Date: 8/25/09

# COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY DUPLICATE SUMMARY RESULTS



**Client:** **Environmental Health & Engineering, Inc.**
**Client Sample ID:** **101160**
**Client Project ID:** **16512**

CAS Project ID: P0902766
CAS Sample ID: P0902766-001DUP

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Wida Ang
Sampling Media: 6.0 L Summa Canister
Test Notes:
Container ID: AC01202

Date Collected: 8/11/09
Date Received: 8/12/09
Date Analyzed: 8/18/09
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -1.9 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.42

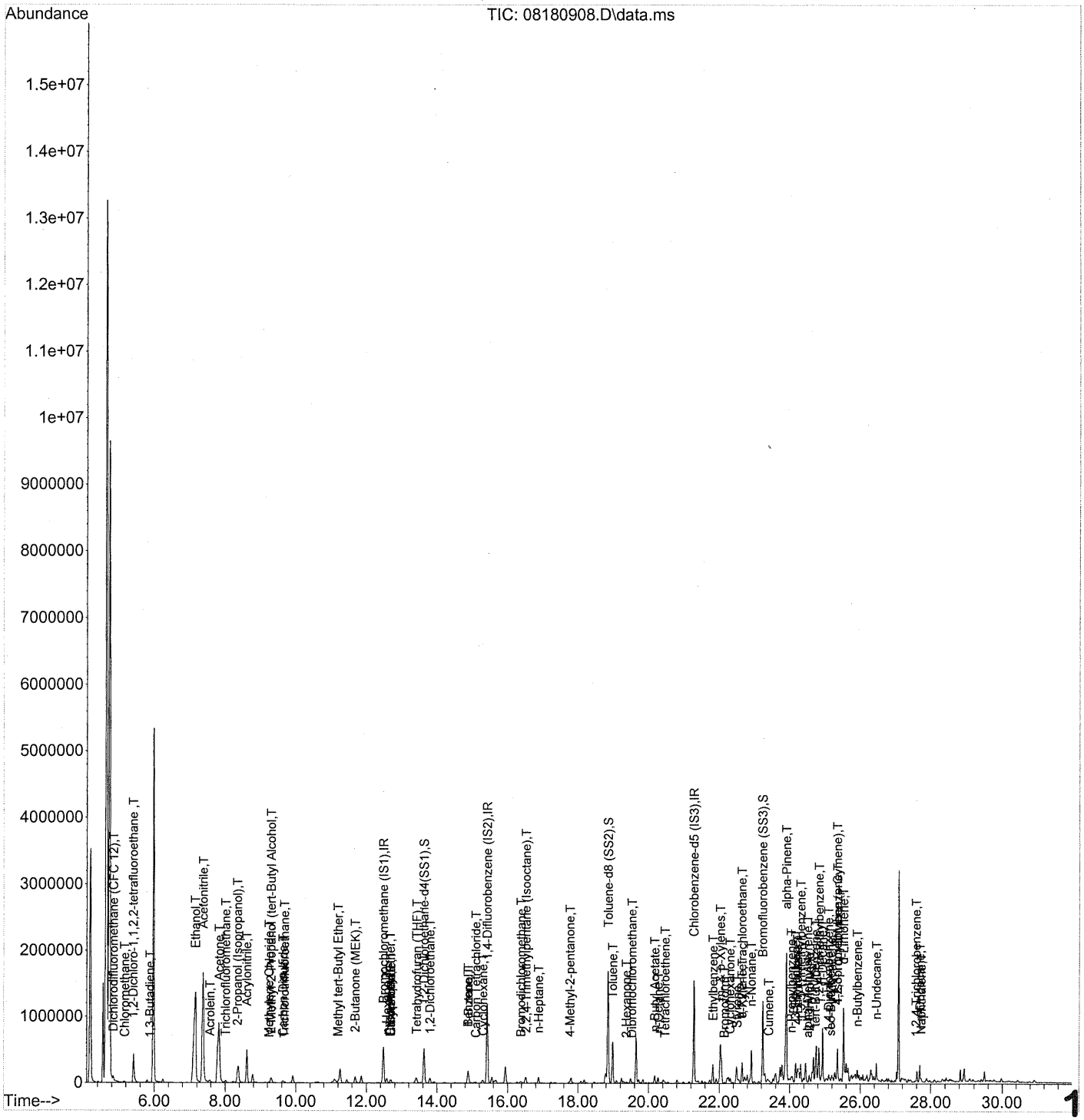
| Compound | Sample Result µg/m³ | Sample Result ppbV | Duplicate Sample Result µg/m³ | Duplicate Sample Result ppbV | Average µg/m³ | % RPD | RPD Limit | Data Qualifier |
|---|---|---|---|---|---|---|---|---|
| **n-Octane** | 1.87 | 0.401 | 1.83 | 0.391 | 1.85 | **2** | 25 | |
| **Tetrachloroethene** | 0.684 | 0.101 | 0.652 | 0.0962 | 0.668 | **5** | 25 | |
| Chlorobenzene | ND | ND | ND | ND | - | - | 25 | |
| **Ethylbenzene** | 5.70 | 1.31 | 5.71 | 1.32 | 5.705 | **0.2** | 25 | |
| **m,p-Xylenes** | 15.7 | 3.61 | 15.9 | 3.66 | 15.8 | **1** | 25 | |
| Bromoform | ND | ND | ND | ND | - | - | 25 | |
| **Styrene** | 2.48 | 0.583 | 2.43 | 0.572 | 2.455 | **2** | 25 | |
| **o-Xylene** | 5.57 | 1.28 | 5.63 | 1.30 | 5.6 | **1** | 25 | |
| **n-Nonane** | 8.82 | 1.68 | 8.94 | 1.70 | 8.88 | **1** | 25 | |
| 1,1,2,2-Tetrachloroethane | ND | ND | ND | ND | - | - | 25 | |
| Cumene | ND | ND | ND | ND | - | - | 25 | |
| **alpha-Pinene** | 37.7 | 6.76 | 38.4 | 6.89 | 38.05 | **2** | 25 | |
| **n-Propylbenzene** | 1.02 | 0.207 | 1.06 | 0.215 | 1.04 | **4** | 25 | |
| **4-Ethyltoluene** | 1.42 | 0.289 | 1.43 | 0.291 | 1.425 | **0.7** | 25 | |
| **1,3,5-Trimethylbenzene** | 1.86 | 0.379 | 1.84 | 0.375 | 1.85 | **1** | 25 | |
| **1,2,4-Trimethylbenzene** | 5.28 | 1.07 | 5.36 | 1.09 | 5.32 | **2** | 25 | |
| Benzyl Chloride | ND | ND | ND | ND | - | - | 25 | |
| 1,3-Dichlorobenzene | ND | ND | ND | ND | - | - | 25 | |
| **1,4-Dichlorobenzene** | 0.308 | 0.0513 | 0.258 | 0.0430 | 0.283 | **18** | 25 | |
| 1,2-Dichlorobenzene | ND | ND | ND | ND | - | - | 25 | |
| **d-Limonene** | 16.9 | 3.03 | 17.7 | 3.18 | 17.3 | **5** | 25 | |
| 1,2-Dibromo-3-chloropropane | ND | ND | ND | ND | - | - | 25 | |
| 1,2,4-Trichlorobenzene | ND | ND | ND | ND | - | - | 25 | |
| Naphthalene | 0.971 | 0.185 | ND | ND | - | - | 25 | |
| Hexachlorobutadiene | ND | ND | ND | ND | - | - | 25 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

Verified By: _____ Date: 8/25/09

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:32:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:32:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 264180 | 25.000 | ng | | -0.03 |
| 37) 1,4-Difluorobenzene (IS2) | 15.42 | 114 | 1343262 | 25.000 | ng | | -0.02 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 638592 | 25.000 | ng | | -0.01 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 529928 | 23.079 | ng | | -0.03 |
| Spiked Amount 25.000 | | | Recovery = 92.32% | | | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1472515 | 26.390 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = 105.56% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.23 | 174 | 390825 | 26.560 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = 106.24% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 0.00 | 42 | 0 | N.D. d | | | |
| 3) Dichlorodifluoromethan... | 4.85 | 85 | 64451 | 2.175 | ng | | 98 |
| 4) Chloromethane | 5.17 | 50 | 15066 | 0.757 | ng | | 97 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.41 | 135 | 858 | 0.071 | ng | | 64 |
| 6) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 7) 1,3-Butadiene | 5.87 | 54 | 1303 | 0.095 | ng | # | 37 |
| 8) Bromomethane | 6.37 | 94 | 461 | N.D. | | | |
| 9) Chloroethane | 0.00 | 64 | 0 | N.D. | | | |
| 10) Ethanol | 7.16 | 45 | 3536810 | 307.784 | ng | | 100 |
| 11) Acetonitrile | 7.38 | 41 | 2854921 | 84.834 | ng | | 100 |
| 12) Acrolein | 7.57 | 56 | 40875 | 4.673 | ng | | 99 |
| 13) Acetone | 7.83 | 58 | 529538 | 48.840 | ng | # | 85 |
| 14) Trichlorofluoromethane | 8.01 | 101 | 28025 | 1.046 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.35 | 45 | 359150 | 8.429 | ng | | 70 |
| 16) Acrylonitrile | 8.61 | 53 | 8114 | 0.414 | ng | # | 39 |
| 17) 1,1-Dichloroethene | 8.95 | 96 | 87 | N.D. | | | |
| 18) 2-Methyl-2-Propanol (t... | 9.30 | 59 | 15489 | 0.410 | ng | # | 1 |
| 19) Methylene Chloride | 9.24 | 84 | 7956 | 0.546 | ng | | 96 |
| 20) 3-Chloro-1-propene (Al... | 9.43 | 41 | 426 | N.D. | | | |
| 21) Trichlorotrifluoroethane | 9.67 | 151 | 4931 | 0.506 | ng | | 98 |
| 22) Carbon Disulfide | 9.63 | 76 | 70705 | 1.377 | ng | | 100 |
| 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 | 11.20 | 73 | 34787 | 0.848 | ng | # | 53 |
| 26) Vinyl Acetate | 0.00 | 86 | 0 | N.D. d | | | |
| 27) 2-Butanone (MEK) | 11.68 | 72 | 41876 | 4.278 | ng | | 93 |
| 28) cis-1,2-Dichloroethene | 0.00 | 61 | 0 | N.D. | | | |
| 29) Diisopropyl Ether | 12.67 | 87 | 1265 | 0.097 | ng | # | 1 |
| 30) Ethyl Acetate | 12.69 | 61 | 8168 | 1.602 | ng | | 94 |
| 31) n-Hexane | 12.58 | 57 | 39043 | 1.497 | ng | | 100 |





8/22/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:32:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 12.68 | 83 | 13978 | 0.609 ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.42 | 72 | 25508 | 2.444 ng | # | 73 |
| 35) Ethyl tert-Butyl Ether | 0.00 | 87 | 0 | N.D. | | |
| 36) 1,2-Dichloroethane | 13.80 | 62 | 12276 | 0.585 ng | | 98 |
| 38) 1,1,1-Trichloroethane | 14.18 | 97 | 504 | N.D. | | |
| 39) Isopropyl Acetate | 14.87 | 61 | 444 | N.D. | | |
| 40) 1-Butanol | 14.88 | 56 | 95965 | 5.505 ng | | 83 |
| 41) Benzene | 14.88 | 78 | 99456 | 1.684 ng | | 99 |
| 42) Carbon Tetrachloride | 15.10 | 117 | 8511 | 0.452 ng | | 98 |
| 43) Cyclohexane | 15.30 | 84 | 24755 | 1.144 ng | | 97 |
| 44) tert-Amyl Methyl Ether | 15.87 | 73 | 1402 | N.D. | | |
| 45) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | | |
| 46) Bromodichloromethane | 16.38 | 83 | 5228 | 0.269 ng | # | 61 |
| 47) Trichloroethene | 0.00 | 130 | 0 | N.D. | | |
| 48) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | | |
| 49) 2,2,4-Trimethylpentane... | 16.52 | 57 | 95758 | 1.377 ng | | 89 |
| 50) Methyl Methacrylate | 0.00 | 100 | 0 | N.D. d | | |
| 51) n-Heptane | 16.88 | 71 | 27905 | 1.761 ng | | 96 |
| 52) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 53) 4-Methyl-2-pentanone | 17.77 | 58 | 6520 | 0.459 ng | | 92 |
| 54) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 55) 1,1,2-Trichloroethane | 0.00 | 97 | 0 | N.D. d | | |
| 58) Toluene | 18.98 | 91 | 481242 | 8.776 ng | | 99 |
| 59) 2-Hexanone | 19.37 | 43 | 18545 | 0.509 ng | | 95 |
| 60) Dibromochloromethane | 19.53 | 129 | 1370 | 0.106 ng | | 97 |
| 61) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 62) n-Butyl Acetate | 20.18 | 43 | 97173 | 2.261 ng | | 95 |
| 63) n-Octane | 20.28 | 57 | 17063 | 1.287 ng | | 95 |
| 64) Tetrachloroethene | 20.47 | 166 | 5830 | 0.459 ng | | 95 |
| 65) Chlorobenzene | 0.00 | 112 | 0 | N.D. d | | |
| 66) Ethylbenzene | 21.82 | 91 | 252120 | 4.022 ng | | 99 |
| 67) m- & p-Xylenes | 22.03 | 91 | 567579 | 11.193 ng | | 99 |
| 68) Bromoform | 22.15 | 173 | 2125 | 0.197 ng | | 94 |
| 69) Styrene | 22.51 | 104 | 62837 | 1.714 ng | | 100 |
| 70) o-Xylene | 22.65 | 91 | 201738 | 3.968 ng | | 99 |
| 71) n-Nonane | 22.91 | 43 | 212687 | 6.296 ng | | 97 |
| 72) 1,1,2,2-Tetrachloroethane | 22.65 | 83 | 1639 | 0.073 ng | # | 1 |
| 74) Cumene | 23.41 | 105 | 18212 | 0.284 ng | | 97 |
| 75) alpha-Pinene | 23.90 | 93 | 890235 | 27.042 ng | | 72 |
| 76) n-Propylbenzene | 24.05 | 91 | 59962 | 0.743 ng | | 91 |
| 77) 3-Ethyltoluene | 24.17 | 105 | 147045 | 2.396 ng | | 99 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 59899 | 1.007 ng | | 100 |
| 79) 1,3,5-Trimethylbenzene | 24.31 | 105 | 65043 | 1.297 ng | | 101 |

Data Path : J:\MS13\DATA\2009_08\18\
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ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:32:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 1841 | 0.069 ng | # | 82 |
| 81) 2-Ethyltoluene | 24.56 | 105 | 63419 | 1.025 ng | | 99 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 192992 | 3.773 ng | | 88 |
| 83) n-Decane | 24.93 | 57 | 279830 | 8.414 ng | | 97 |
| 84) Benzyl Chloride | 25.01 | 91 | 2208 | N.D. | | |
| 85) 1,3-Dichlorobenzene | 25.02 | 146 | 95 | N.D. | | |
| 86) 1,4-Dichlorobenzene | 25.10 | 146 | 5027 | 0.182 ng | | 97 |
| 87) sec-Butylbenzene | 25.17 | 105 | 6270 | 0.091 ng | # | 77 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 81902 | 1.329 ng | | 98 |
| 89) 1,2,3-Trimethylbenzene | 25.35 | 105 | 55484 | 1.065 ng | | 92 |
| 90) 1,2-Dichlorobenzene | 25.53 | 146 | 205 | N.D. | | |
| 91) d-Limonene | 25.53 | 68 | 271691 | 12.490 ng | # | 65 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.06 | 157 | 94 | N.D. | | |
| 93) n-Undecane | 26.46 | 57 | 98872 | 2.794 ng | | 97 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 865 | 0.051 ng | # | 73 |
| 95) Naphthalene | 27.73 | 128 | 31529 | 0.454 ng | | 98 |
| 96) n-Dodecane | 27.70 | 57 | 81714 | 1.988 ng | | 99 |
| 97) Hexachlorobutadiene | 28.14 | 225 | 185 | N.D. | | |
| 98) Cyclohexanone | 22.31 | 55 | 38935 | 1.714 ng | | 94 |
| 99) tert-Butylbenzene | 24.73 | 119 | 3521 | 0.071 ng | | 98 |
| 100) n-Butylbenzene | 25.91 | 91 | 12109 | 0.213 ng | # | 67 |

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

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
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Acq On : 18 Aug 2009 19:25
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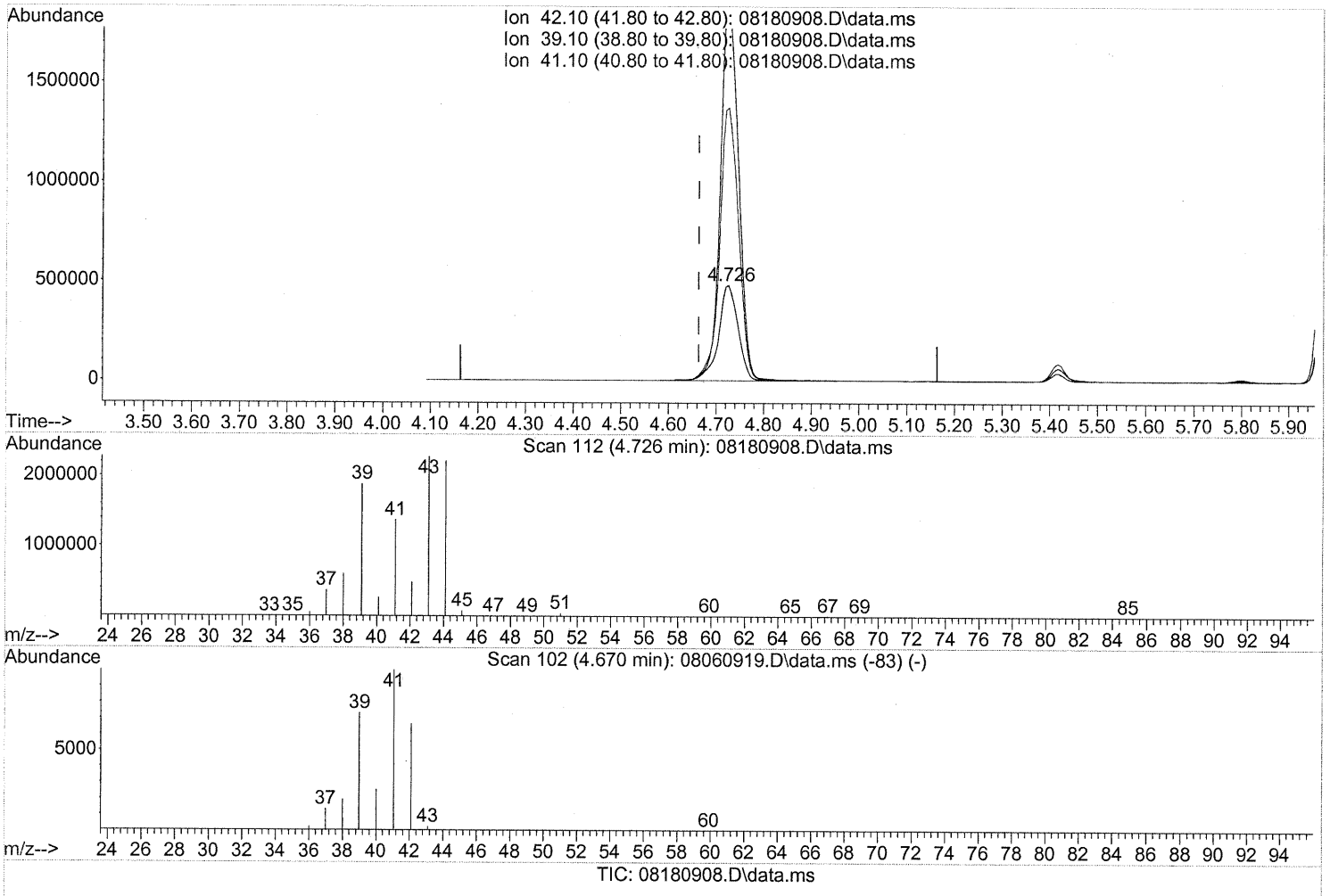
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration










TIC: 08180908.D\data.ms

(2) Propene (T)

4.726min (+0.063) 76.25ng

response 1382378

| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 111.90 | 368.23# |
| 41.10 | 150.20 | 275.99# |
| 0.00 | 0.00 | 0.00 |

TP

SDA 8/22/09 EM 8/25/09

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Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
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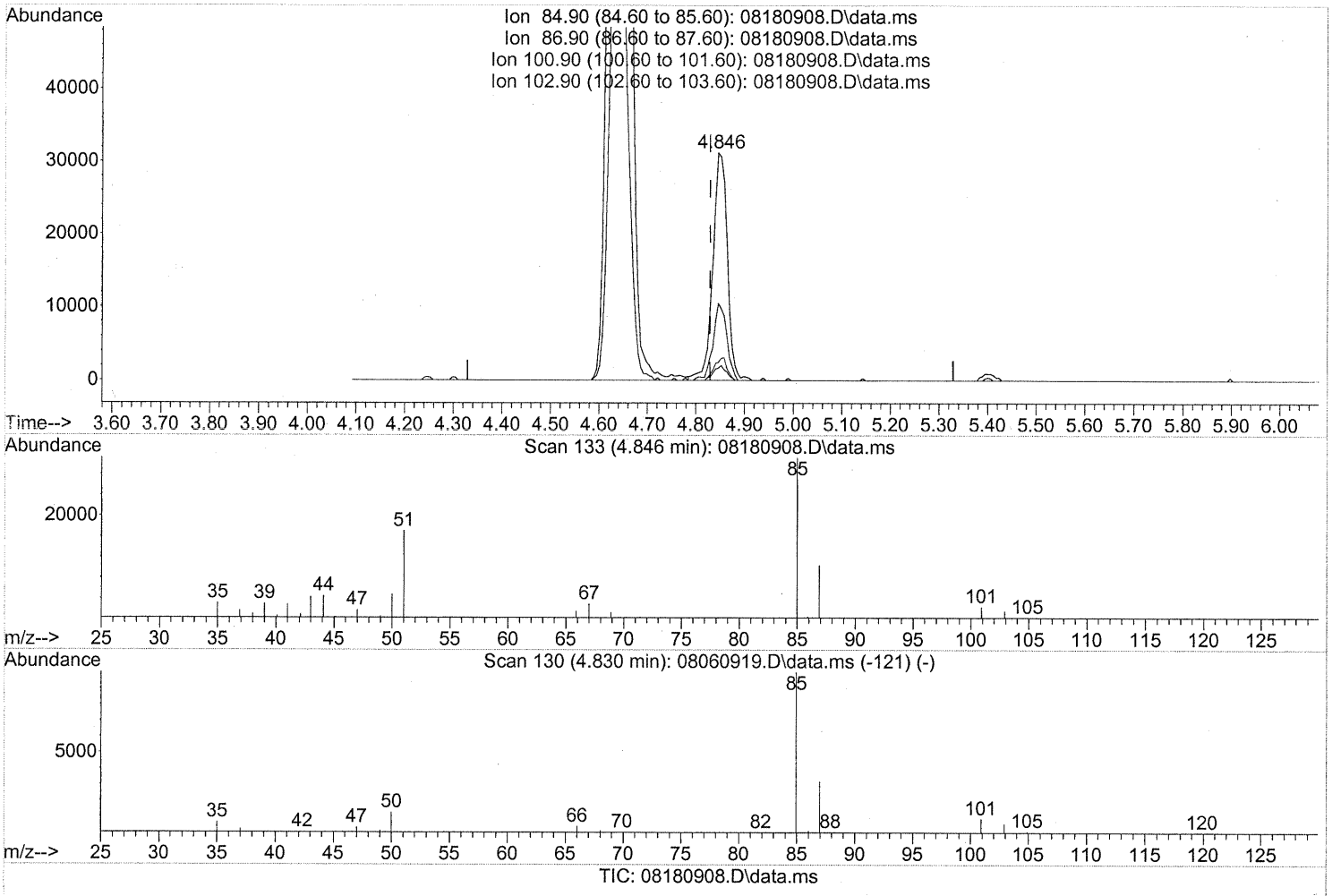
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(3) Dichlorodifluoromethane (CFC 12) (T)

4.846min (+0.017) 2.18ng

response 64451

| Ion | Exp% | Act% |
|---|---|---|
| 84.90 | 100 | 100 |
| 86.90 | 32.80 | 31.70 |
| 100.90 | 8.80 | 8.56 |
| 102.90 | 5.20 | 5.54 |

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Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
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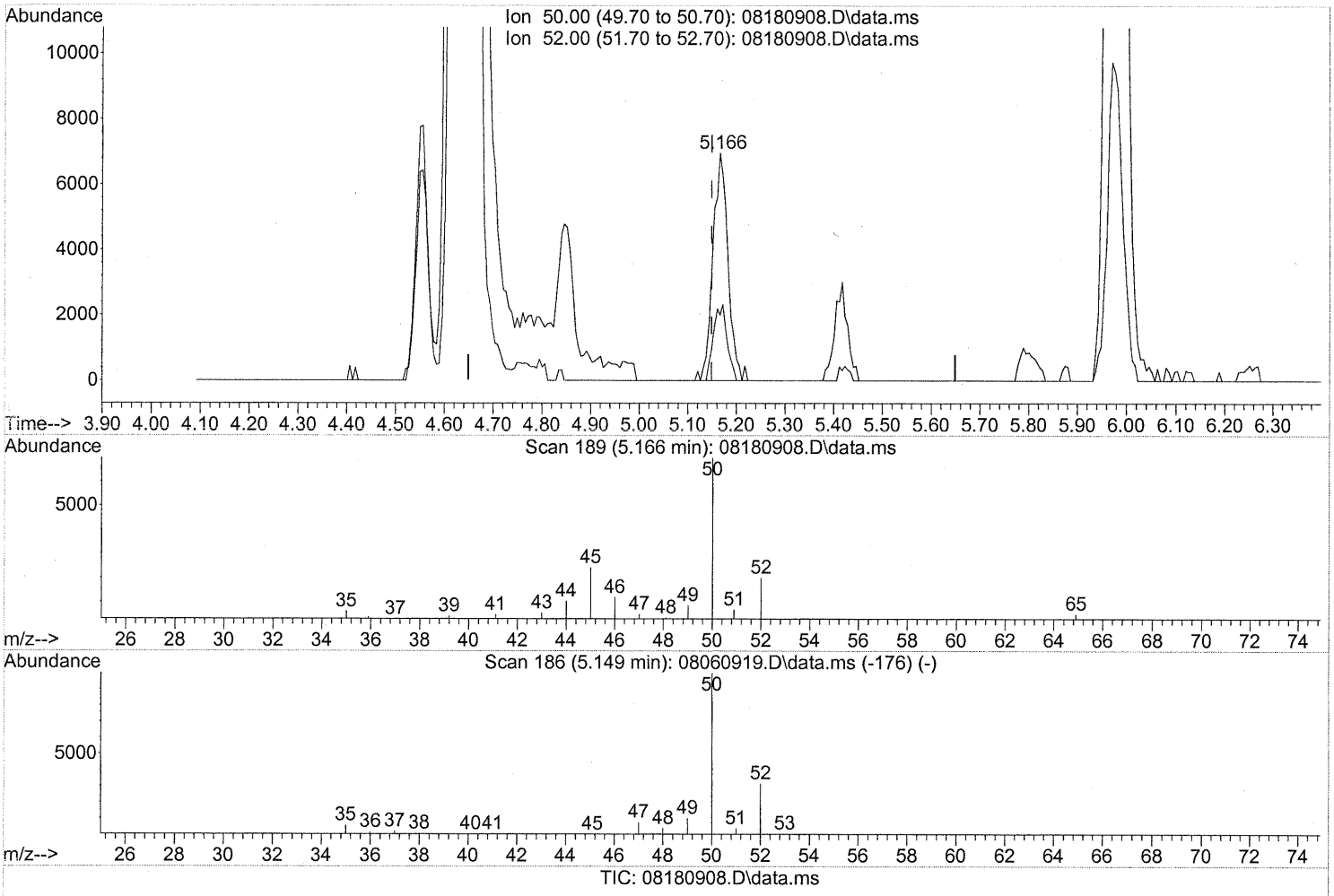
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(4) Chloromethane (T)

5.166min (+0.017) 0.76ng

response 15066

| Ion | Exp% | Act% |
|---|---|---|
| 50.00 | 100 | 100 |
| 52.00 | 31.60 | 29.84 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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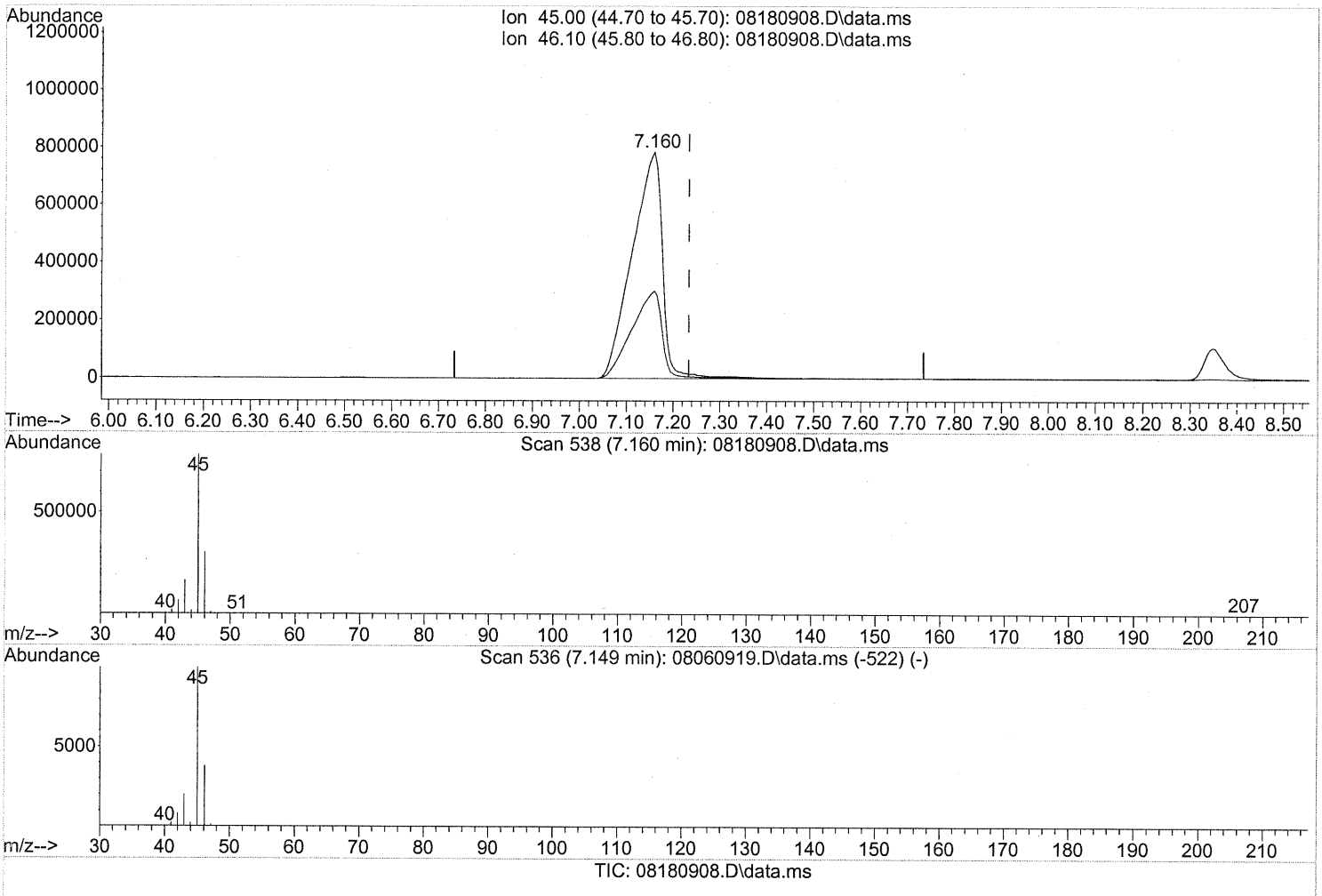
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(10) Ethanol (T)

7.160min (-0.074) 307.78ng

response 3536810

| Ion | Exp% | Act% |
|---|---|---|
| 45.00 | 100 | 100 |
| 46.10 | 38.40 | 38.57 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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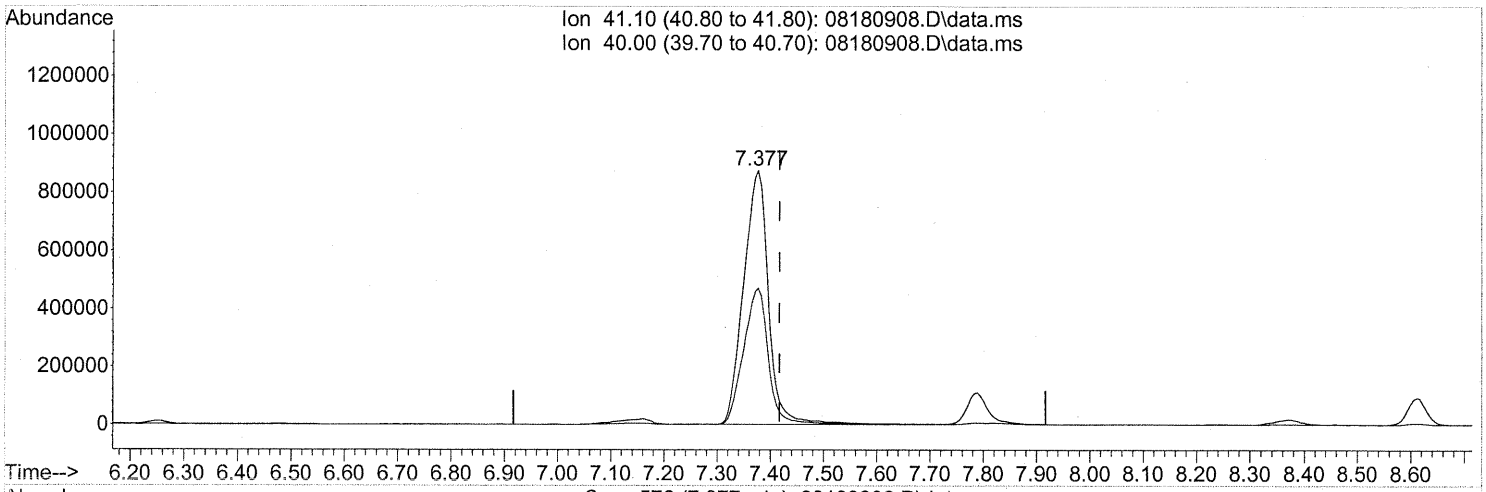
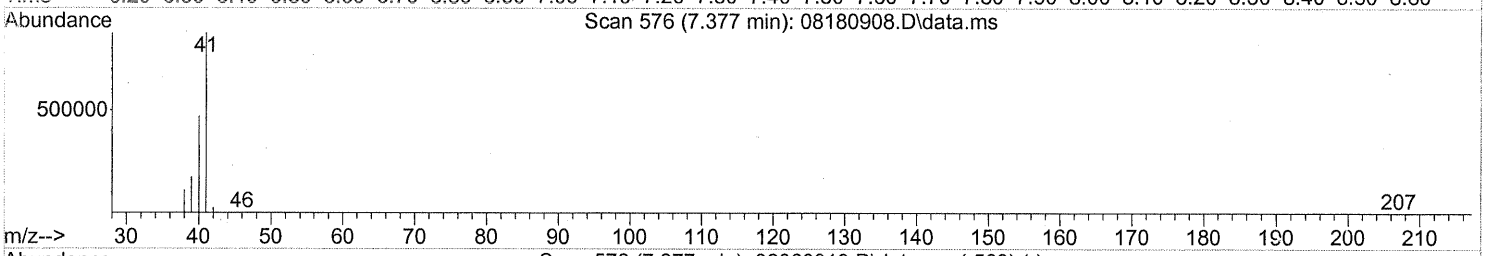
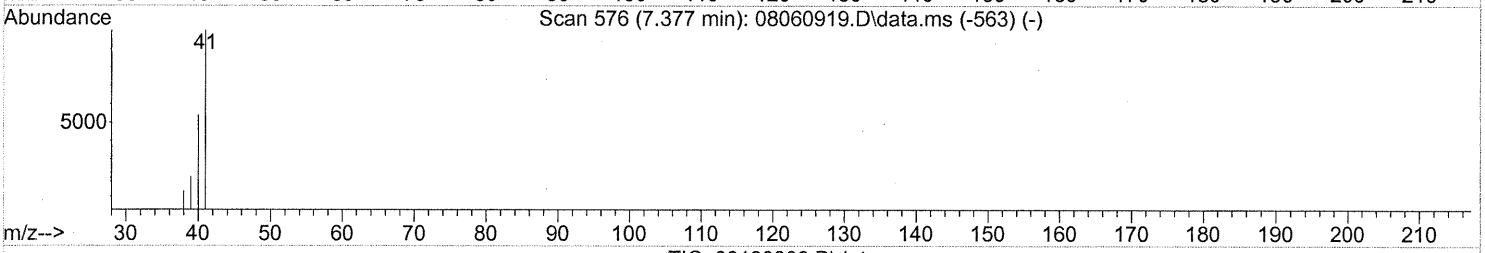
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(11) Acetonitrile (T)

7.377min (-0.040) 84.83ng

response 2854921

| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 40.00 | 53.70 | 53.58 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
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Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
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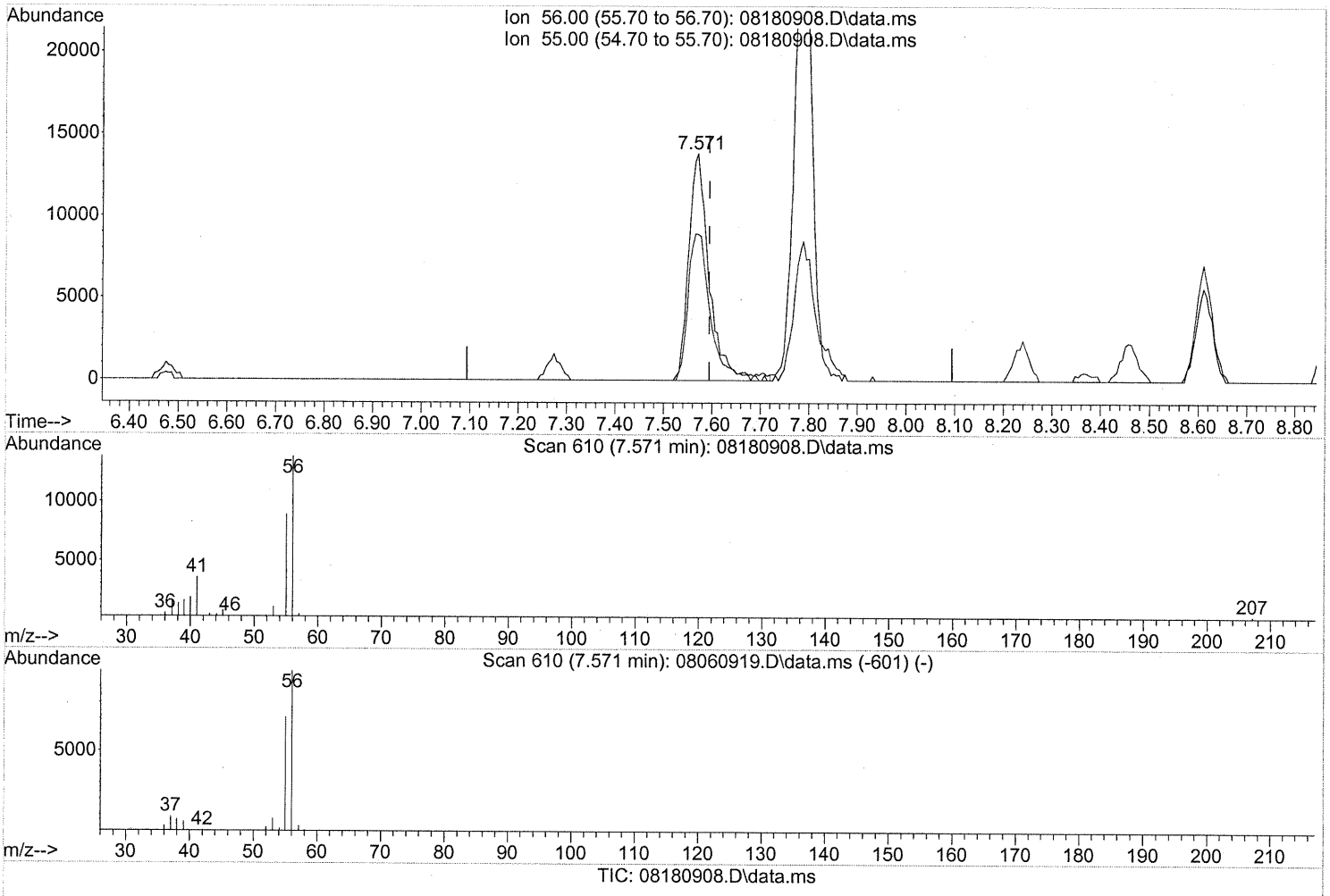
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(12) Acrolein (T)

7.571min (-0.023) 4.67ng

response 40875

| Ion | Exp% | Act% |
|---|---|---|
| 56.00 | 100 | 100 |
| 55.00 | 68.10 | 68.66 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
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Acq On : 18 Aug 2009 19:25
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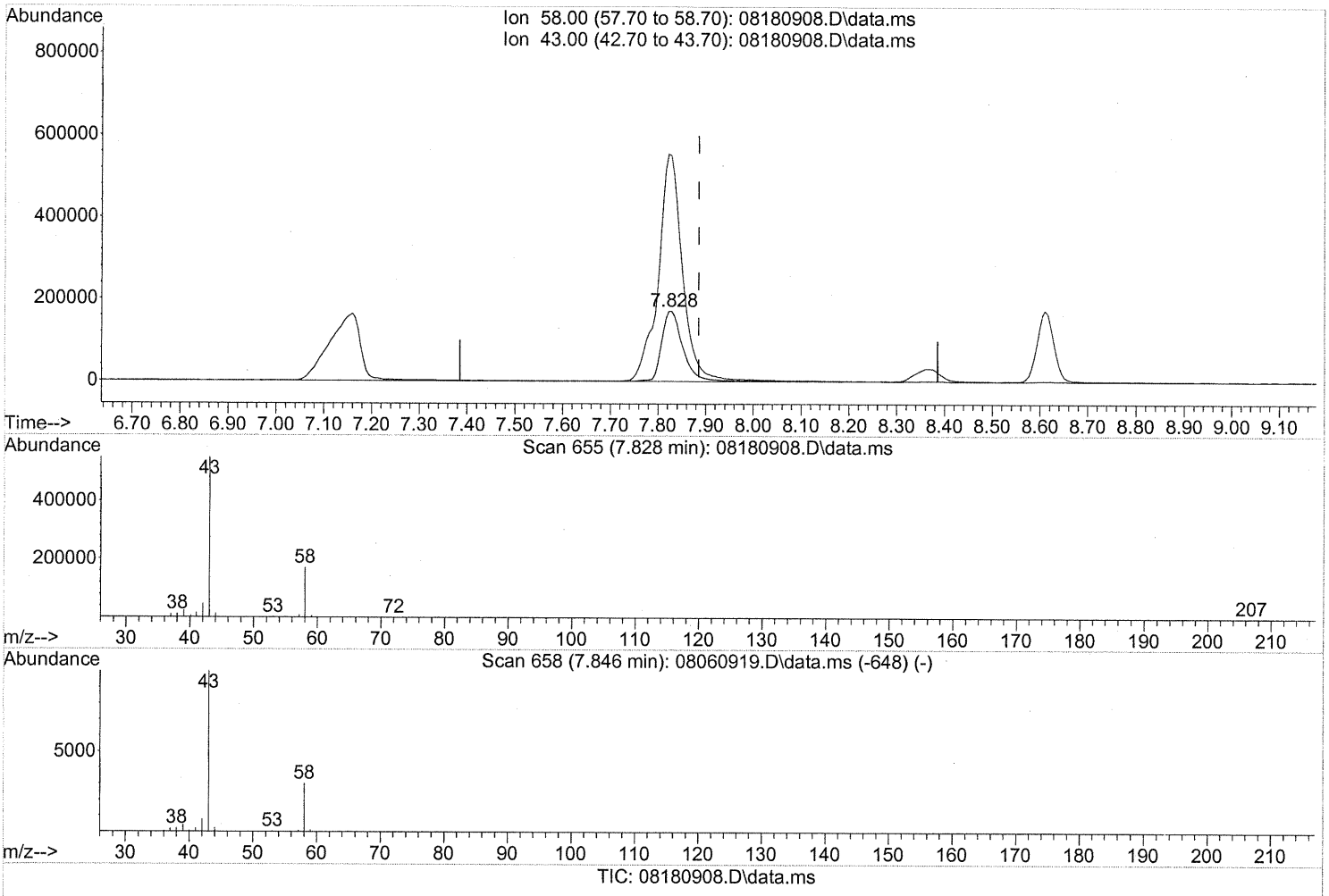
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(13) Acetone (T)

7.828min (-0.058) 48.84ng

response 529538

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 340.40 | 372.70# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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Quantitation Report (Qedit)

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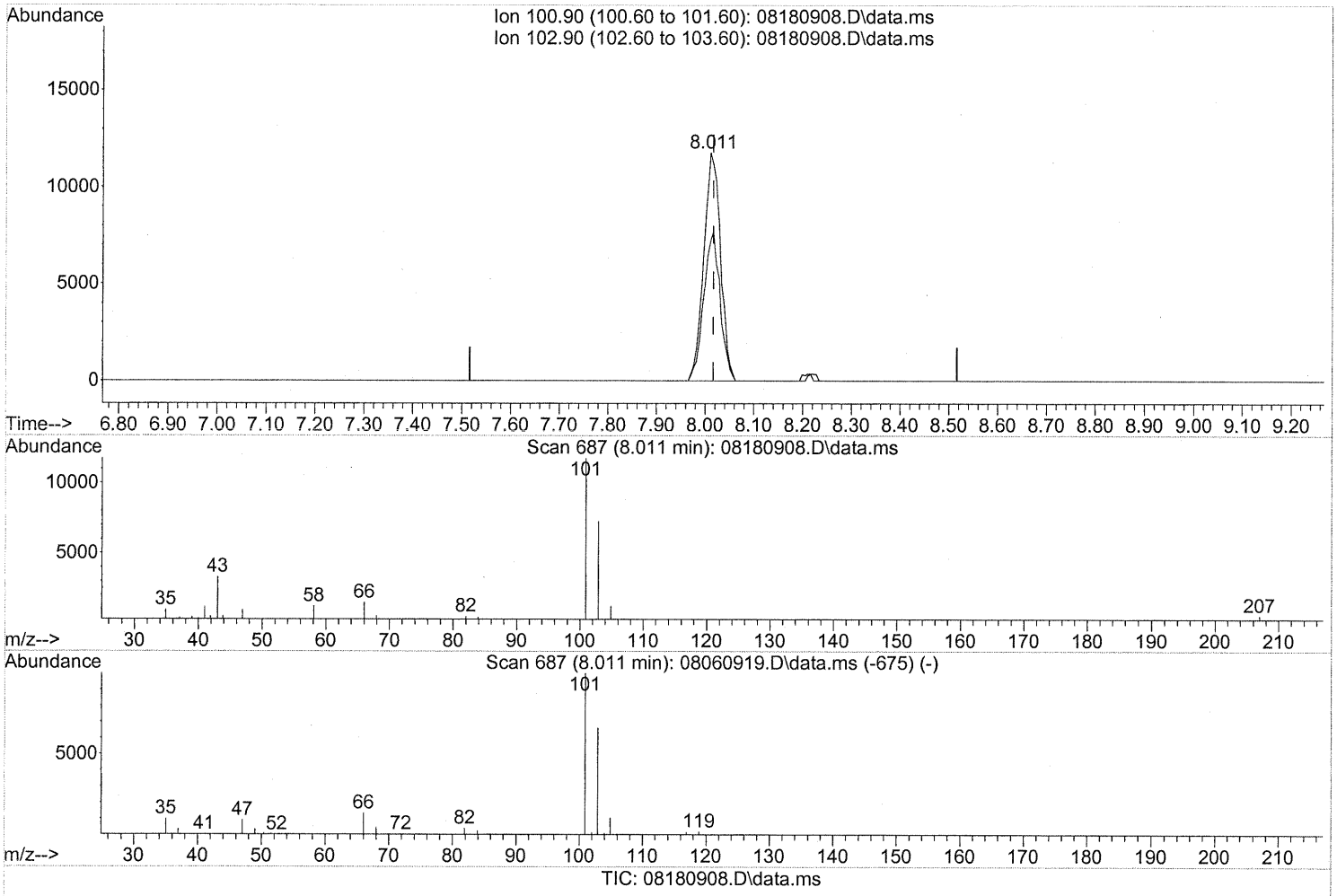
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(14) Trichlorofluoromethane (T)

8.011min (-0.006) 1.05ng

response 28025

| Ion | Exp% | Act% |
|---|---|---|
| 100.90 | 100 | 100 |
| 102.90 | 64.40 | 64.16 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

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Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
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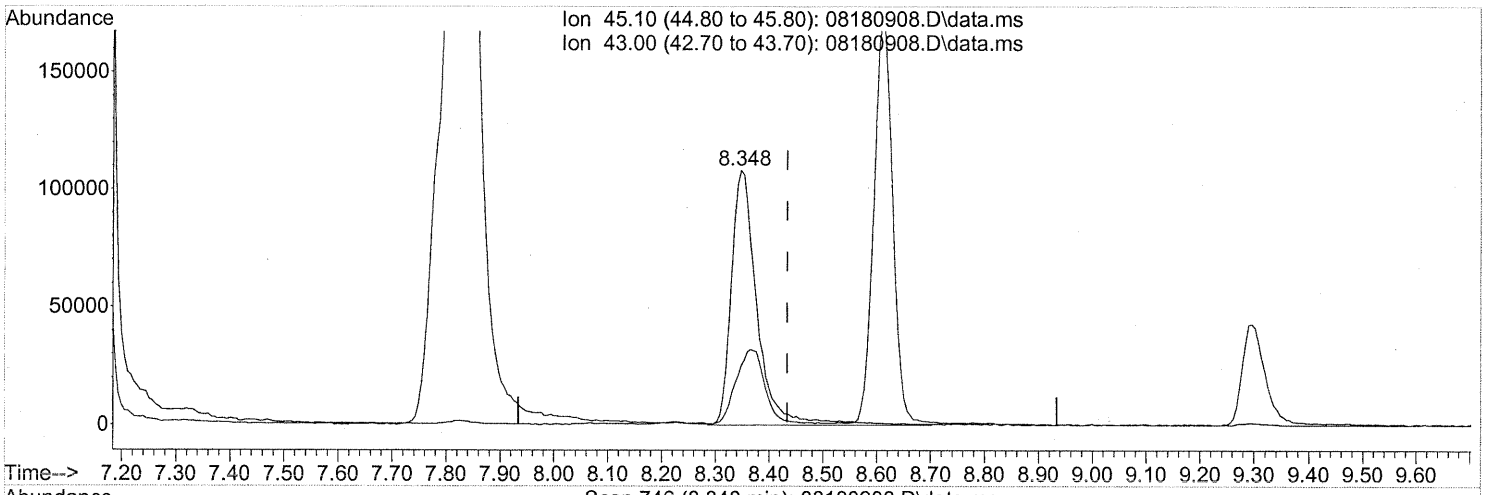
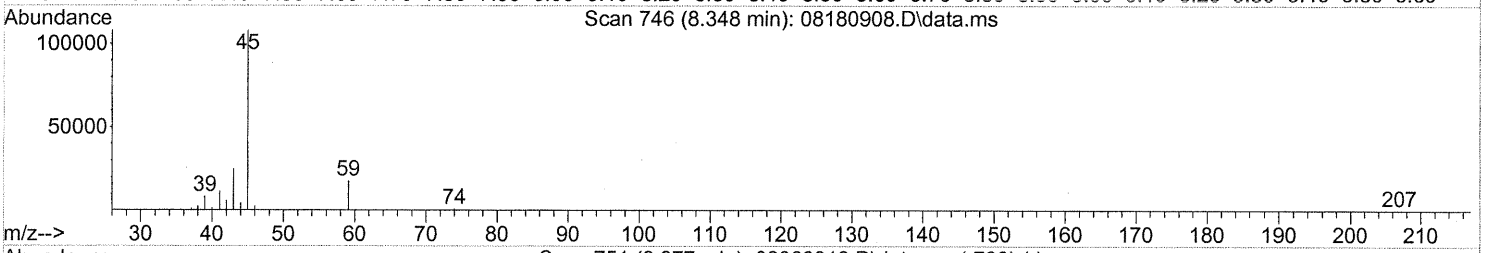
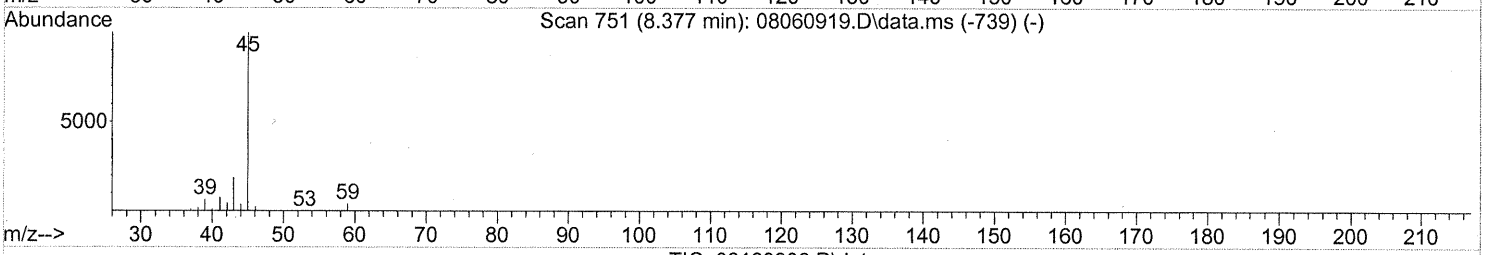
Response via : Initial Calibration




TIC: 08180908.D\data.ms

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

8.348min (-0.086) 8.43ng

response 359150

| Ion | Exp% | Act% |
|---|---|---|
| 45.10 | 100 | 100 |
| 43.00 | 19.00 | 32.64 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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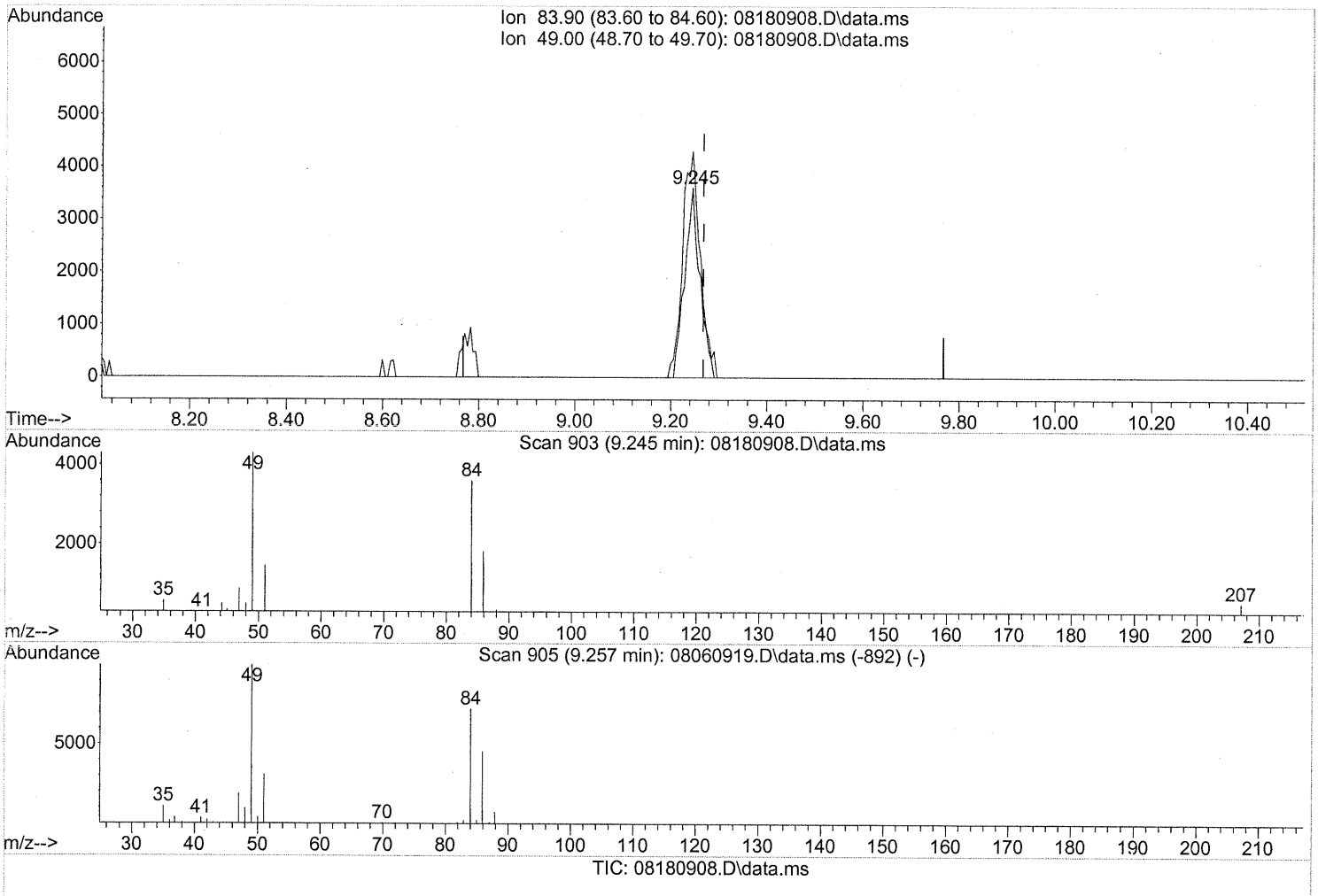
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(19) Methylene Chloride (T)

9.245min (-0.023) 0.55ng

response 7956

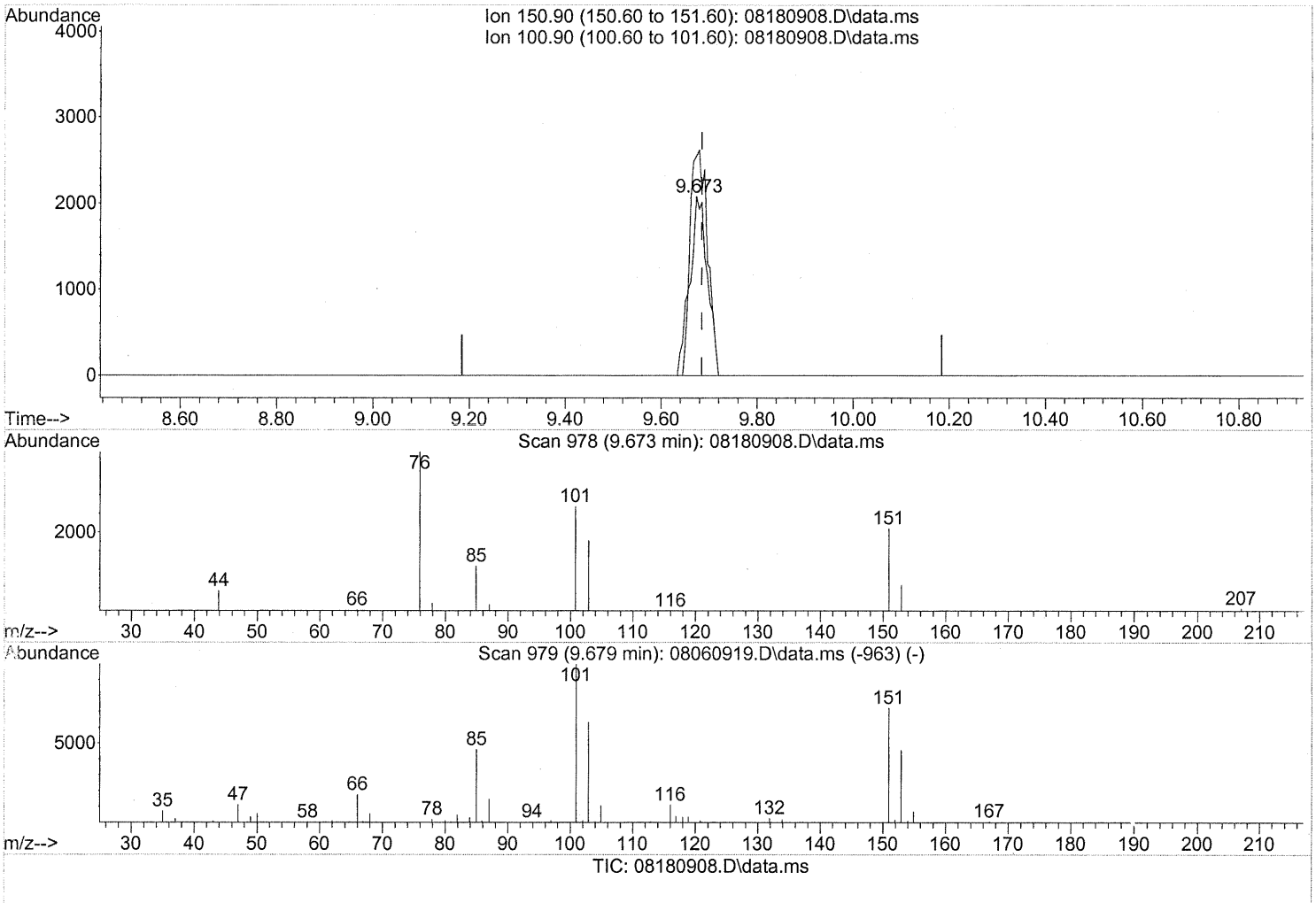
| Ion | Exp% | Act% |
|---|---|---|
| 83.90 | 100 | 100 |
| 49.00 | 144.60 | 139.22 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

194

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.673min (-0.012) 0.51ng

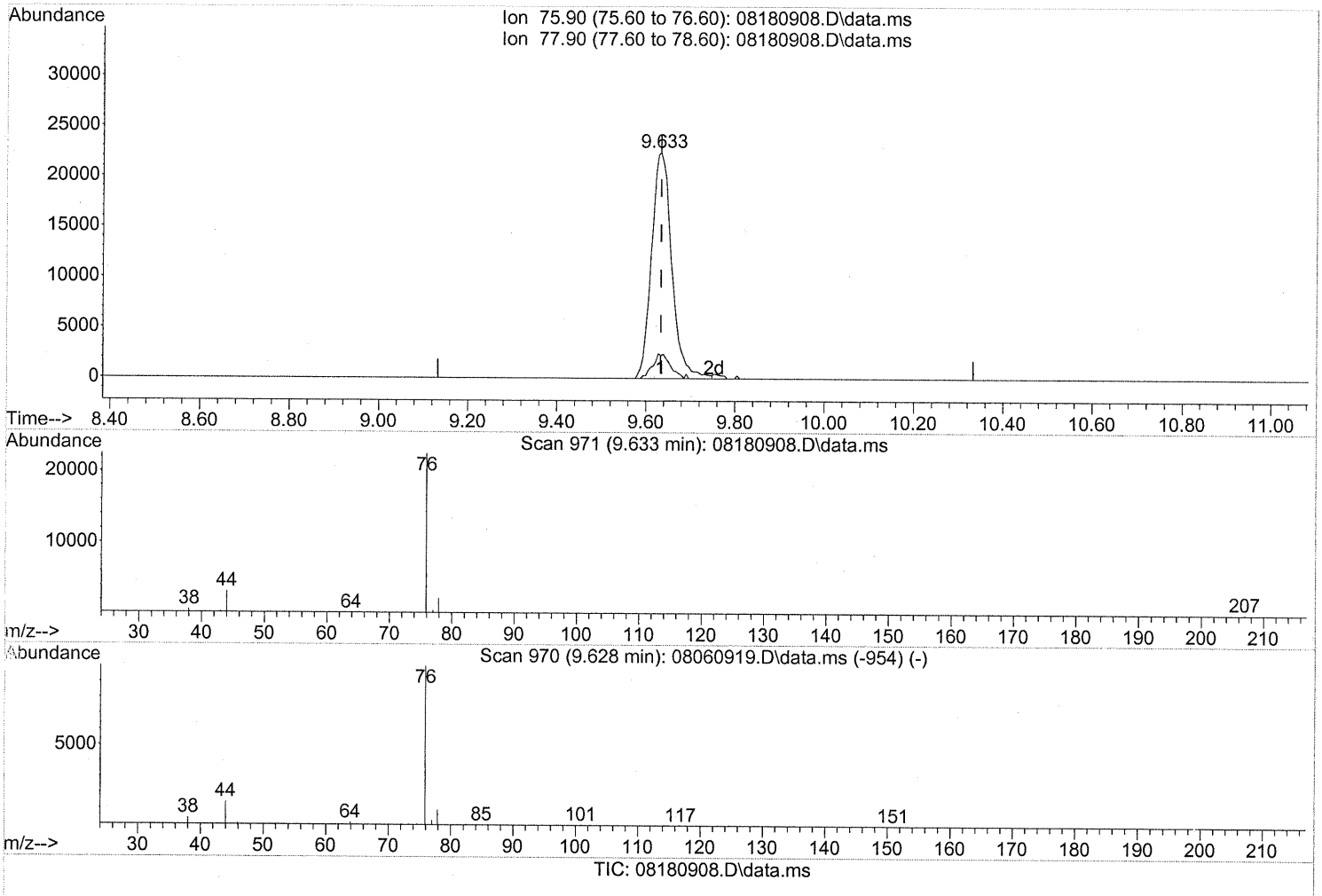
response 4931

| Ion | Exp% | Act% |
|---|---|---|
| 150.90 | 100 | 100 |
| 100.90 | 138.40 | 140.99 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(22) Carbon Disulfide (T)

9.633min (-0.000) 1.38ng

response 70705

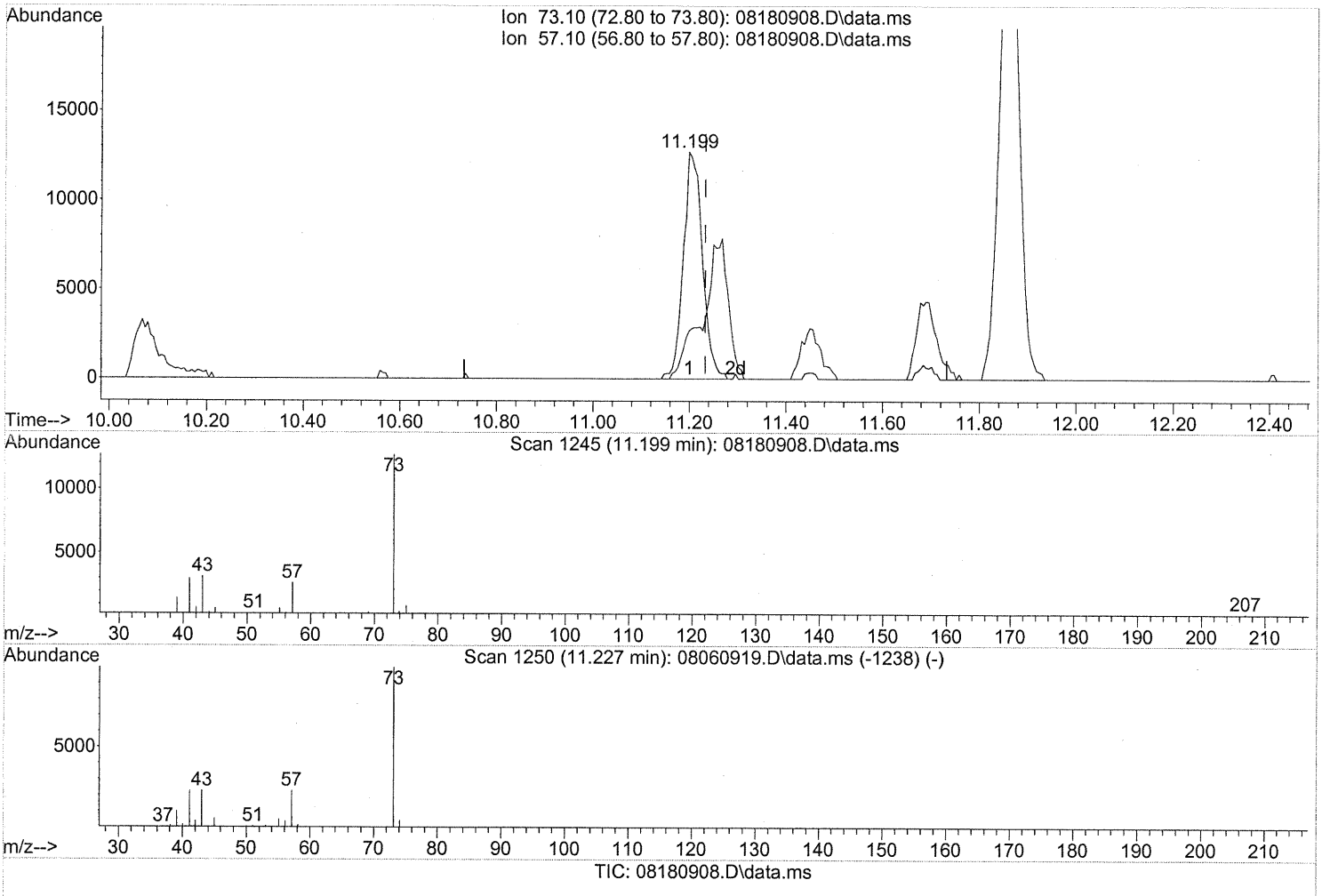
| Ion | Exp% | Act% |
|---|---|---|
| 75.90 | 100 | 100 |
| 77.90 | 9.40 | 9.32 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

196

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(25) Methyl tert-Butyl Ether (T)

11.199min (-0.034) 0.85ng

response 34787

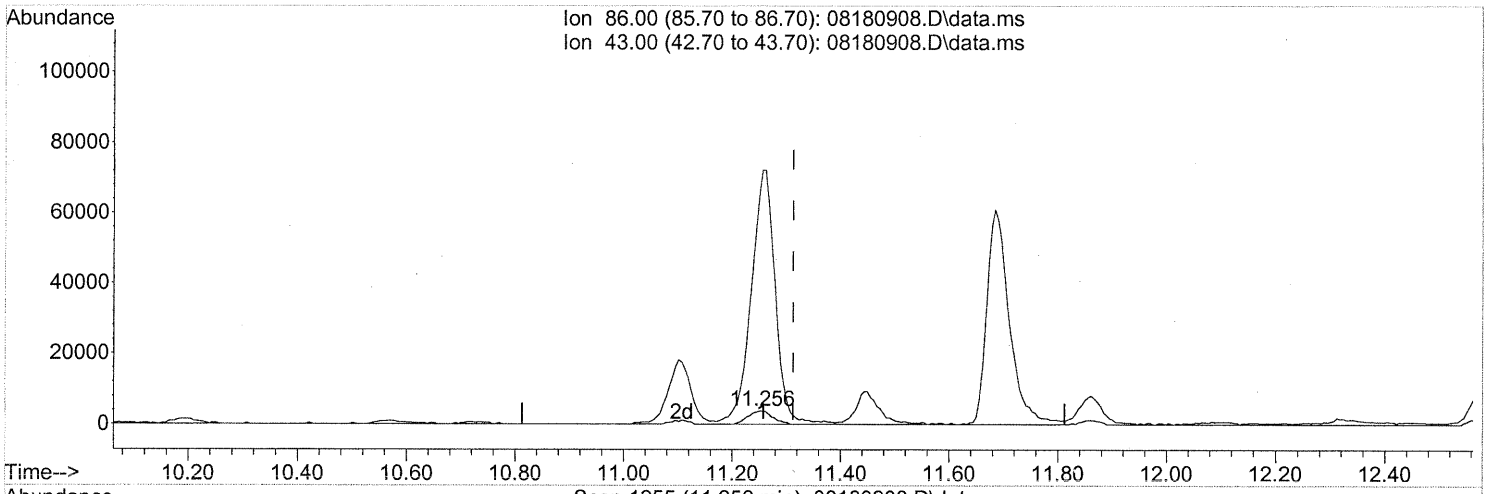
| Ion | Exp% | Act% |
|---|---|---|
| 73.10 | 100 | 100 |
| 57.10 | 22.50 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

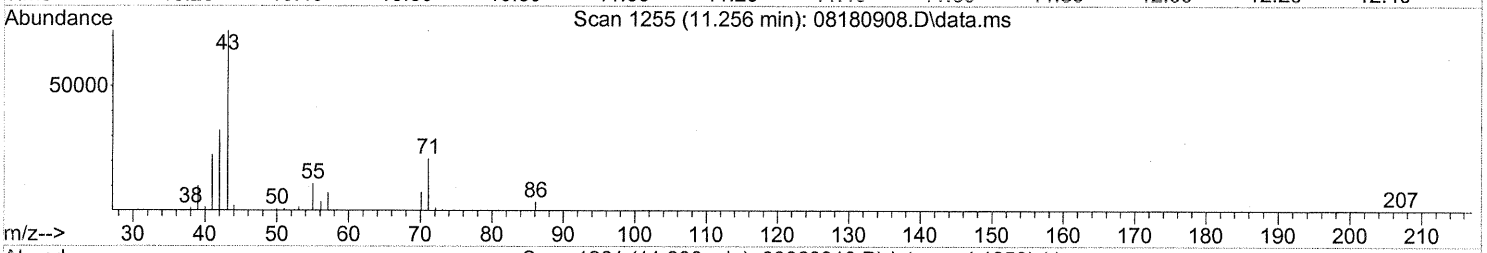
197

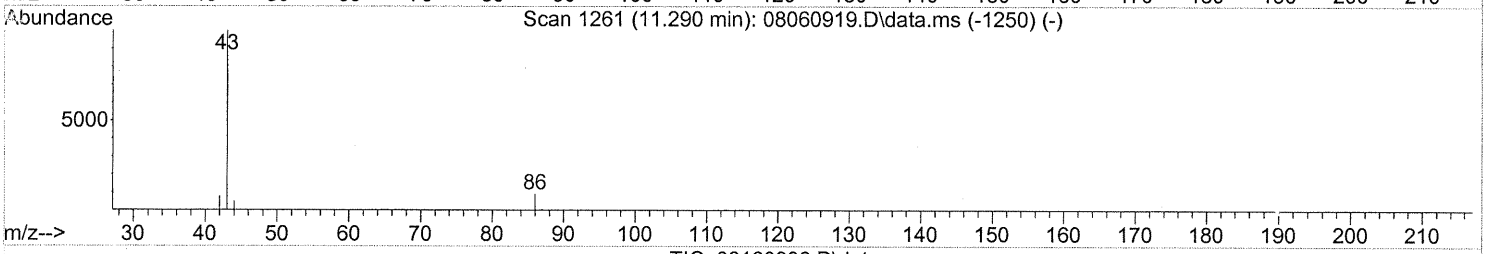
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(26) Vinyl Acetate (T)

11.256min (-0.057) 5.11ng

response 11274

| Ion | Exp% | Act% |
|---|---|---|
| 86.00 | 100 | 100 |
| 43.00 | 1210.70 | 1912.79# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

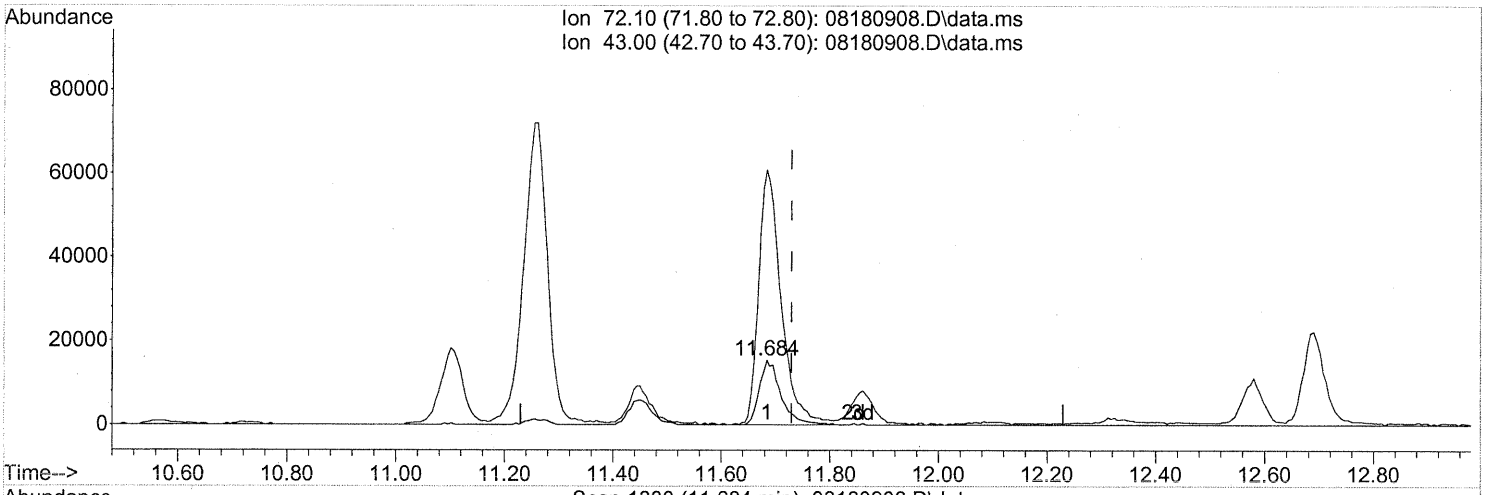
DA 8/22/09 EM 8/25/09

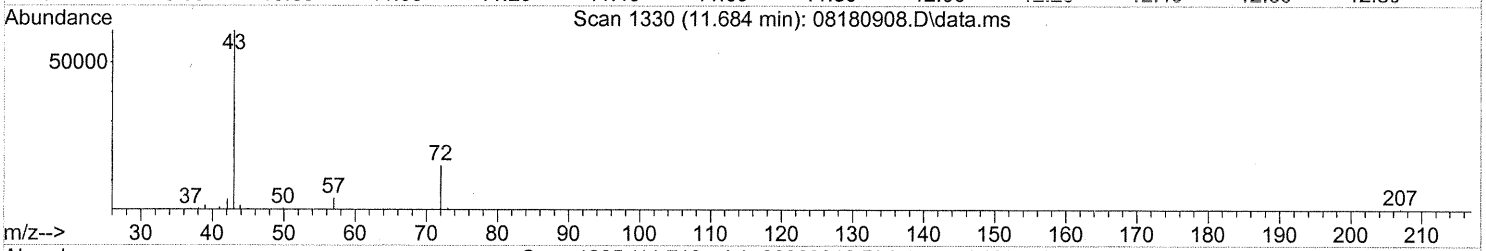
198

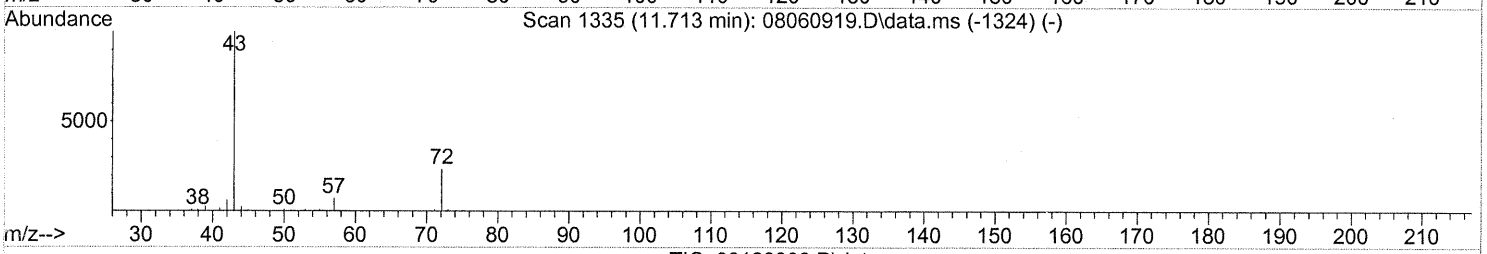
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(27) 2-Butanone (MEK) (T)

11.684min (-0.046) 4.28ng

response 41876

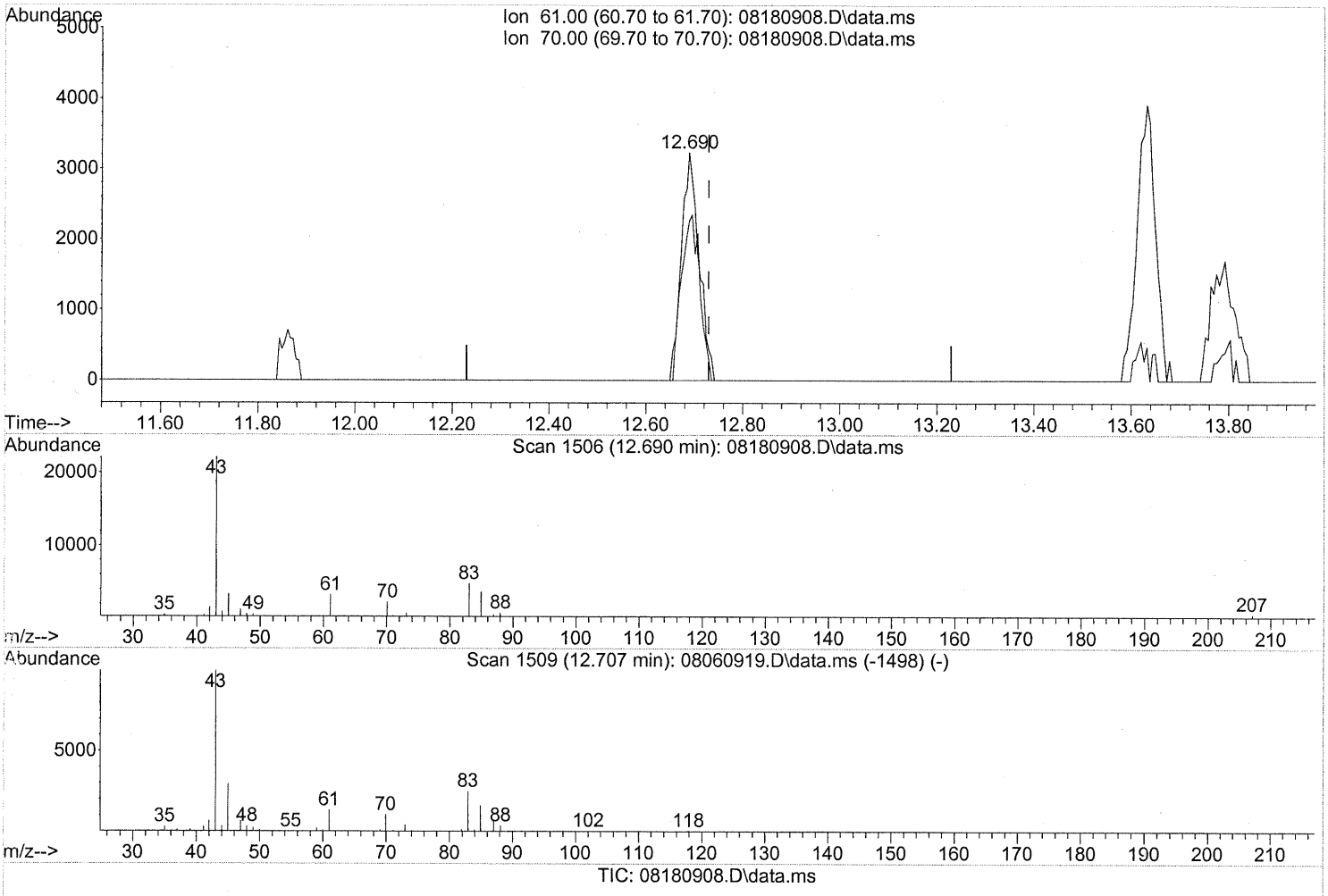
| Ion | Exp% | Act% |
|---|---|---|
| 72.10 | 100 | 100 |
| 43.00 | 437.40 | 419.14 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

199

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(30) Ethyl Acetate (T)

12.690min (-0.040) 1.60ng

response 8168

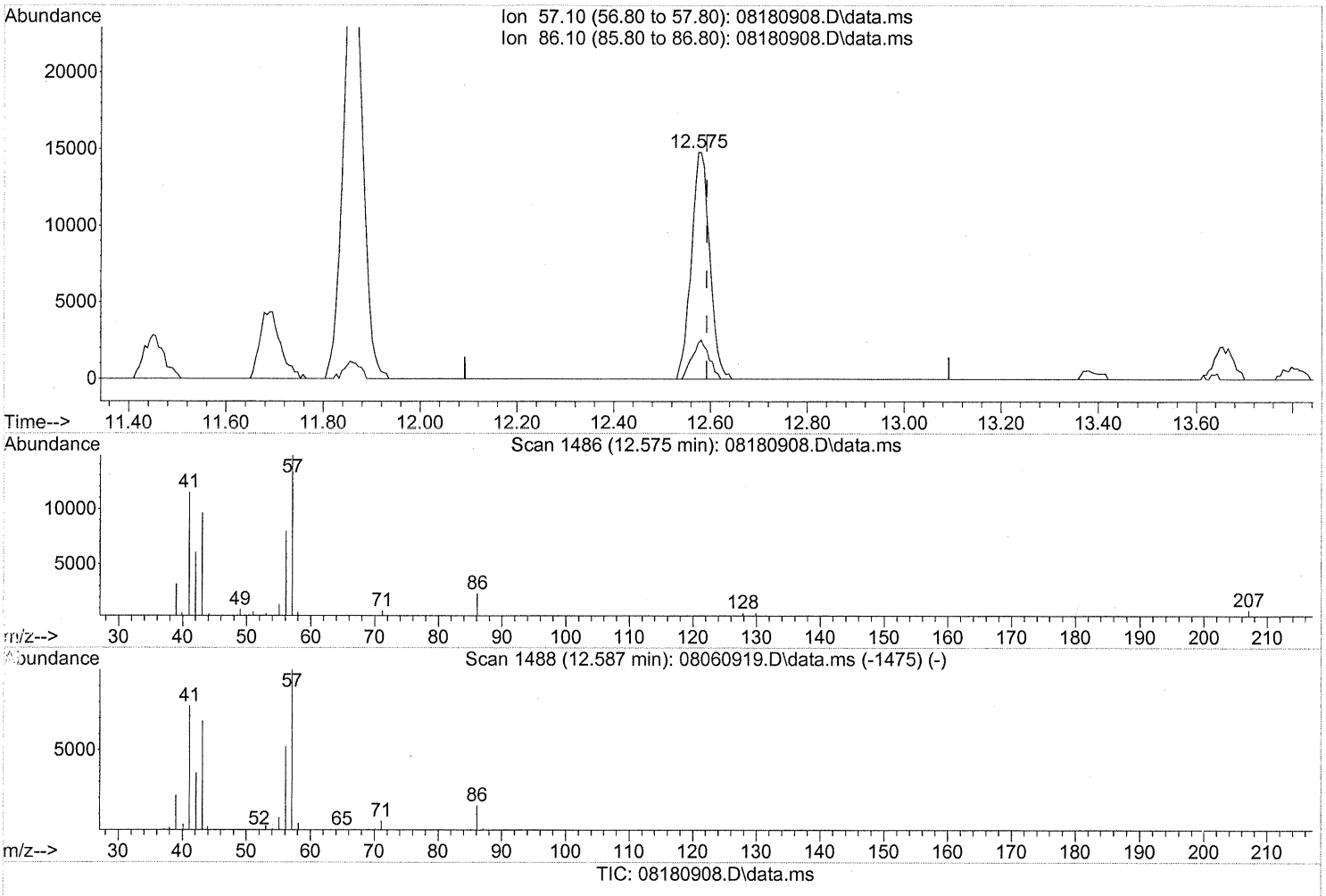
| Ion | Exp% | Act% |
|---|---|---|
| 61.00 | 100 | 100 |
| 70.00 | 82.00 | 76.29 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

200

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(31) n-Hexane (T)

12.575min (-0.017) 1.50ng

response 39043

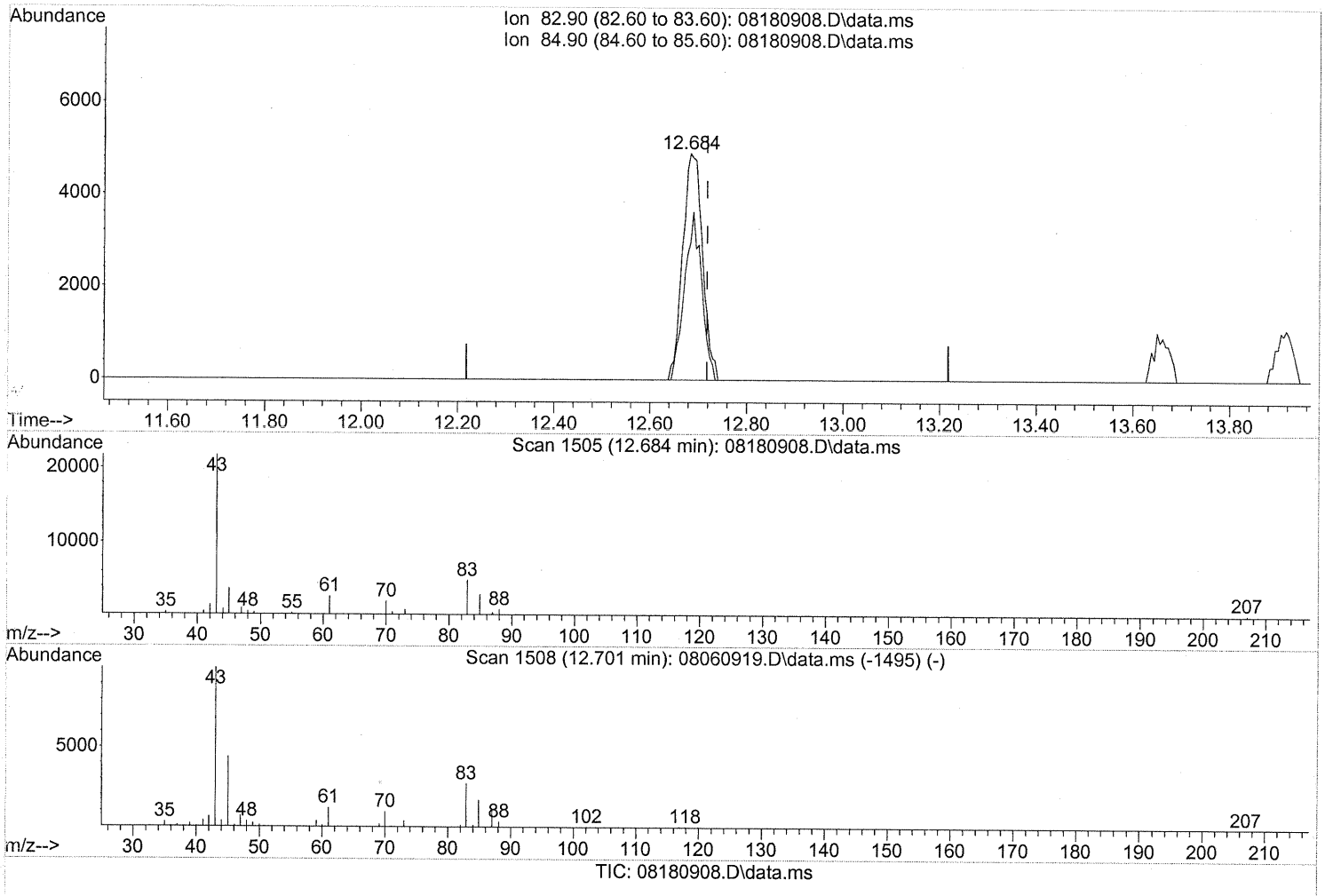
| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 86.10 | 15.70 | 15.56 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

201

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(32) Chloroform (T)

12.684min (-0.034) 0.61ng

response 13978

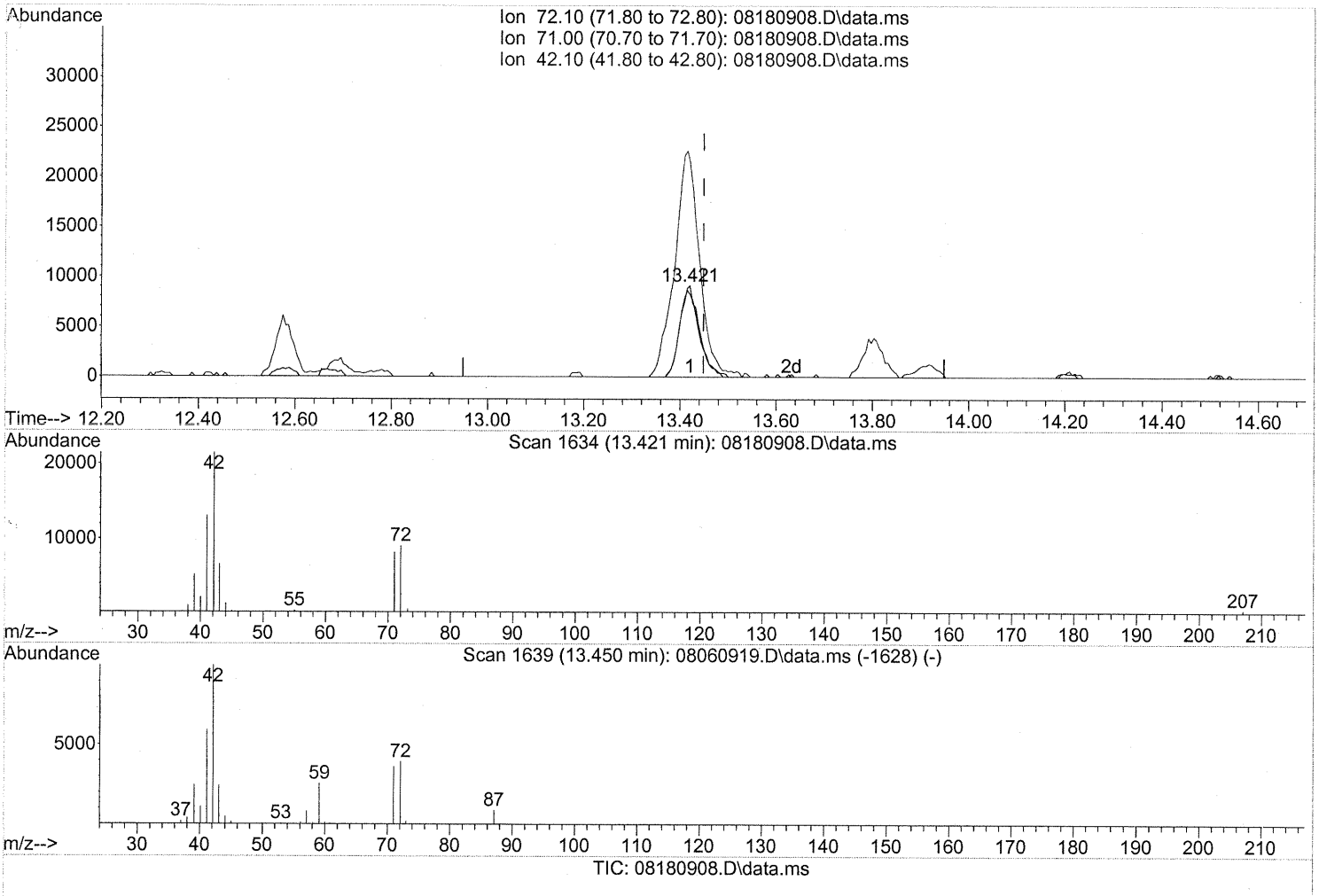
| Ion | Exp% | Act% |
|---|---|---|
| 82.90 | 100 | 100 |
| 84.90 | 64.30 | 63.82 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

202

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(34) Tetrahydrofuran (THF) (T)

13.421min (-0.028) 2.44ng

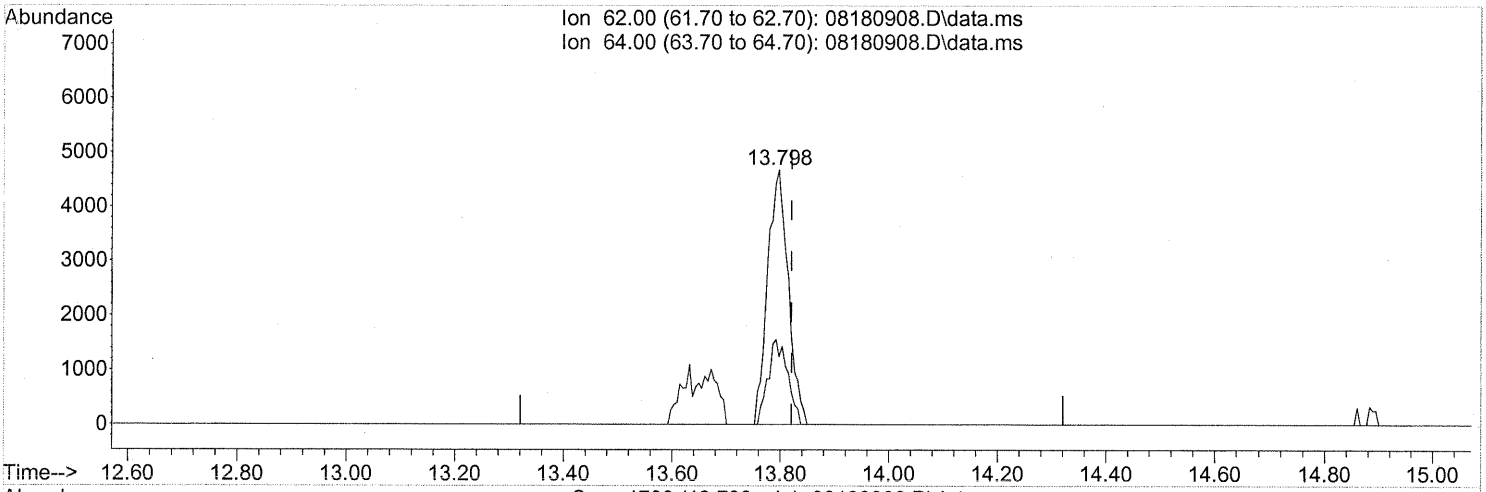
response 25508

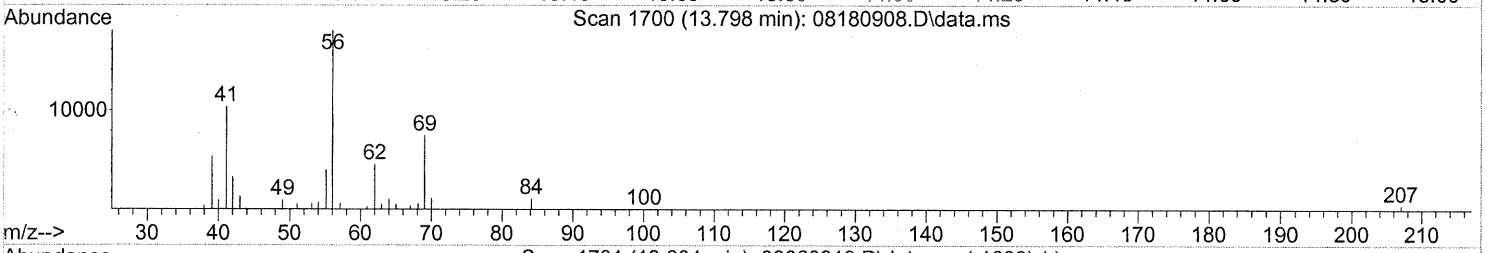
| Ion | Exp% | Act% |
|---|---|---|
| 72.10 | 100 | 100 |
| 71.00 | 95.70 | 96.86 |
| 42.10 | 253.40 | 318.05# |
| 0.00 | 0.00 | 0.00 |

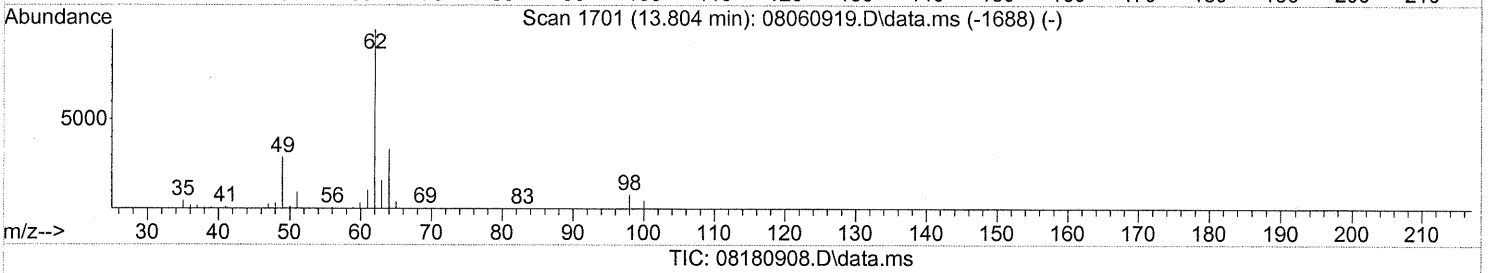
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(36) 1,2-Dichloroethane (T)

13.798min (-0.023) 0.58ng

response 12276

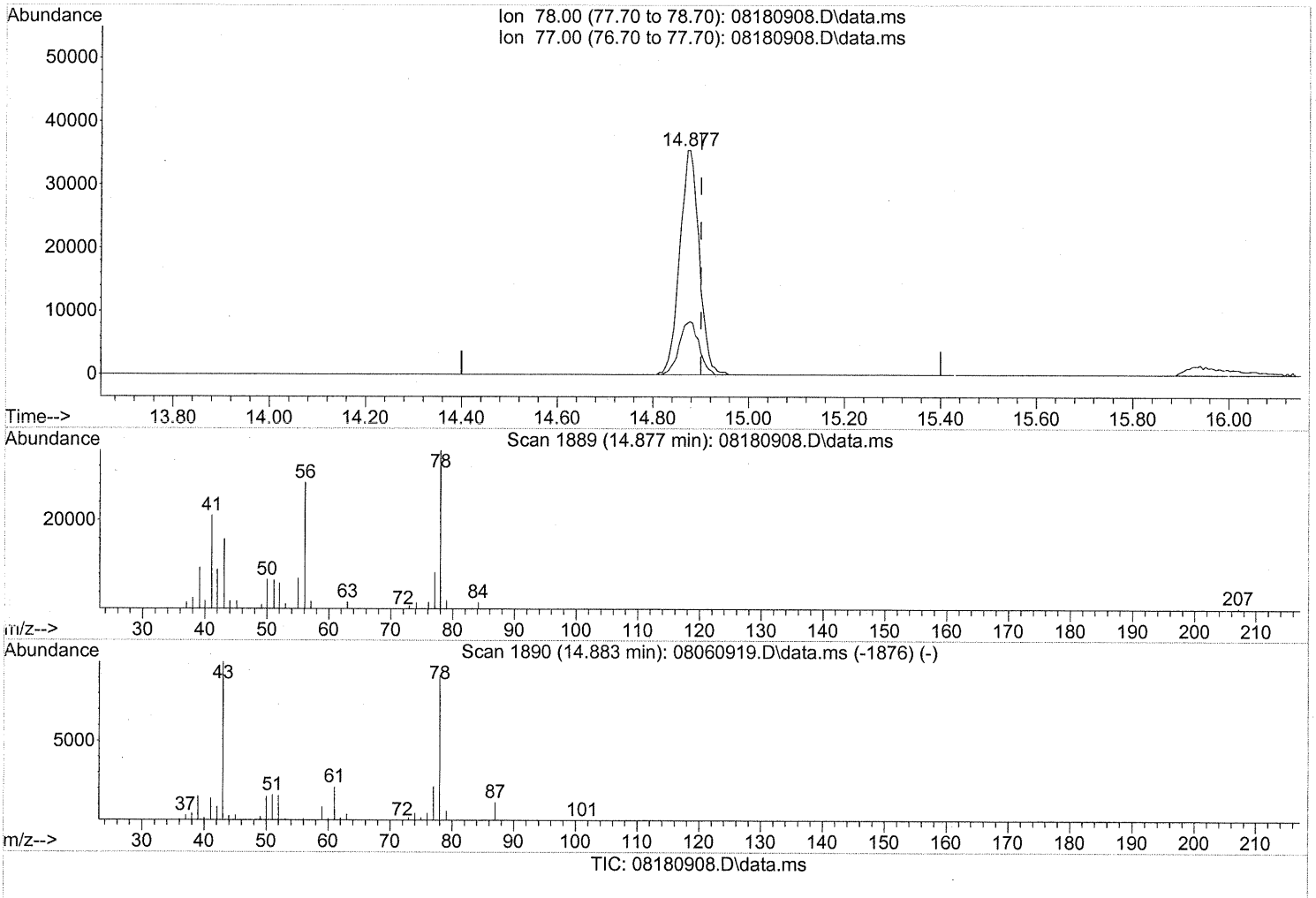
| Ion | Exp% | Act% |
|---|---|---|
| 62.00 | 100 | 100 |
| 64.00 | 30.80 | 31.69 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

204

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(41) Benzene (T)

14.877min (-0.023) 1.68ng

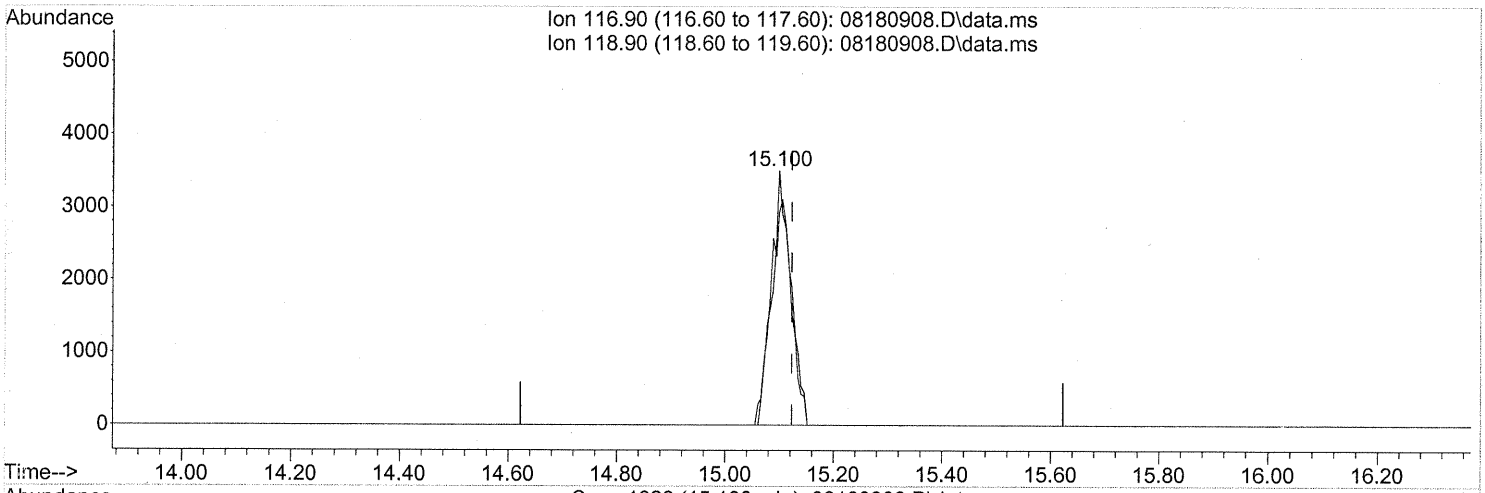
response 99456

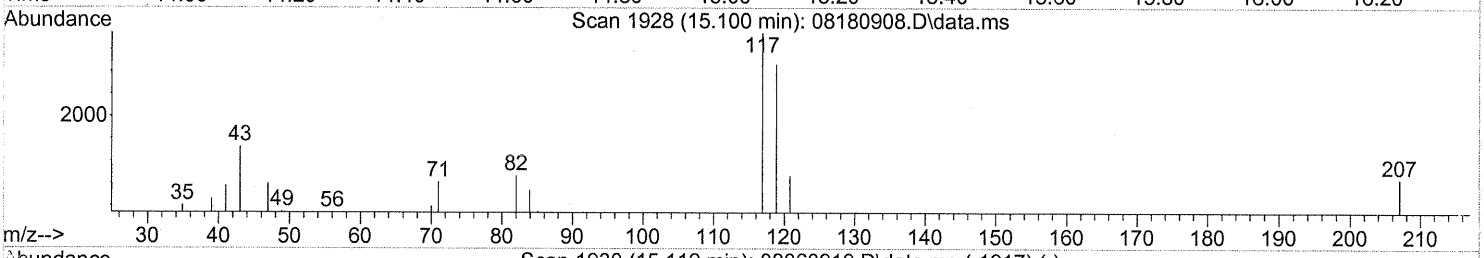
| Ion | Exp% | Act% |
|---|---|---|
| 78.00 | 100 | 100 |
| 77.00 | 23.60 | 23.99 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

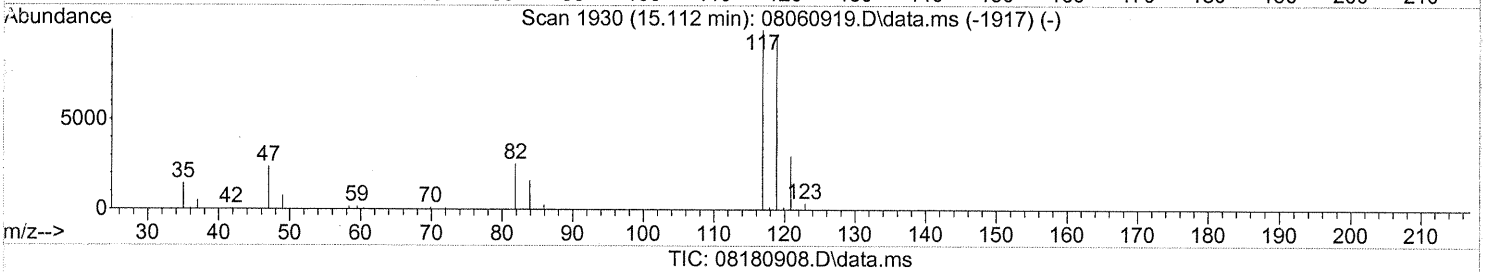
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(42) Carbon Tetrachloride (T)

15.100min (-0.023) 0.45ng

response 8511

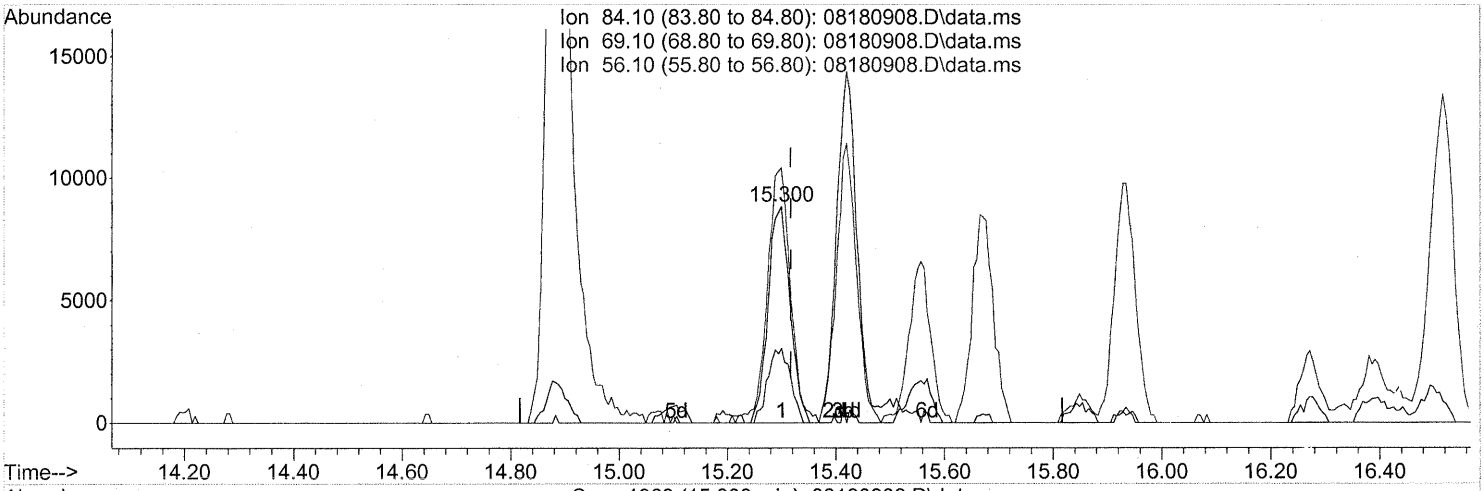
| Ion | Exp% | Act% |
|---|---|---|
| 116.90 | 100 | 100 |
| 118.90 | 97.10 | 98.83 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

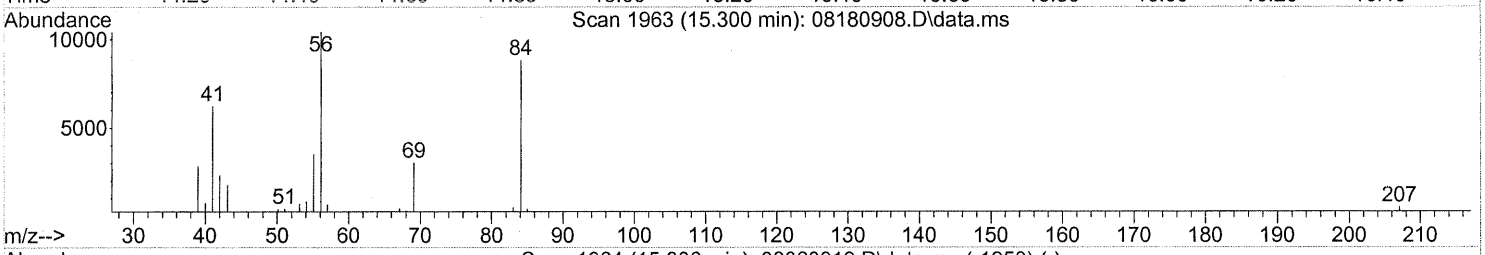
206

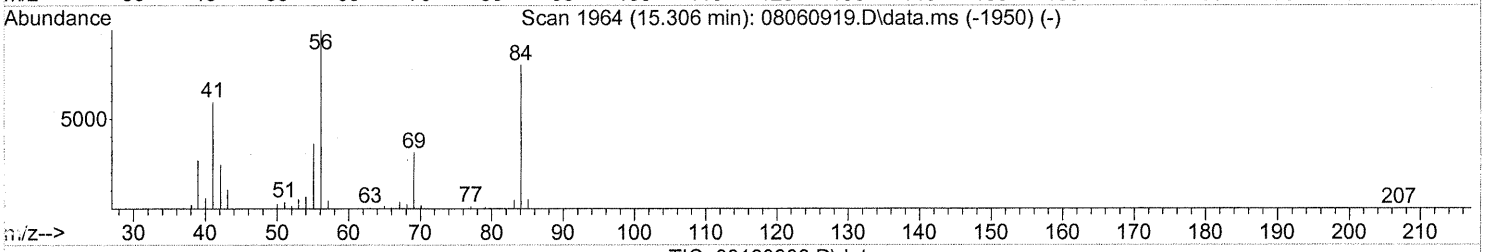
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(43) Cyclohexane (T)

15.300min (-0.017) 1.14ng

response 24755

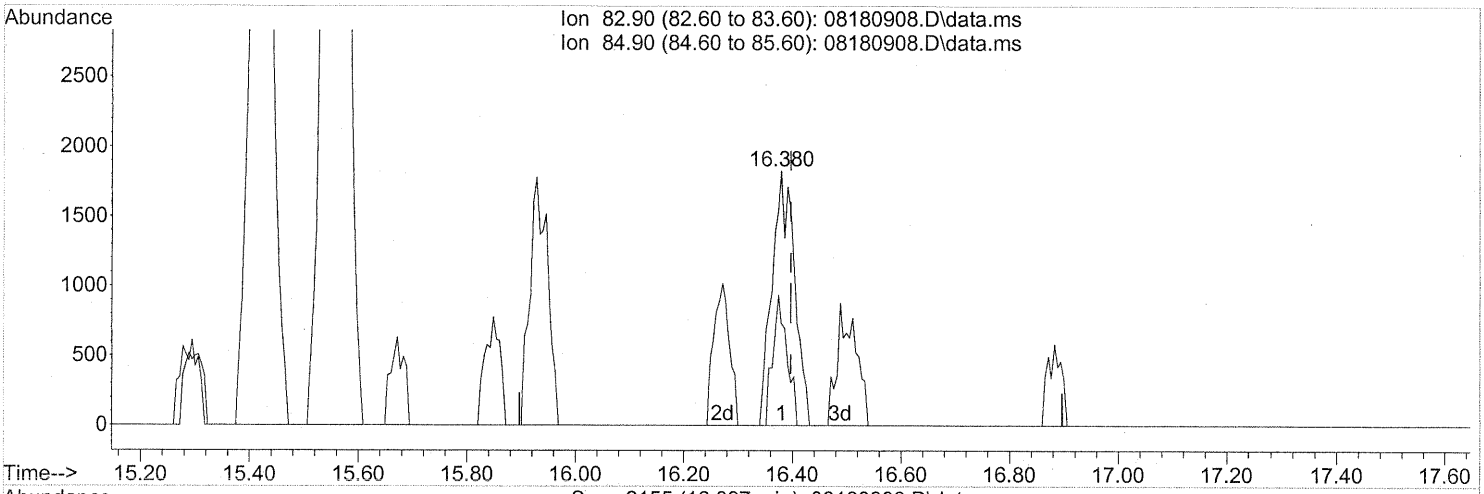
| Ion | Exp% | Act% |
|---|---|---|
| 84.10 | 100 | 100 |
| 69.10 | 38.70 | 35.70 |
| 56.10 | 127.50 | 125.15 |
| 0.00 | 0.00 | 0.00 |

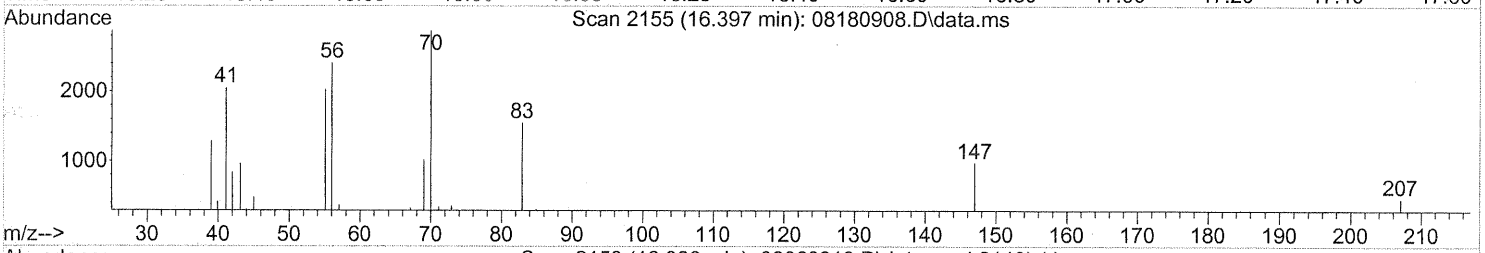
207

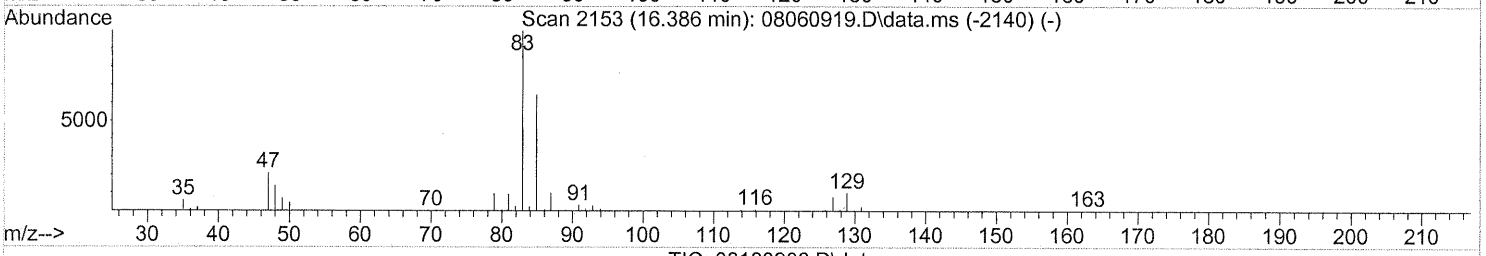
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 21 16:32:23 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(46) Bromodichloromethane (T)

16.380min (-0.017) 0.27ng

response 5228

| Ion | Exp% | Act% |
|---|---|---|
| 82.90 | 100 | 100 |
| 84.90 | 62.80 | 32.31# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

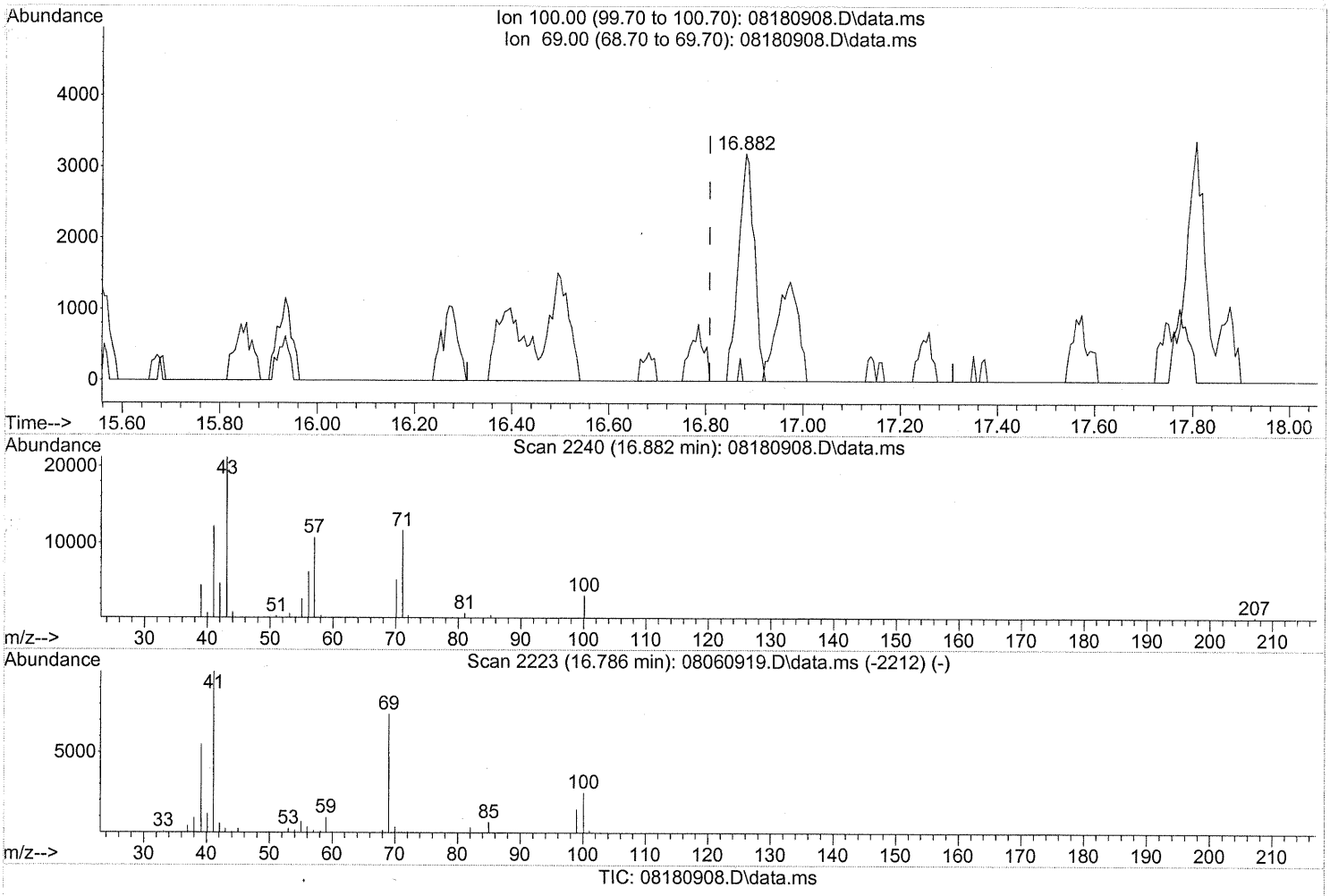
TP
8/25/09 EAM 8/25/09

208

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(50) Methyl Methacrylate (T)

16.882min (+0.074) 1.31ng

response 7149

| Ion | Exp% | Act% |
|---|---|---|
| 100.00 | 100 | 100 |
| 69.00 | 294.80 | 1.52# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

FP

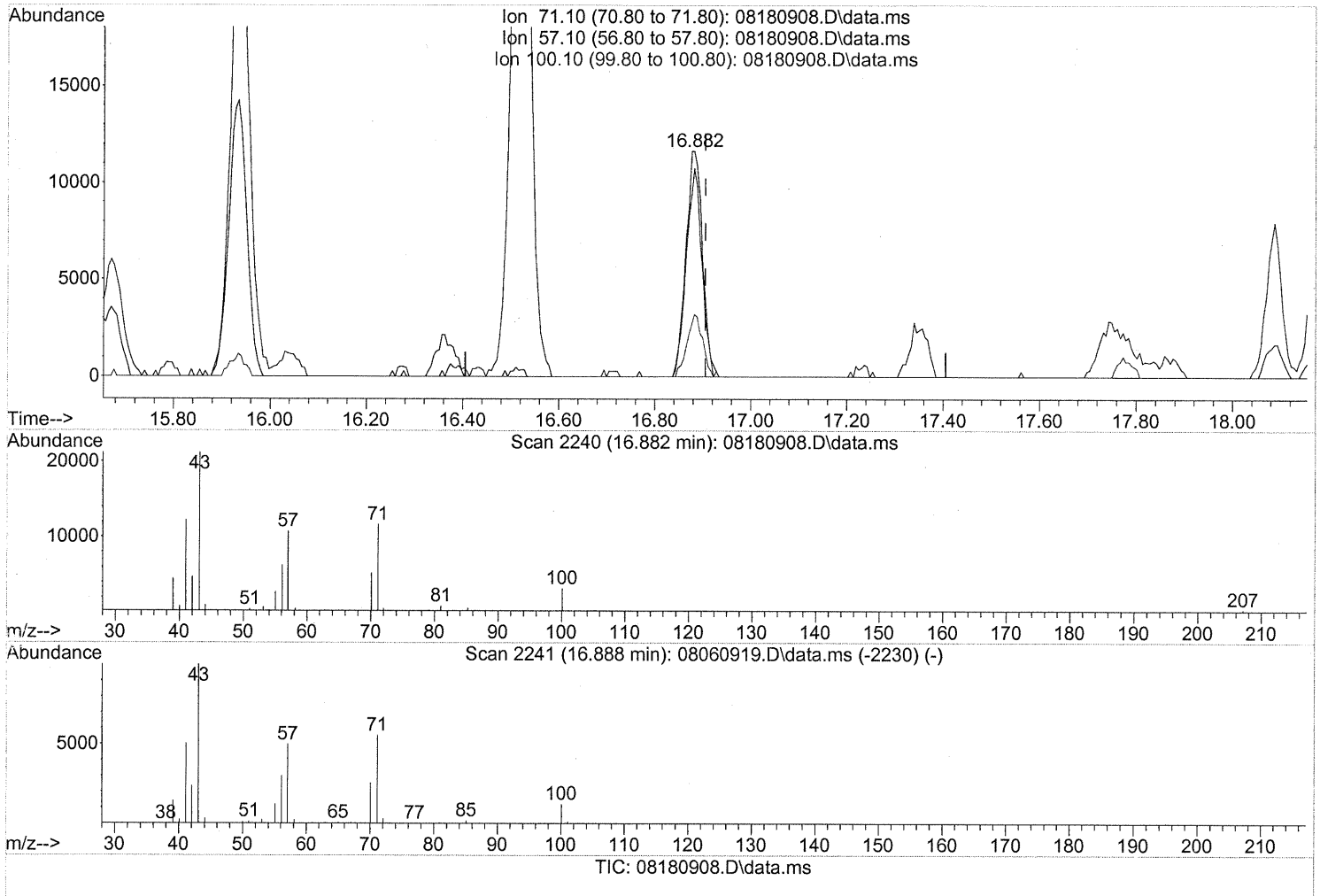
VOA 8/22/09 Em 8/25/09

209

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(51) n-Heptane (T)

16.882min (-0.023) 1.76ng

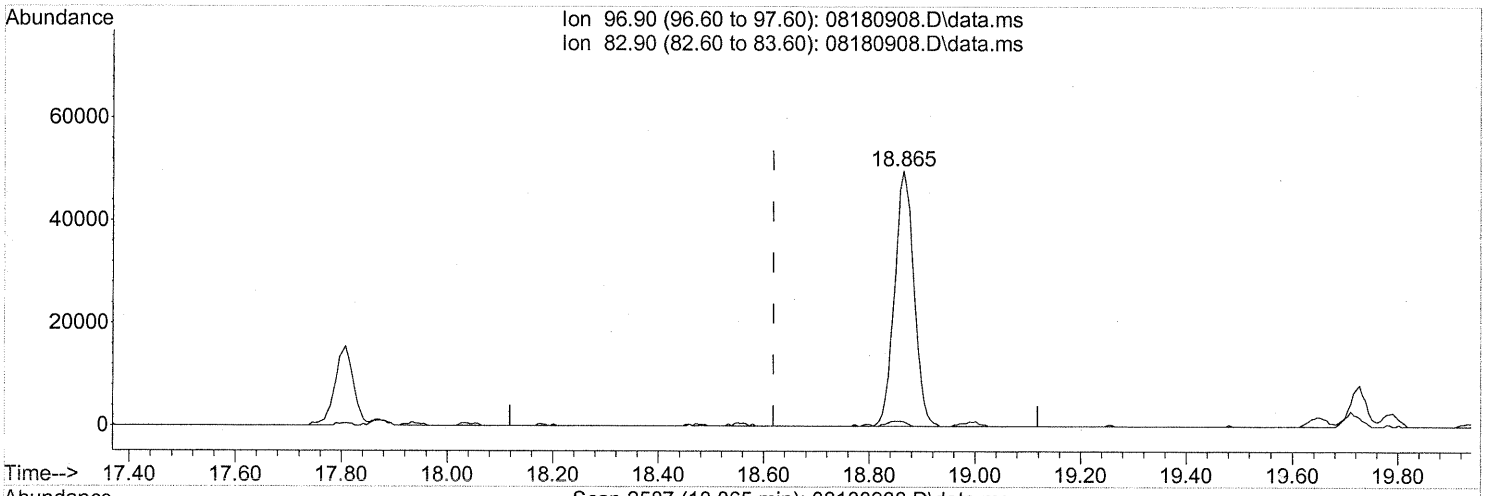
response 27905

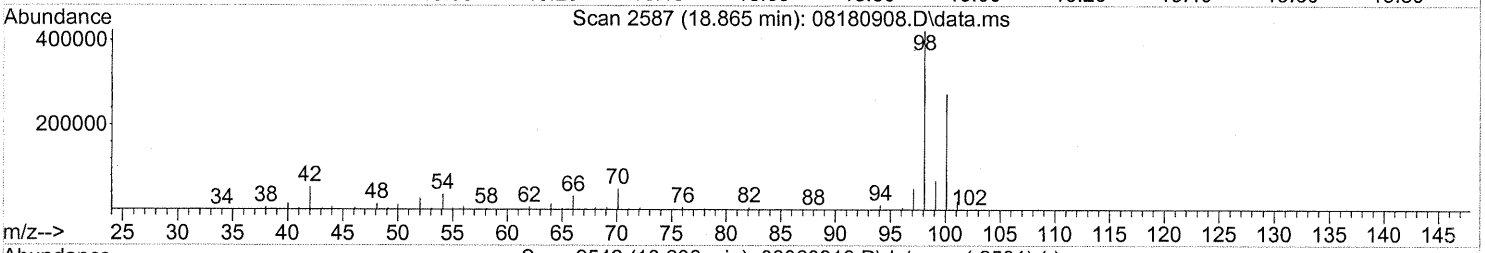
| Ion | Exp% | Act% |
|---|---|---|
| 71.10 | 100 | 100 |
| 57.10 | 91.90 | 87.39 |
| 100.10 | 26.40 | 25.62 |
| 0.00 | 0.00 | 0.00 |

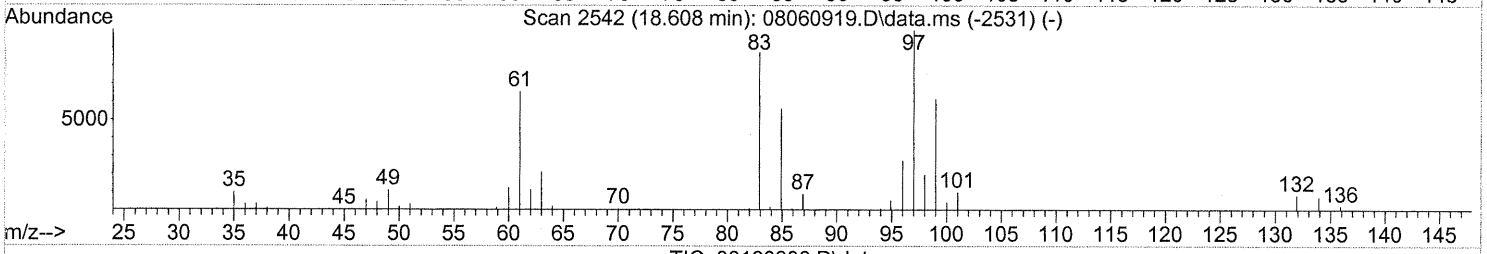
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(55) 1,1,2-Trichloroethane (T)

18.865min (+0.246) 9.77ng

response 126627

| Ion | Exp% | Act% |
|---|---|---|
| 96.90 | 100 | 100 |
| 82.90 | 90.30 | 1.84# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

TP

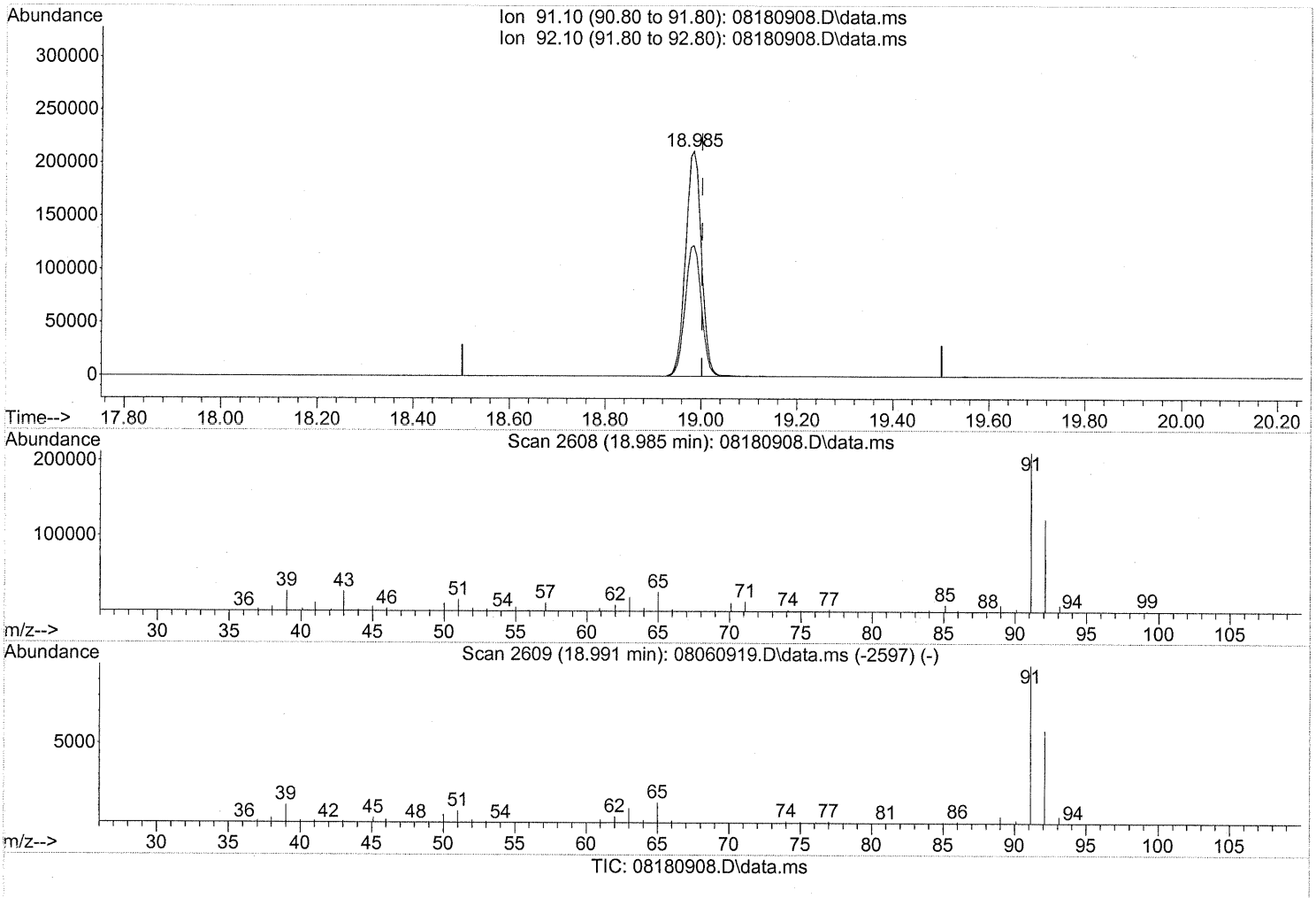
SDA 8/22/09 EDM 8/25/09

211

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(58) Toluene (T)

18.985min (-0.017) 8.78ng

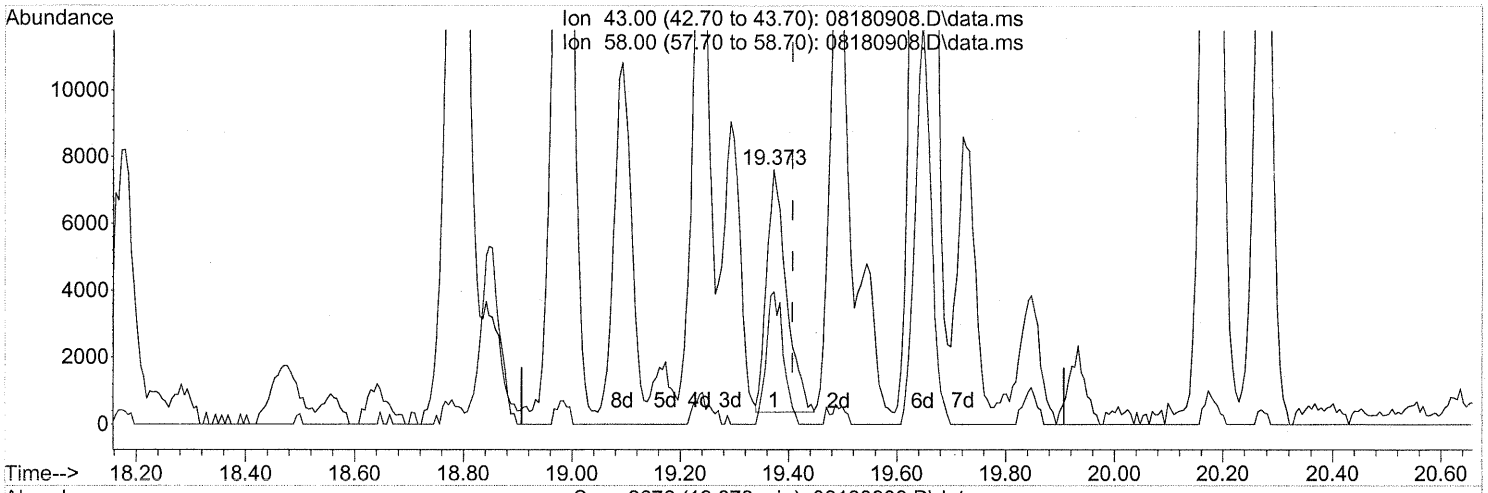
response 481242

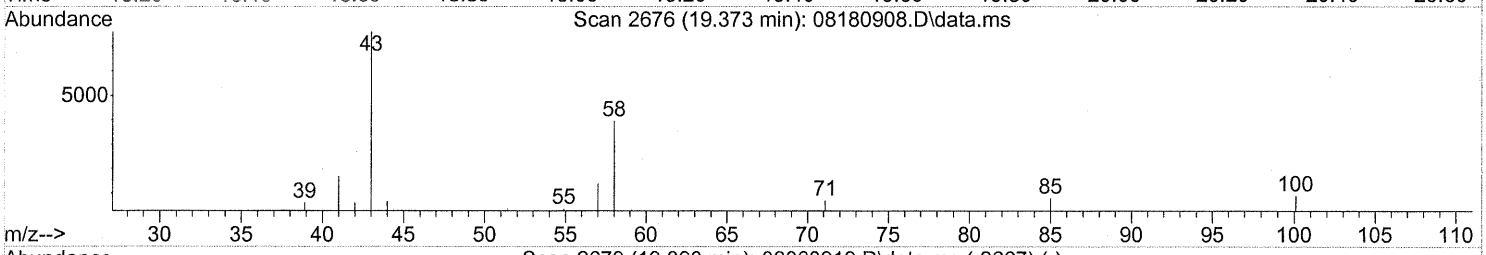
| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 92.10 | 58.60 | 59.52 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

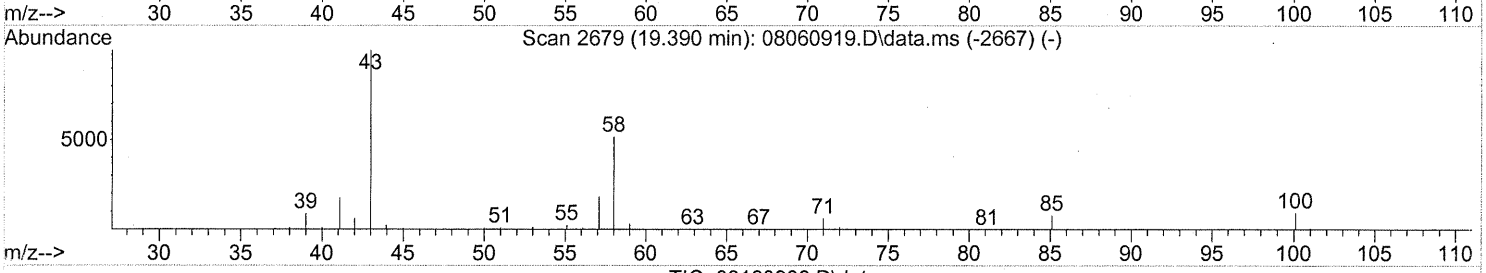
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(59) 2-Hexanone (T)

19.373min (-0.034) 0.51ng

response 18545

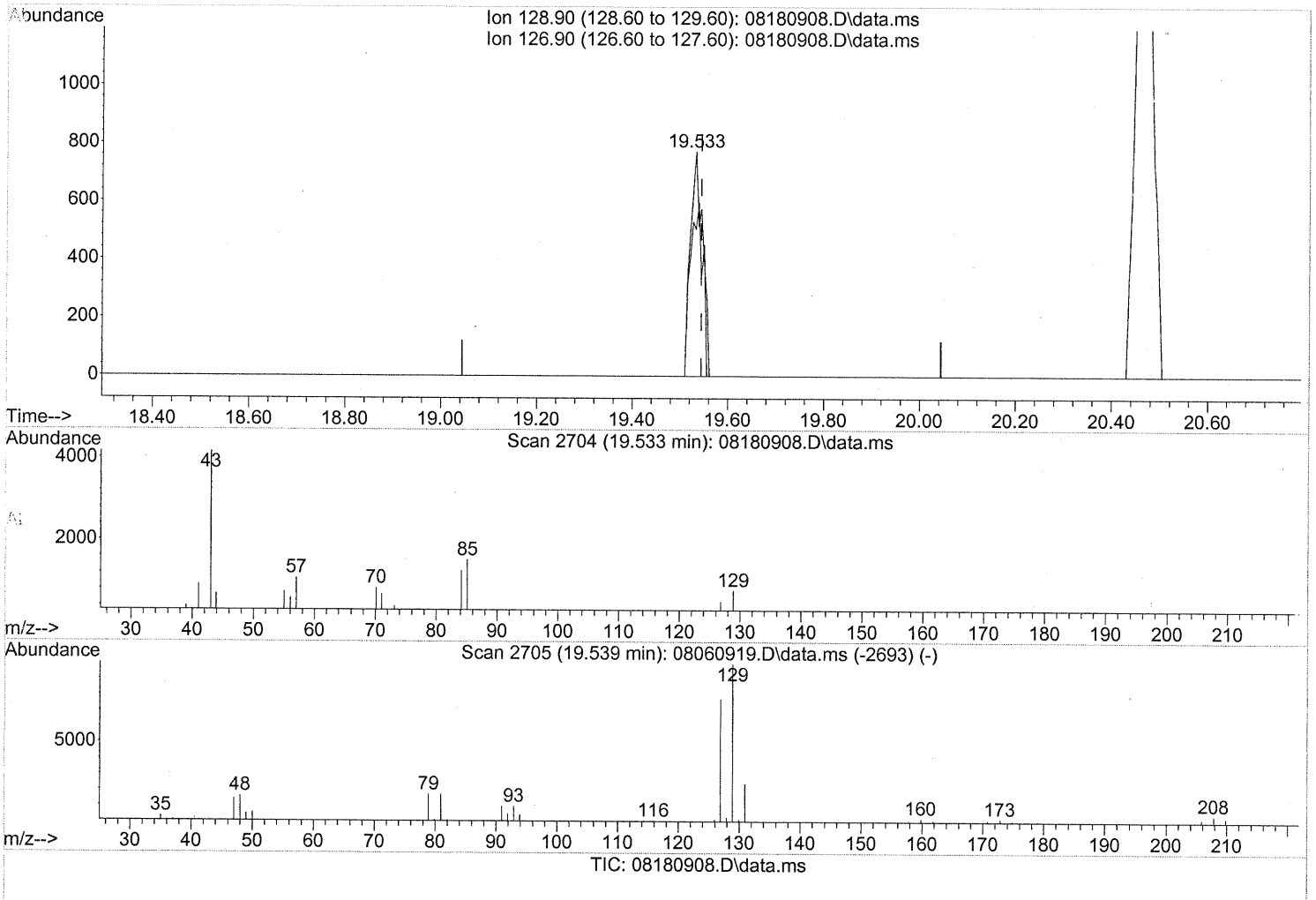
| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 58.00 | 50.90 | 47.20 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

213

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(60) Dibromochloromethane (T)

19.533min (-0.012) 0.11ng

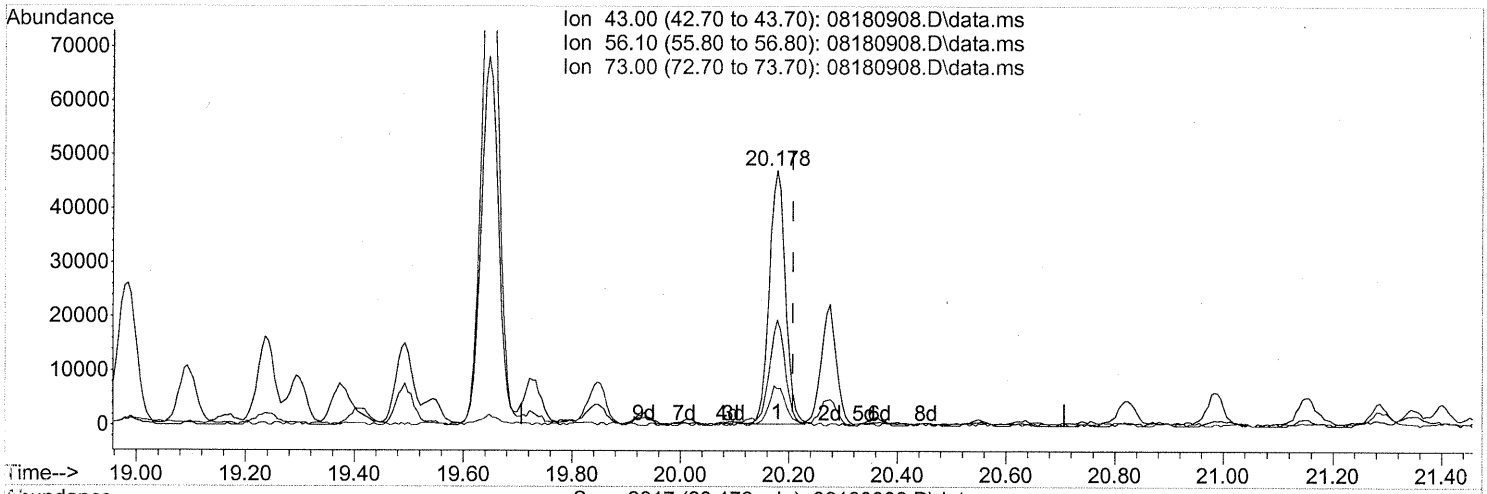
response 1370

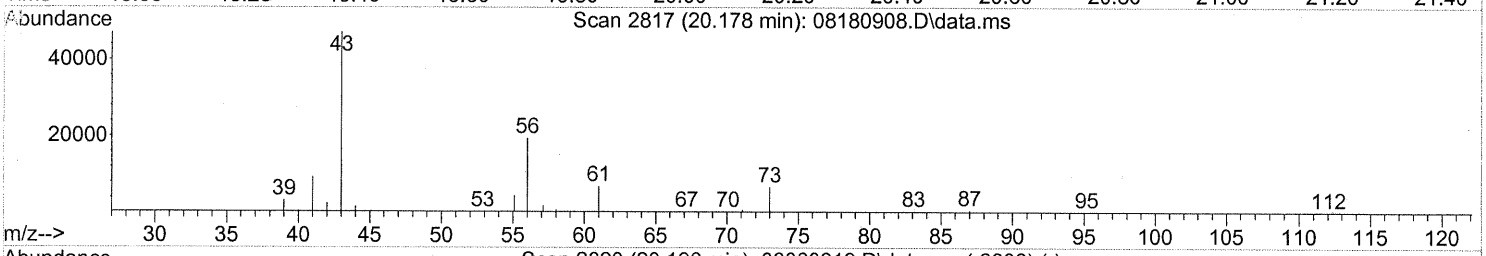
| Ion | Exp% | Act% |
|---|---|---|
| 128.90 | 100 | 100 |
| 126.90 | 76.40 | 78.61 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

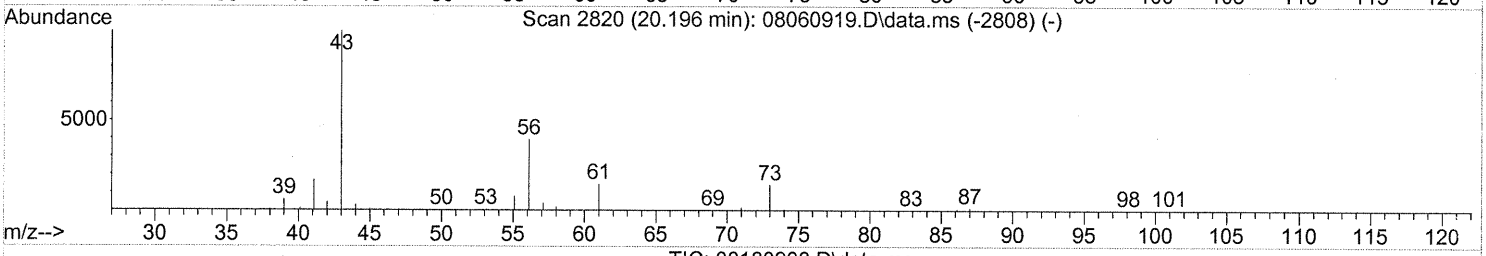
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(62) n-Butyl Acetate (T)

20.178min (-0.029) 2.26ng

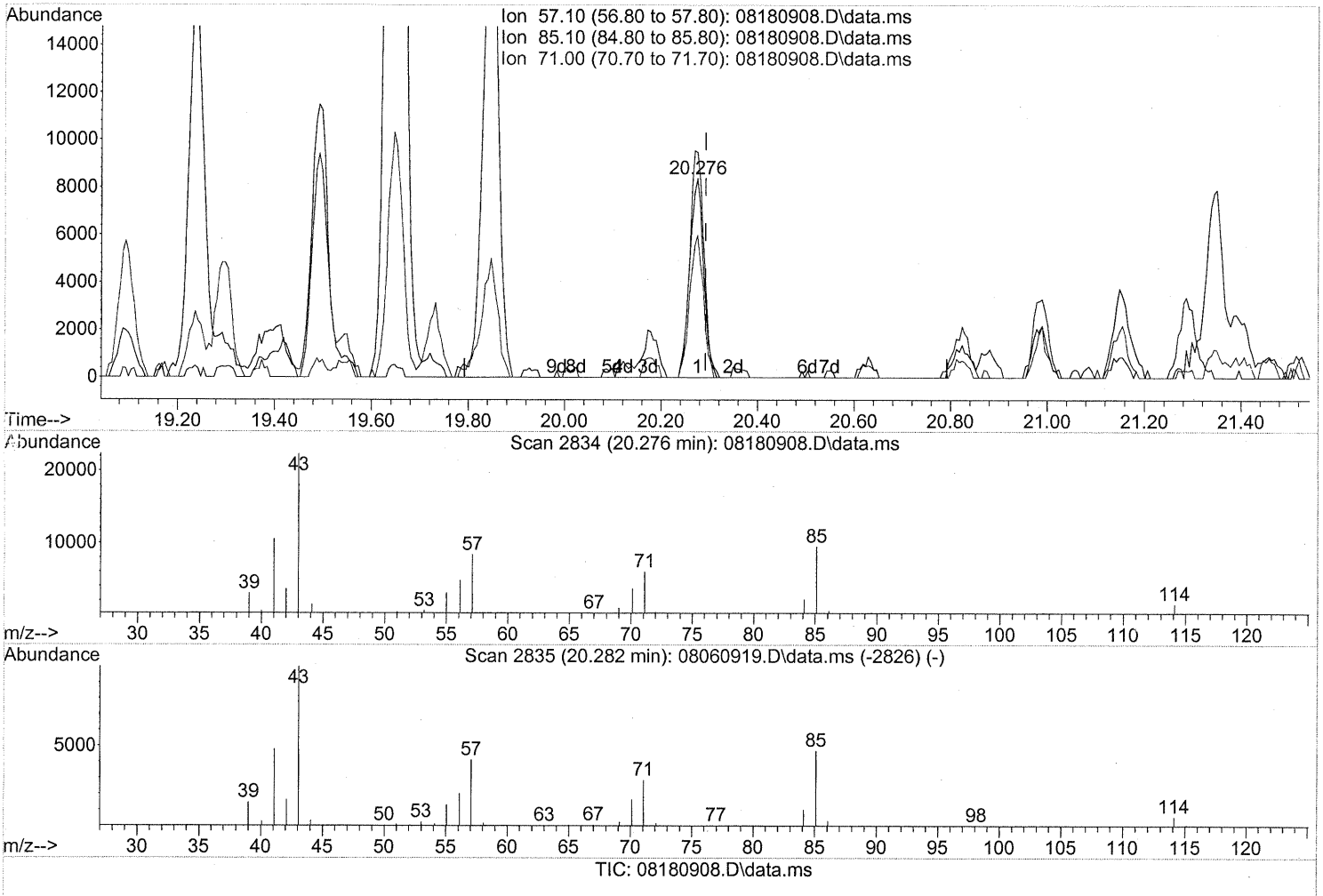
response 97173

| Ion | Exp% | Act% |
|---|---|---|
| 43.00 | 100 | 100 |
| 56.10 | 38.50 | 40.94 |
| 73.00 | 14.80 | 17.24 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(63) n-Octane (T)

20.276min (-0.017) 1.29ng

response 17063

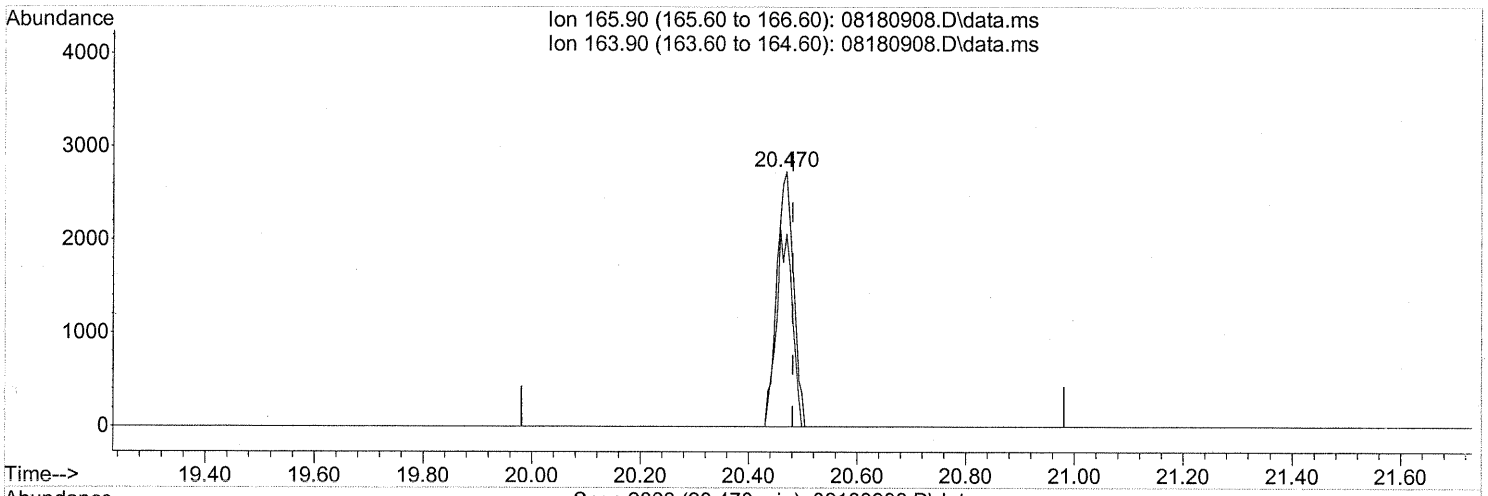
| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 85.10 | 107.00 | 114.24 |
| 71.00 | 68.10 | 69.58 |
| 0.00 | 0.00 | 0.00 |

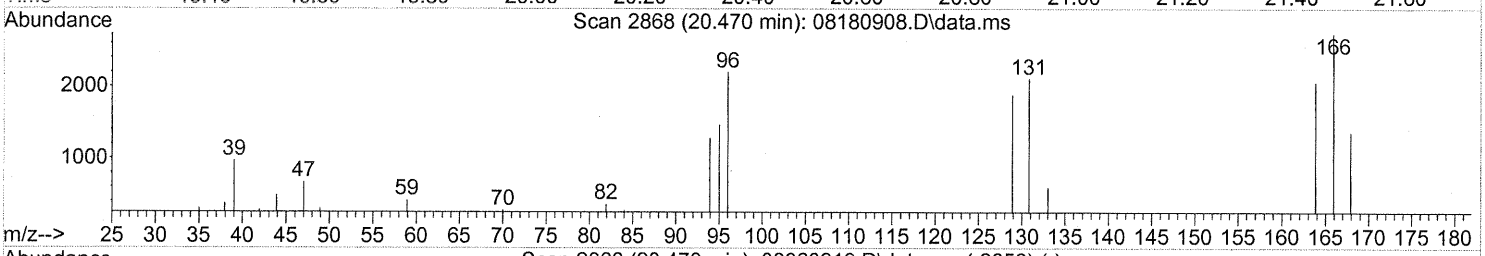
216

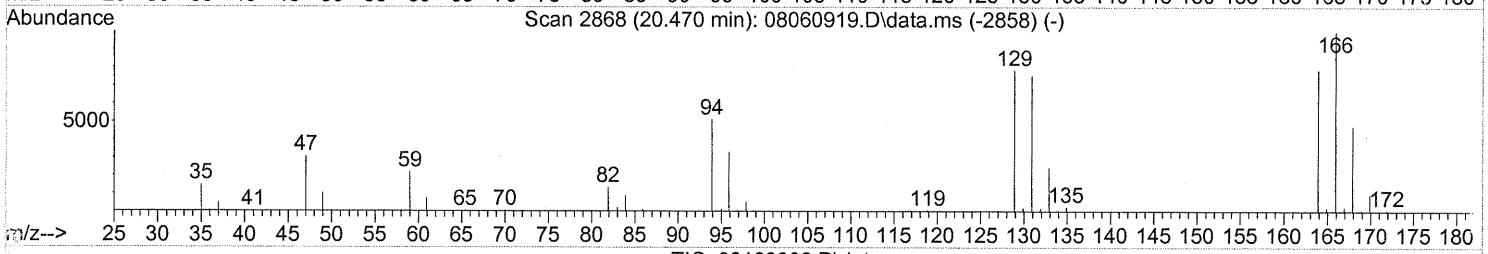
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(64) Tetrachloroethene (T)

20.470min (-0.012) 0.46ng

response 5830

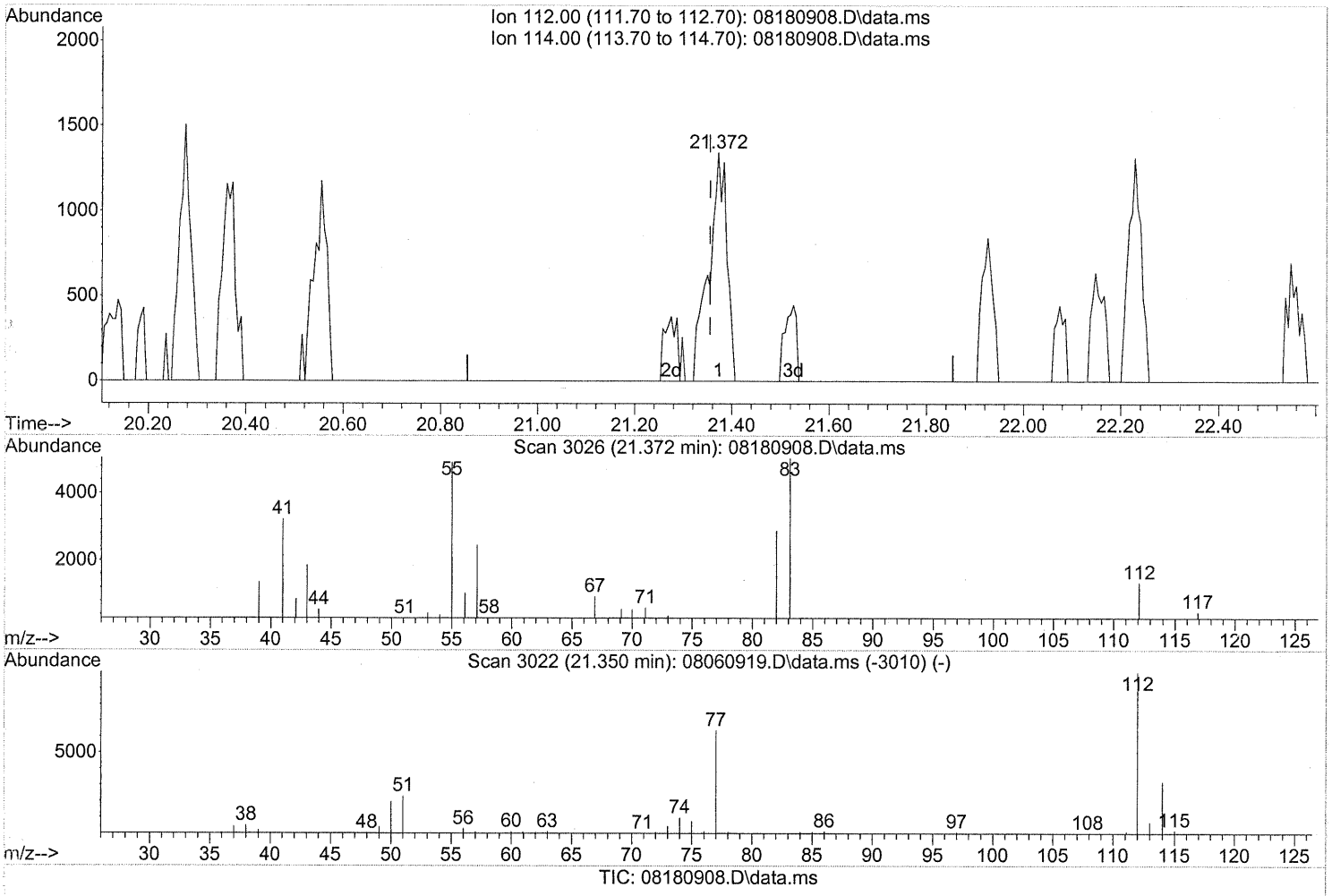
| Ion | Exp% | Act% |
|---|---|---|
| 165.90 | 100 | 100 |
| 163.90 | 77.80 | 73.74 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

217

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(65) Chlorobenzene (T)

21.372min (+0.017) 0.10ng

response 3470

| 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

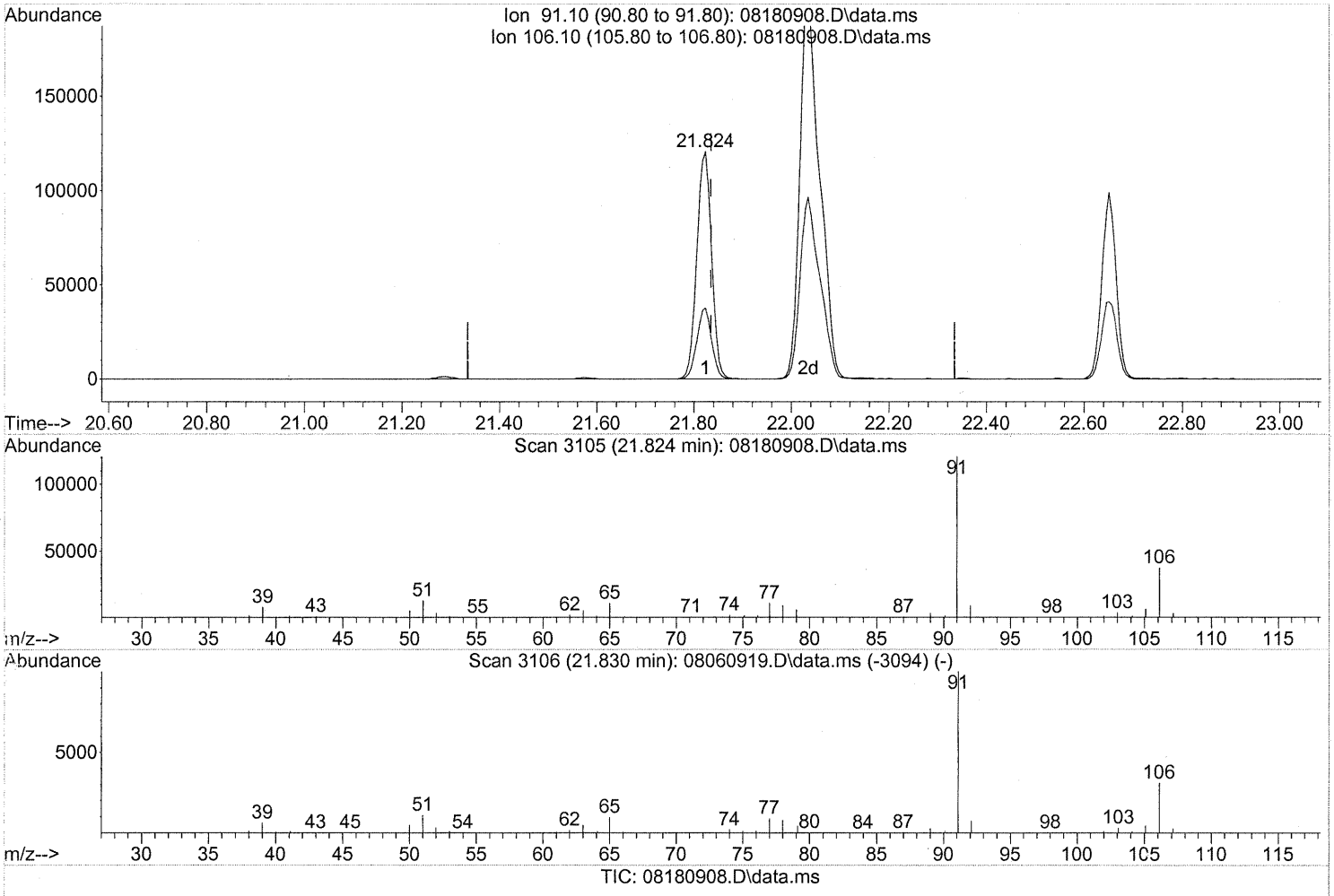
1891 8/22/09 EM 8/25/09

218

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(66) Ethylbenzene (T)

21.824min (-0.012) 4.02ng

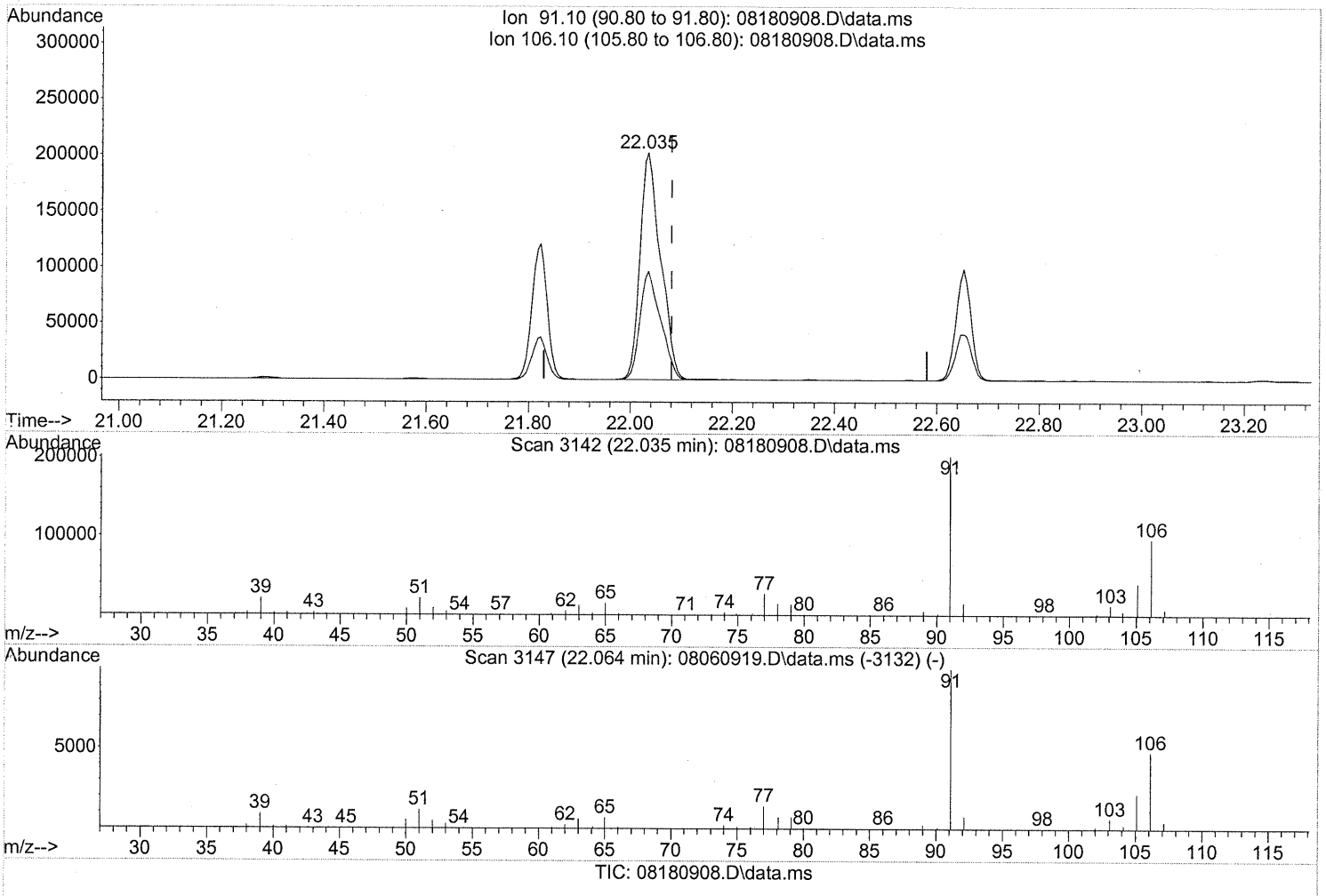
response 252120

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 30.10 | 30.73 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(67) m- & p-Xylenes (T)

22.035min (-0.046) 11.19ng

response 567579

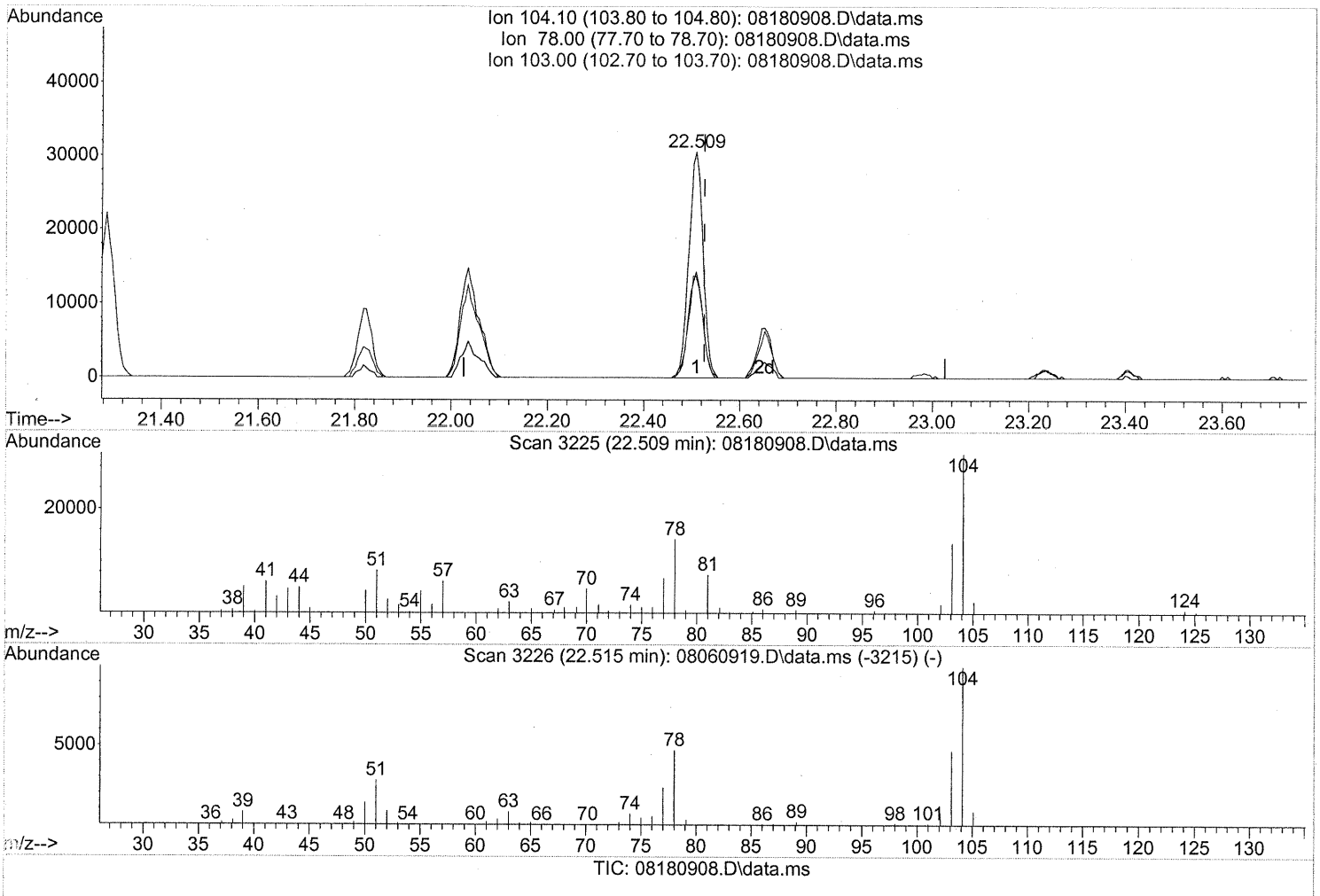
| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 46.90 | 47.87 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

220

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(69) Styrene (T)

22.509min (-0.017) 1.71ng

response 62837

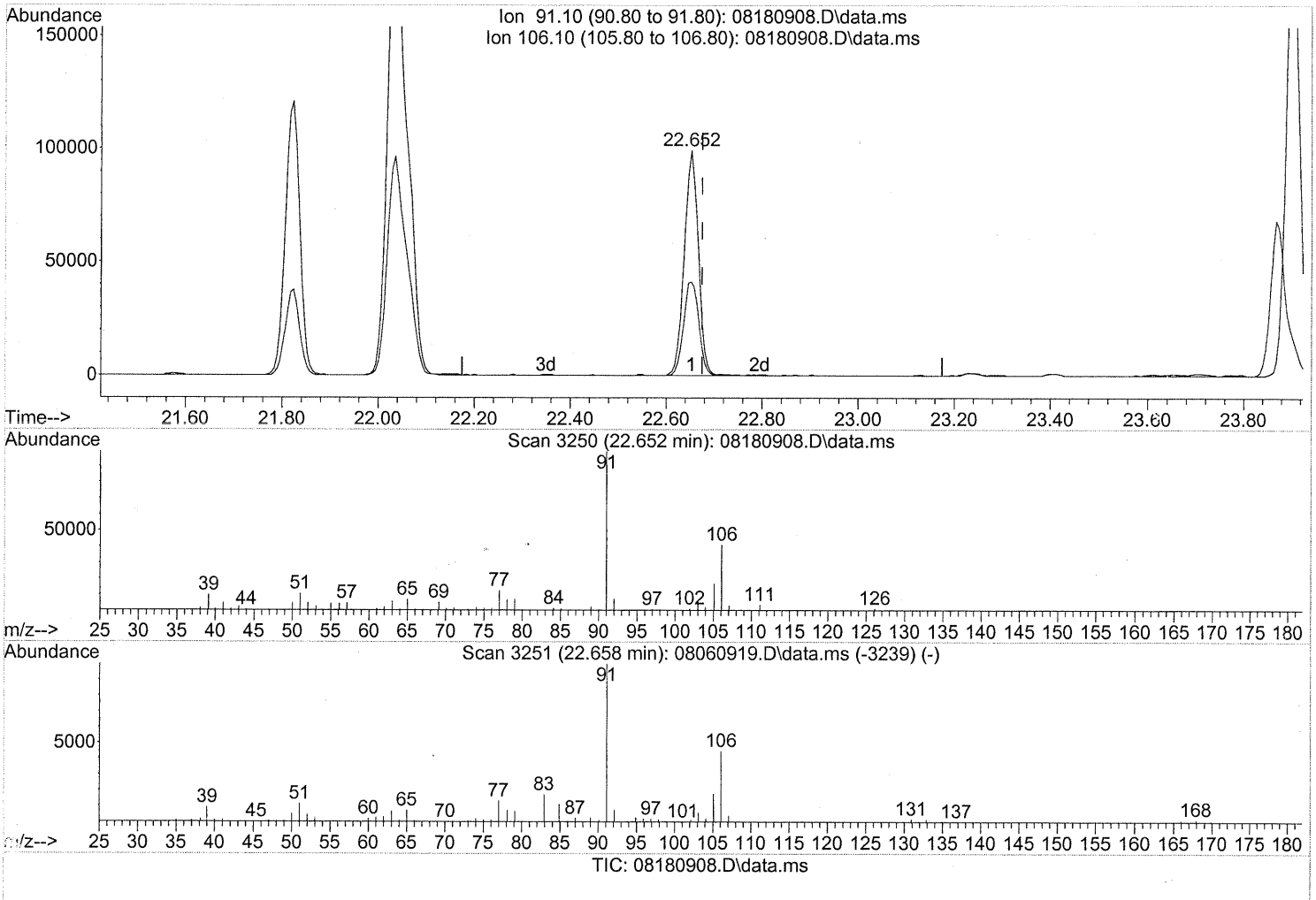
| Ion | Exp% | Act% |
|---|---|---|
| 104.10 | 100 | 100 |
| 78.00 | 47.10 | 47.62 |
| 103.00 | 46.20 | 46.34 |
| 0.00 | 0.00 | 0.00 |

221

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




(70) o-Xylene (T)

22.652min (-0.023) 3.97ng

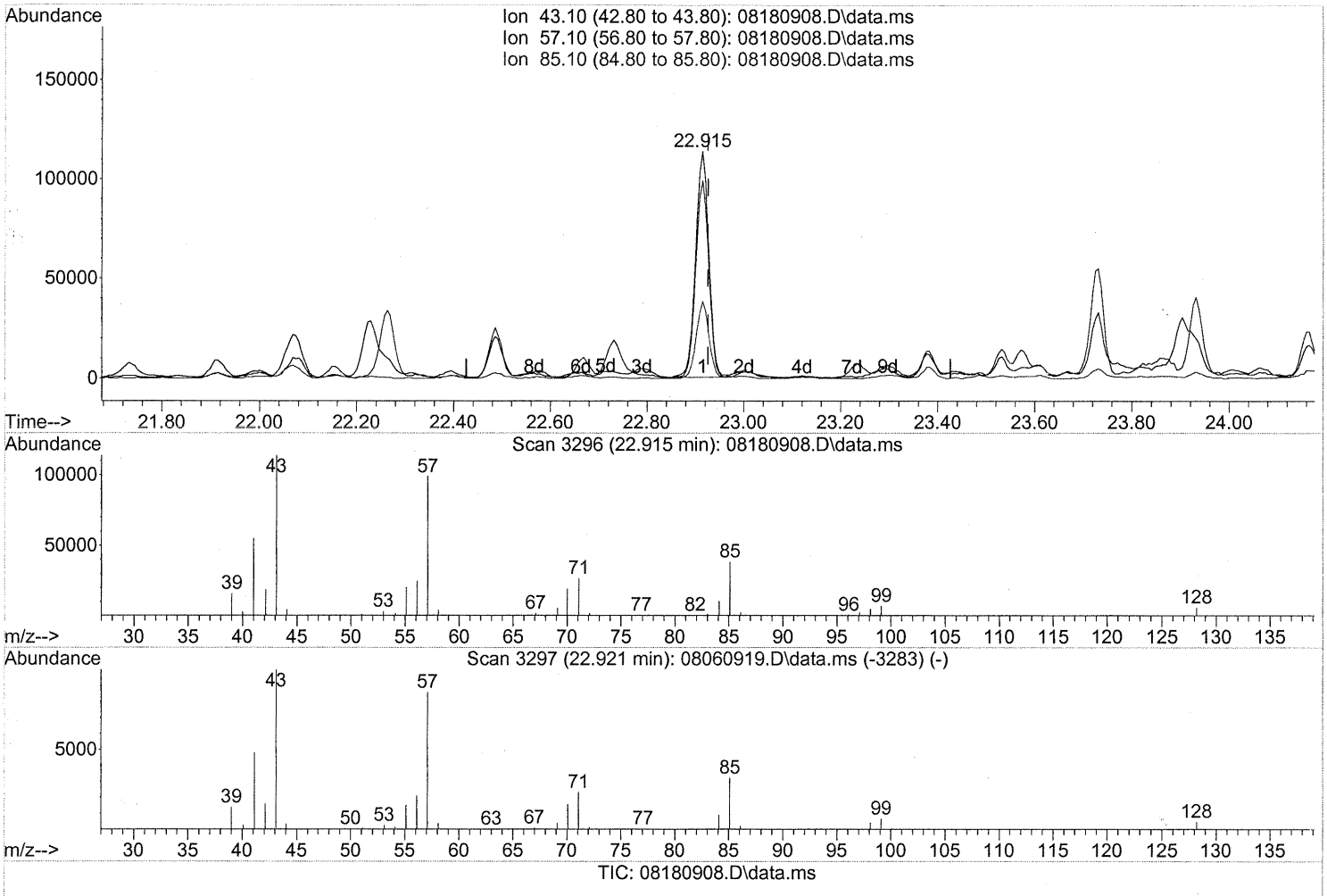
response 201738

| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 106.10 | 44.10 | 44.69 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(71) n-Nonane (T)

22.915min (-0.012) 6.30ng

response 212687

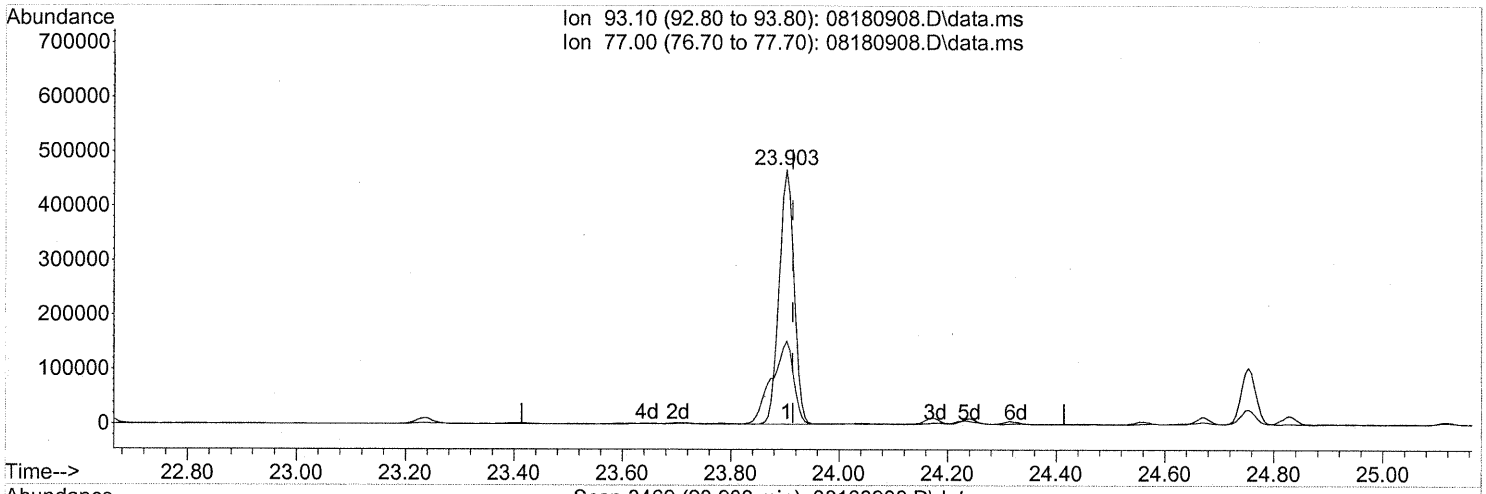
| Ion | Exp% | Act% |
|---|---|---|
| 43.10 | 100 | 100 |
| 57.10 | 84.90 | 87.06 |
| 85.10 | 30.40 | 33.07 |
| 0.00 | 0.00 | 0.00 |

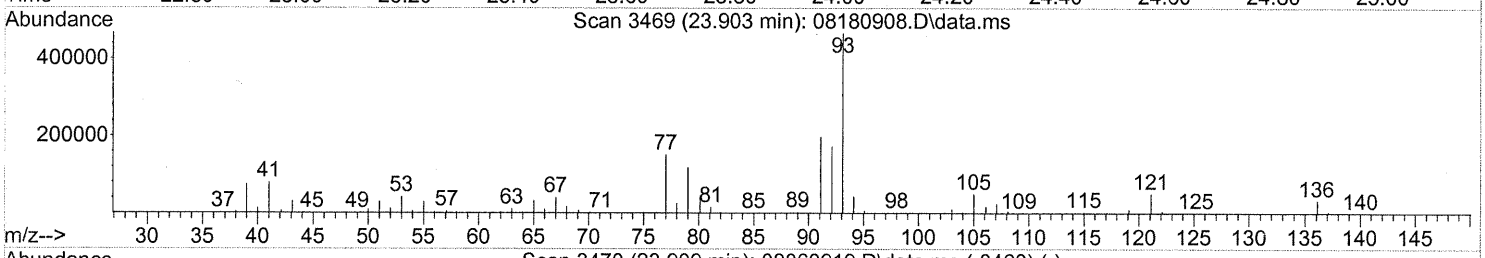
223

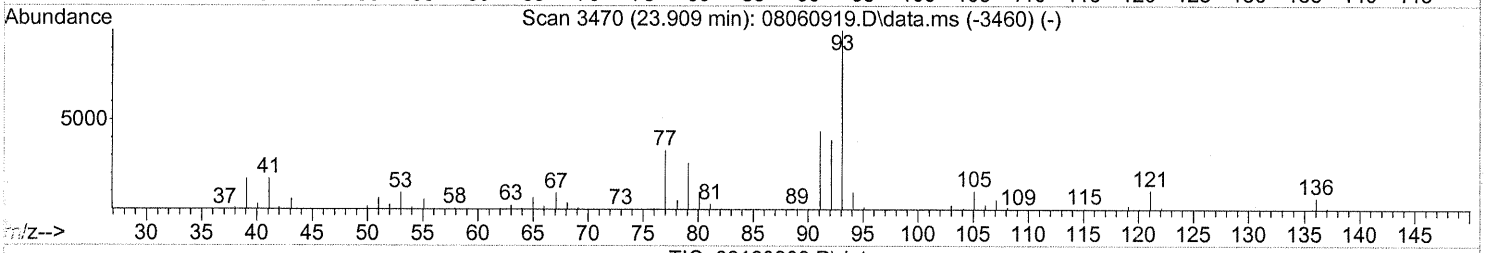
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(75) alpha-Pinene (T)

23.903min (-0.012) 27.04ng

response 890235

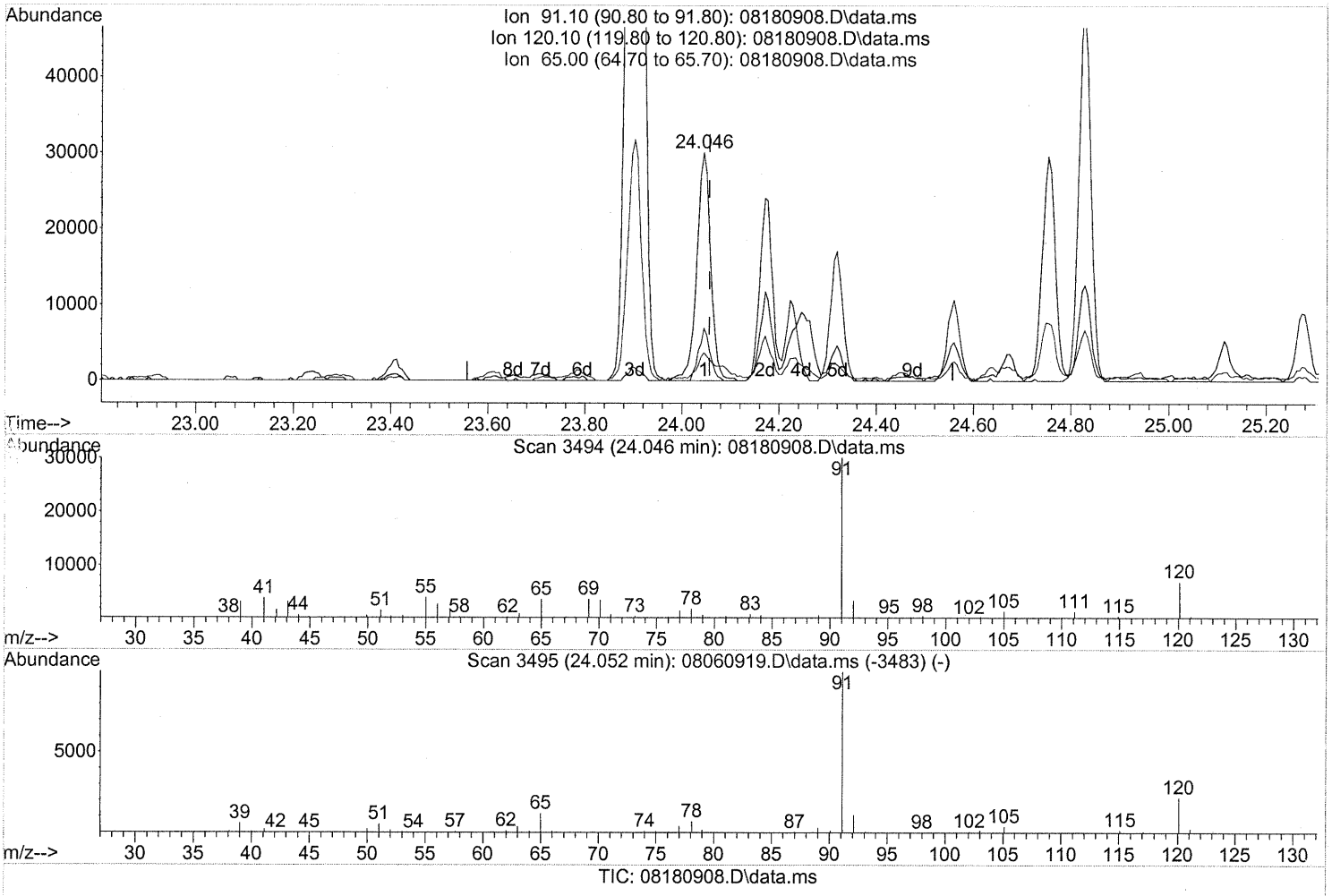
| Ion | Exp% | Act% |
|---|---|---|
| 93.10 | 100 | 100 |
| 77.00 | 32.40 | 47.90 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

224

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(76) n-Propylbenzene (T)

24.046min (-0.012) 0.74ng

response 59962

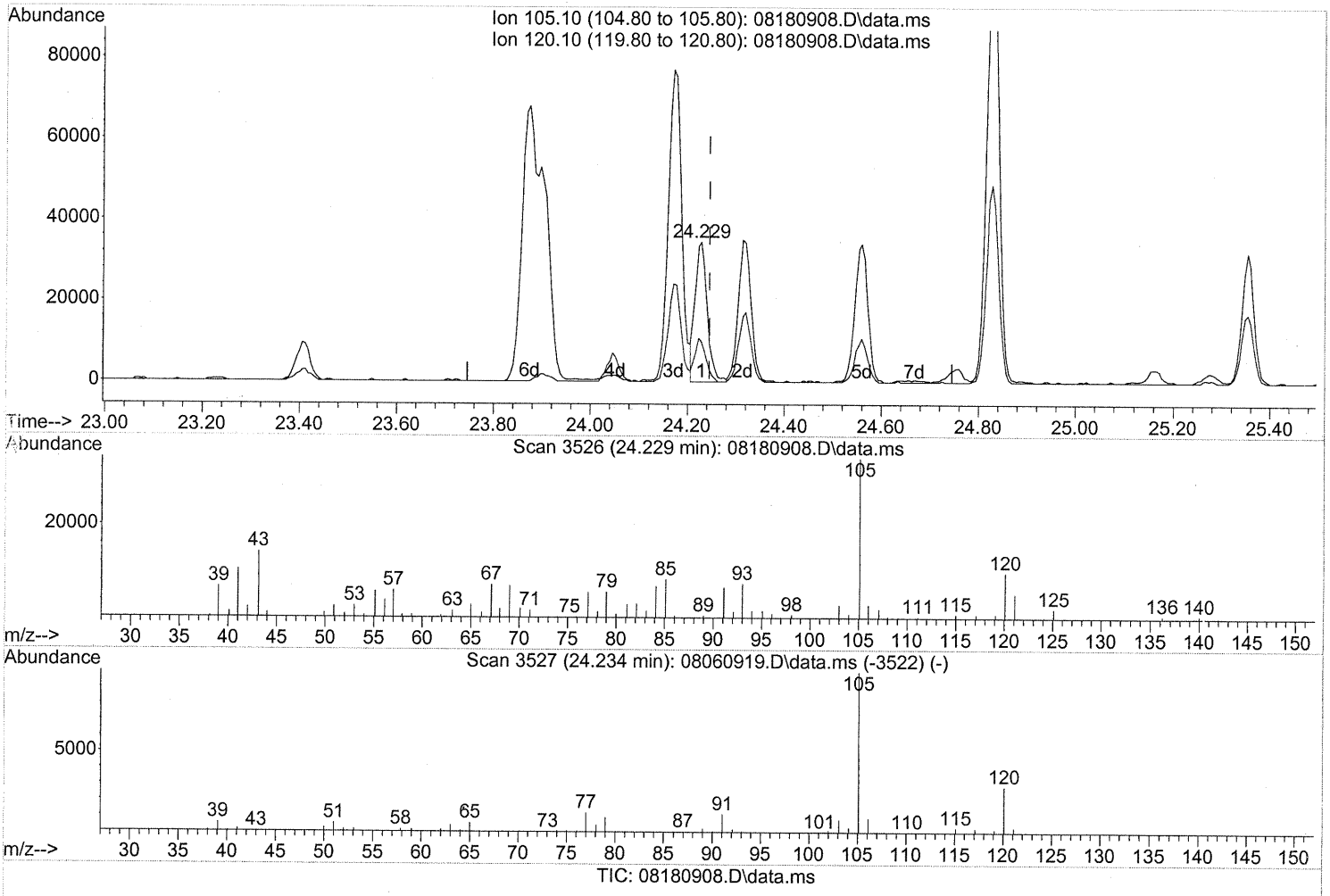
| Ion | Exp% | Act% |
|---|---|---|
| 91.10 | 100 | 100 |
| 120.10 | 21.60 | 18.87 |
| 65.00 | 12.00 | 17.63 |
| 0.00 | 0.00 | 0.00 |

225

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(78) 4-Ethyltoluene (T)

24.229min (-0.017) 1.01ng

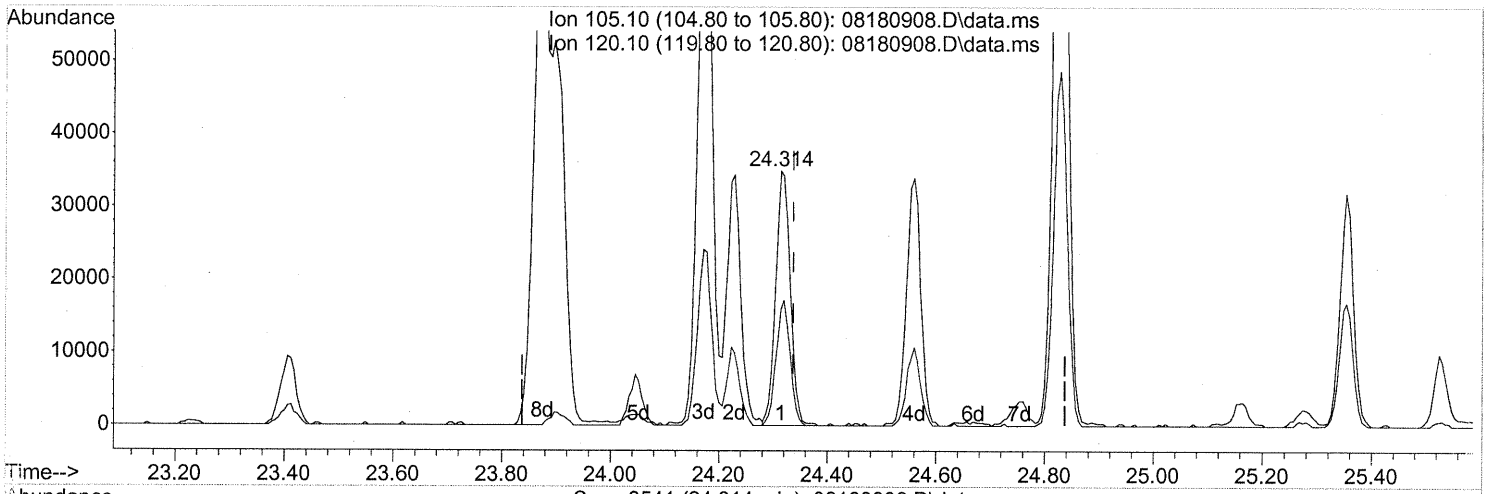
response 59899

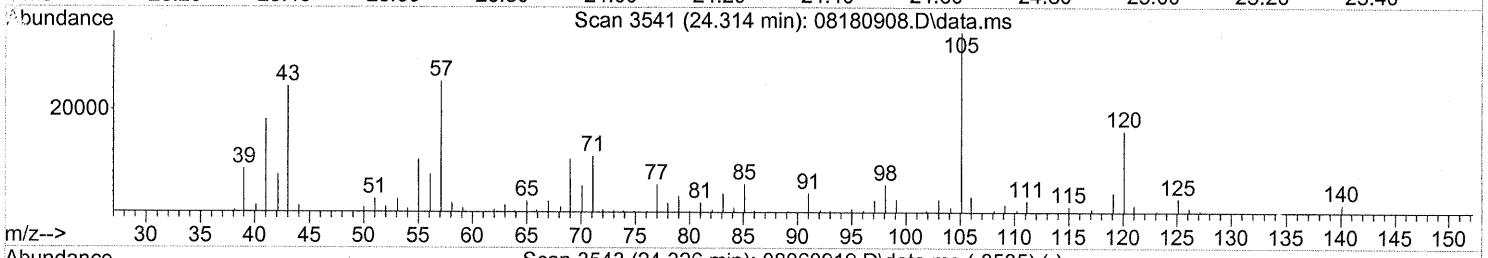
| Ion | Exp% | Act% |
|---|---|---|
| 105.10 | 100 | 100 |
| 120.10 | 28.40 | 28.62 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

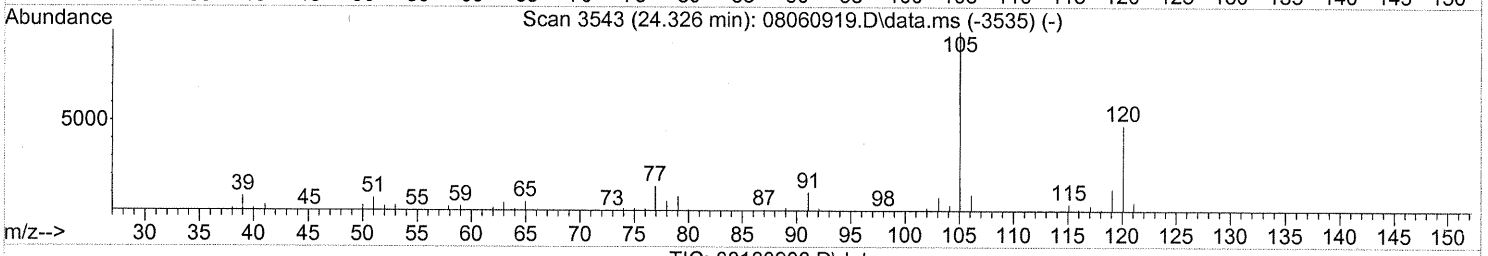
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(79) 1,3,5-Trimethylbenzene (T)

24.314min (-0.023) 1.30ng

response 65043

| Ion | Exp% | Act% |
|---|---|---|
| 105.10 | 100 | 100 |
| 120.10 | 46.80 | 46.88 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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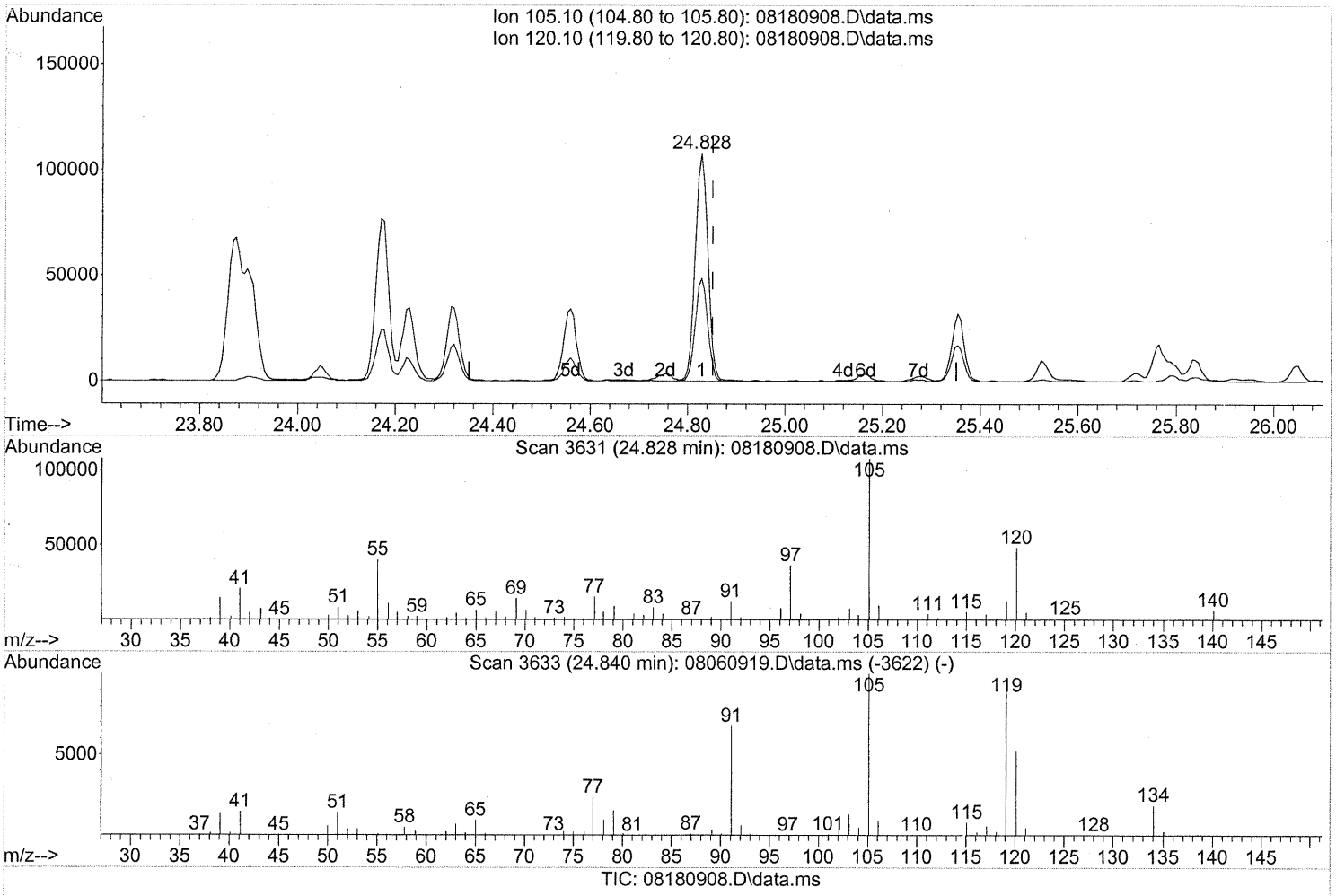
Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(82) 1,2,4-Trimethylbenzene (T)

24.828min (-0.023) 3.77ng

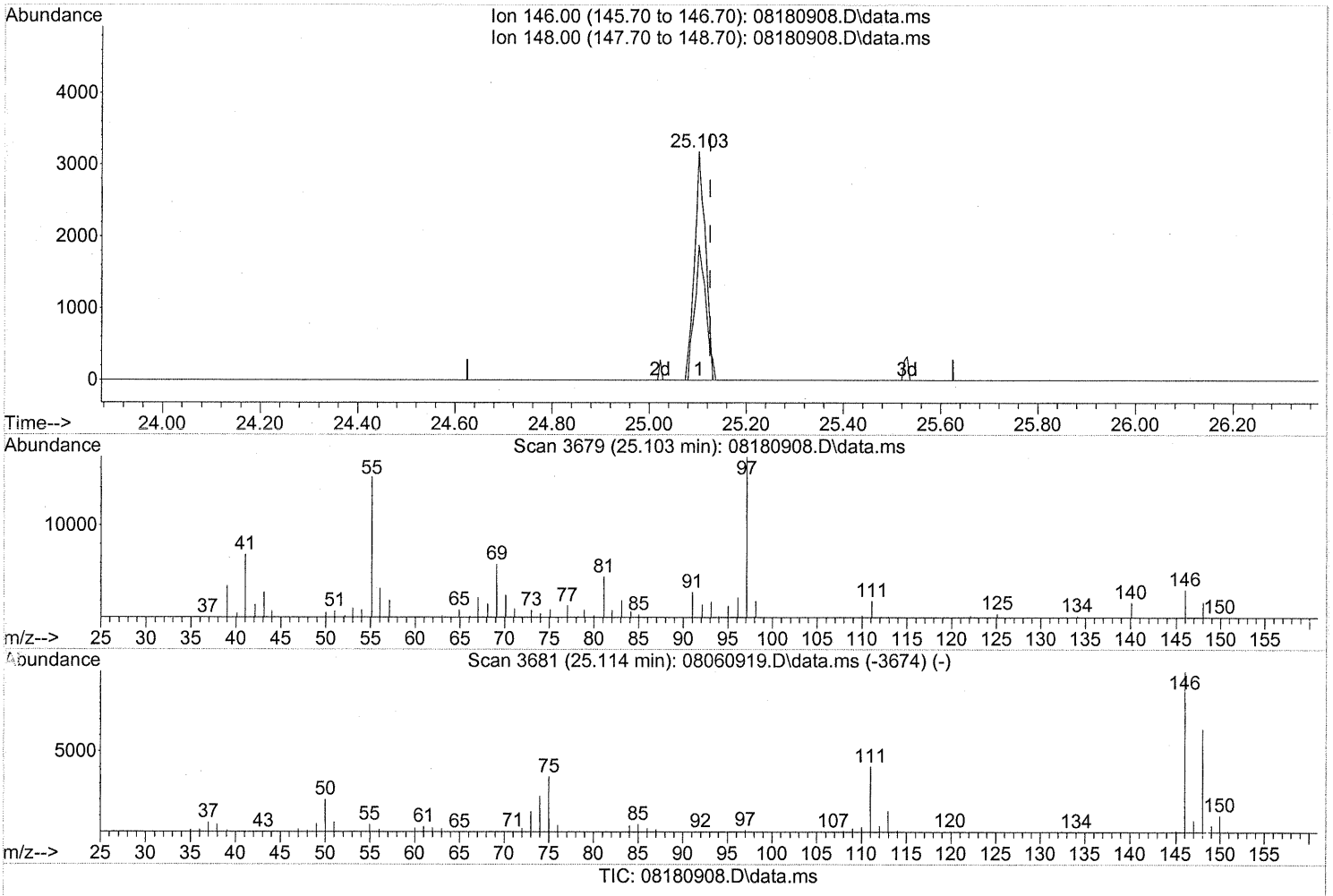
response 192992

| Ion | Exp% | Act% |
|---|---|---|
| 105.10 | 100 | 100 |
| 120.10 | 52.60 | 44.15 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.103min (-0.023) 0.18ng

response 5027

| Ion | Exp% | Act% |
|---|---|---|
| 146.00 | 100 | 100 |
| 148.00 | 62.20 | 60.18 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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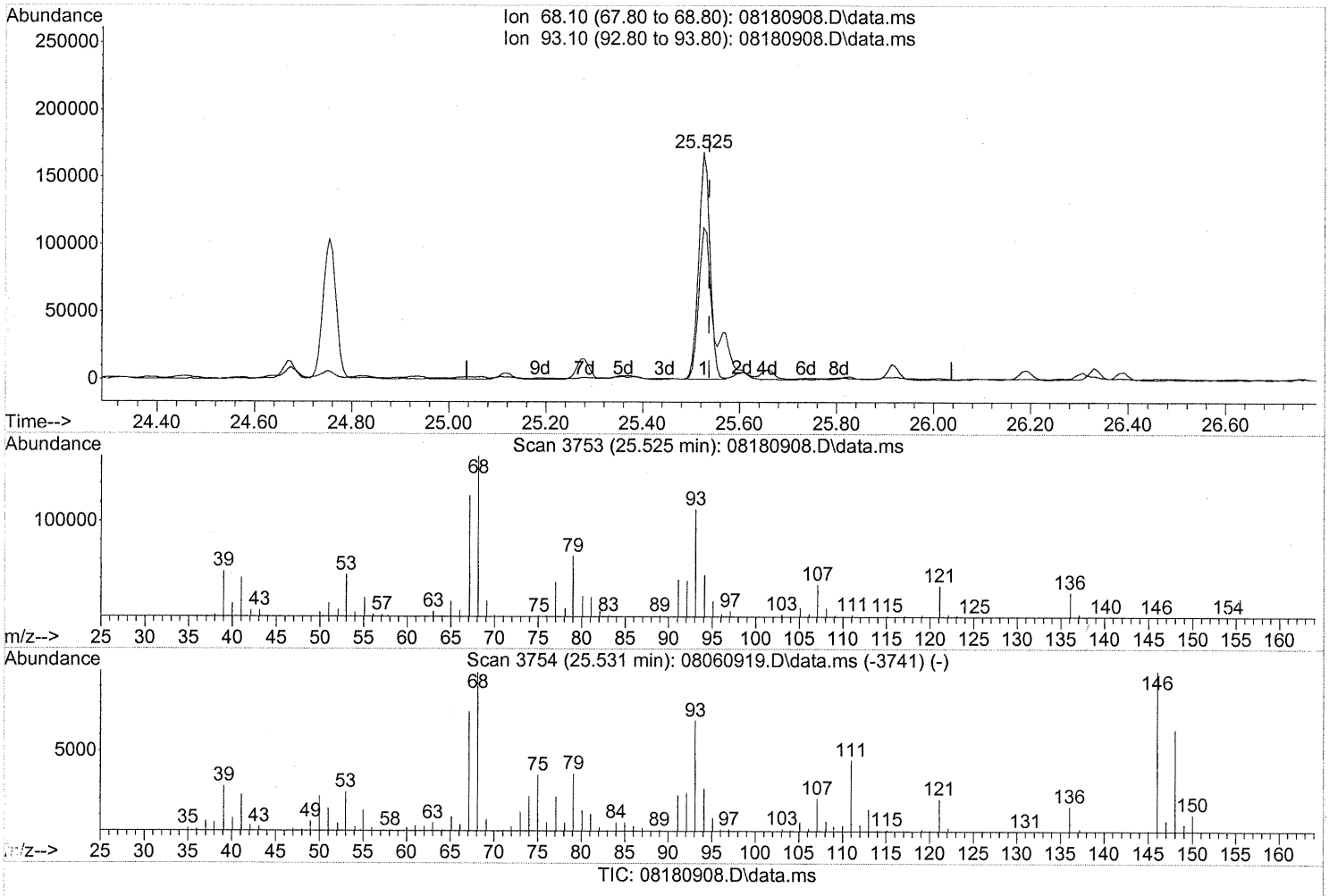
# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(91) d-Limonene (T)

25.525min (-0.012) 12.49ng

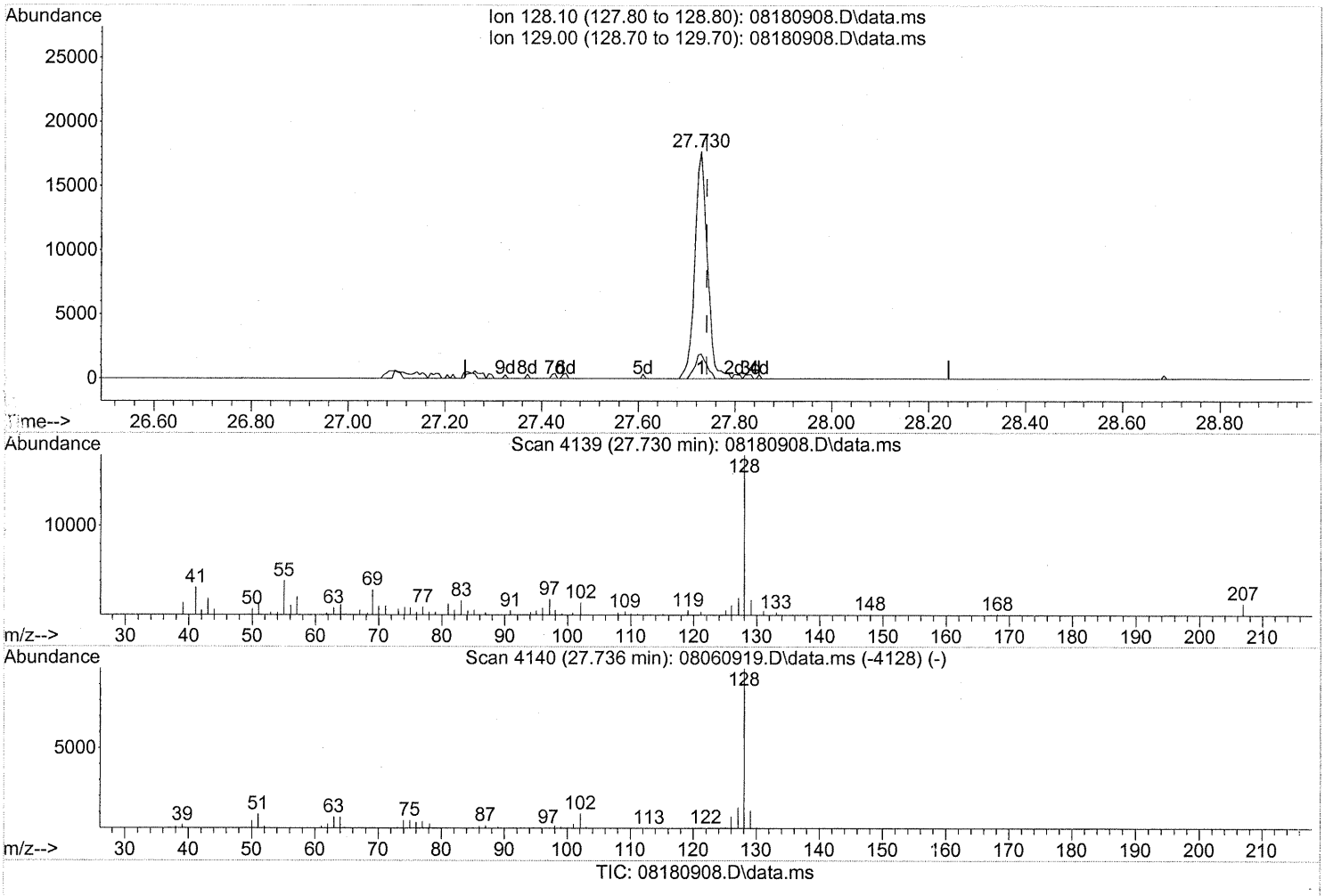
response 271691

| Ion | Exp% | Act% |
|---|---|---|
| 68.10 | 100 | 100 |
| 93.10 | 67.90 | 96.17# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180908.D
Acq On : 18 Aug 2009 19:25
Operator : WA
Sample : P0902766-001 dup (1000mL)
Misc : Env. Health & Engineering 101160
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 18 20:08:03 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration




TIC: 08180908.D\data.ms

(95) Naphthalene (T)

27.730min (-0.012) 0.45ng

response 31529

| Ion | Exp% | Act% |
|---|---|---|
| 128.10 | 100 | 100 |
| 129.00 | 10.90 | 10.04 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

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INITIAL CALIBRATION STANDARDS

# Response Factor Report GCMS13

Method : J:\MS13\METHODS\R13080609.M (RTE Integrator)
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

Calibration Files
0.1 =08060914.D 0.2 =08060915.D 0.5 =08060916.D 1.0 =08060917.D 5.0 =08060918.D
25 =08060919.D 50 =08060920.D 100 =08060921.D = =

| | | Compound | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 25 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | IR | Bromochloromethan | ---------- | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | ---------- | | |
| 2) | T | Propene | 2.083 | 2.046 | 1.527 | 1.452 | 1.677 | 1.785 | 1.456 | 1.699 | 1.716 | 14.33 |
| 3) | T | Dichlorodifluorom | 3.199 | 3.005 | 2.791 | 2.724 | 2.691 | 2.912 | 2.335 | 2.776 | 2.804 | 9.02 |
| 4) | T | Chloromethane | 1.963 | 2.024 | 1.872 | 1.893 | 1.705 | 2.186 | 1.722 | 1.706 | 1.884 | 9.13 |
| 5) | T | 1,2-Dichloro-1,1, | 1.177 | 1.316 | 1.196 | 1.051 | 1.039 | 1.184 | 0.985 | 1.166 | 1.139 | 9.39 |
| 6) | T | Vinyl Chloride | 1.724 | 1.755 | 1.687 | 1.750 | 1.769 | 2.054 | 1.707 | 2.034 | 1.810 | 8.12 |
| 7) | T | 1,3-Butadiene | 1.207 | 1.292 | 1.234 | 1.222 | 1.230 | 1.502 | 1.236 | 1.455 | 1.297 | 8.89 |
| 8) | T | Bromomethane | 1.264 | 1.072 | 1.027 | 1.044 | 1.036 | 1.293 | 0.980 | 1.098 | 1.102 | 10.39 |
| 9) | T | Chloroethane | 1.075 | 1.160 | 0.919 | 1.000 | 1.033 | 1.173 | 0.945 | 1.112 | 1.052 | 9.00 |
| 10) | T | Ethanol | 1.345 | 1.232 | 1.028 | 1.032 | 0.995 | 1.126 | 0.909 | 1.031 | 1.087 | 12.94 |
| 11) | T | Acetonitrile | 3.791 | 3.815 | 3.200 | 2.940 | 2.879 | 3.247 | 2.591 | 3.014 | 3.185 | 13.55 |
| 12) | T | Acrolein | 0.735 | 0.915 | 0.767 | 0.793 | 0.825 | 0.940 | 0.758 | 0.890 | 0.828 | 9.42 |
| 13) | T | Acetone | | | 1.167 | 1.074 | 1.016 | 1.100 | 0.854 | 0.946 | 1.026 | 11.02 |
| 14) | T | Trichlorofluorome | 2.730 | 2.602 | 2.531 | 2.419 | 2.360 | 2.816 | 2.244 | 2.579 | 2.535 | 7.48 |
| 15) | T | 2-Propanol (Isopr | 5.316 | 4.773 | 4.266 | 4.079 | 3.198 | 4.177 | 3.091 | 3.356 | 4.032 | 19.47 |
| 16) | T | Acrylonitrile | 1.226 | 1.941 | 1.770 | 1.848 | 1.903 | 2.263 | 1.804 | 2.077 | 1.854 | 16.20 |
| 17) | T | 1,1-Dichloroethen | 1.098 | 1.161 | 1.131 | 1.150 | 1.132 | 1.359 | 1.091 | 1.293 | 1.177 | 8.20 |
| 18) | T | 2-Methyl-2-Propan | 4.615 | 4.098 | 3.719 | 3.708 | 3.575 | 4.214 | 3.280 | 1.423 | 3.579 | 26.97 |
| 19) | T | Methylene Chlorid | 1.722 | 1.622 | 1.254 | 1.259 | 1.232 | 1.428 | 1.151 | 1.356 | 1.378 | 14.59 |
| 20) | T | 3-Chloro-1-propen | 2.983 | 2.989 | 2.818 | 2.826 | 2.401 | 2.664 | 2.134 | 2.435 | 2.656 | 11.56 |
| 21) | T | Trichlorotrifluor | 0.856 | 0.905 | 0.889 | 0.896 | 0.873 | 1.064 | 0.870 | 1.021 | 0.922 | 8.37 |
| 22) | T | Carbon Disulfide | 5.485 | 5.227 | 4.603 | 4.594 | 4.557 | 5.329 | 4.218 | 4.851 | 4.858 | 9.16 |
| 23) | T | trans-1,2-Dichlor | 1.848 | 2.189 | 1.929 | 2.047 | 2.041 | 2.440 | 1.938 | 2.230 | 2.083 | 9.32 |
| 24) | T | 1,1-Dichloroethan | 2.670 | 2.757 | 2.264 | 2.426 | 2.360 | 2.850 | 2.271 | 2.607 | 2.526 | 8.94 |
| 25) | T | Methyl tert-Butyl | 4.114 | 4.046 | 3.646 | 3.595 | 3.643 | 4.360 | 3.538 | 4.115 | 3.882 | 8.02 |
| 26) | T | Vinyl Acetate | 0.230 | 0.243 | 0.237 | 0.239 | 0.177 | 0.222 | 0.165 | 0.156 | 0.209 | 17.35 |
| 27) | T | 2-Butanone (MEK) | 0.989 | 1.007 | 0.915 | 0.892 | 0.915 | 1.072 | 0.855 | 0.766 | 0.926 | 10.32 |
| 28) | T | cis-1,2-Dichloroe | 1.913 | 1.980 | 1.790 | 1.854 | 1.890 | 2.244 | 1.789 | 2.049 | 1.939 | 7.84 |
| 29) | T | Diisopropyl Ether | 1.013 | 1.376 | 1.212 | 1.246 | 1.214 | 1.425 | 1.129 | 1.303 | 1.240 | 10.65 |

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(#) = Out of Range ### Number of calibration levels exceeded format ###



8/16/09

Method : J:\MS13\METHODS\R13080609.M (RTE Integrator)
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

Calibration Files
0.1 =08060914.D 0.2 =08060915.D 0.5 =08060916.D 1.0 =08060917.D 5.0 =08060918.D
25 =08060919.D 50 =08060920.D 100 =08060921.D = =

| | | Compound | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 25 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30) | T | Ethyl Acetate | 0.395 | 0.513 | 0.492 | 0.479 | 0.491 | 0.561 | 0.439 | 0.491 | 0.483 | 10.18 |
| 31) | T | n-Hexane | 2.766 | 2.862 | 2.319 | 2.390 | 2.266 | 2.624 | 2.095 | 2.429 | 2.469 | 10.60 |
| 32) | T | Chloroform | 2.301 | 2.230 | 2.080 | 2.148 | 2.129 | 2.436 | 1.910 | 2.154 | 2.174 | 7.16 |
| 33) | S | 1,2-Dichloroethan | 2.180 | 2.200 | 2.208 | 2.191 | 2.172 | 2.156 | 2.144 | 2.133 | 2.173 | 1.24 |
| 34) | T | Tetrahydrofuran ( | | 1.393 | 1.027 | 0.901 | 0.860 | 1.025 | 0.804 | 0.903 | 0.988 | 19.90 |
| 35) | T | Ethyl tert-Butyl | 1.747 | 1.639 | 1.589 | 1.578 | 1.501 | 1.752 | 1.405 | 1.621 | 1.604 | 7.26 |
| 36) | T | 1,2-Dichloroethan | 2.106 | 2.083 | 1.937 | 1.868 | 1.850 | 2.232 | 1.788 | 2.028 | 1.986 | 7.62 |
| 37) | IR | 1,4-Difluorobenze | ---------- | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | ---------- | | |
| 38) | T | 1,1,1-Trichloroet | 0.493 | 0.438 | 0.396 | 0.402 | 0.392 | 0.469 | 0.380 | 0.422 | 0.424 | 9.47 |
| 39) | T | Isopropyl Acetate | 0.199 | 0.203 | 0.176 | 0.176 | 0.176 | 0.207 | 0.163 | 0.183 | 0.185 | 8.43 |
| 40) | T | 1-Butanol | 0.444 | 0.385 | 0.301 | 0.293 | 0.285 | 0.330 | 0.265 | 0.291 | 0.324 | 18.74 |
| 41) | T | Benzene | 1.390 | 1.294 | 1.057 | 1.020 | 0.989 | 1.140 | 0.898 | 1.005 | 1.099 | 15.15 |
| 42) | T | Carbon Tetrachlor | 0.346 | 0.351 | 0.327 | 0.329 | 0.336 | 0.408 | 0.329 | 0.377 | 0.350 | 8.13 |
| 43) | T | Cyclohexane | 0.465 | 0.420 | 0.379 | 0.382 | 0.383 | 0.440 | 0.351 | 0.401 | 0.403 | 9.21 |
| 44) | T | tert-Amyl Methyl | 0.924 | 0.905 | 0.814 | 0.799 | 0.775 | 0.901 | 0.707 | 0.778 | 0.825 | 9.32 |
| 45) | T | 1,2-Dichloropropa | 0.283 | 0.286 | 0.260 | 0.268 | 0.261 | 0.313 | 0.251 | 0.286 | 0.276 | 7.20 |
| 46) | T | Bromodichlorometh | 0.375 | 0.388 | 0.340 | 0.344 | 0.339 | 0.408 | 0.331 | 0.371 | 0.362 | 7.63 |
| 47) | T | Trichloroethene | 0.255 | 0.248 | 0.231 | 0.233 | 0.233 | 0.283 | 0.230 | 0.270 | 0.248 | 8.13 |
| 48) | T | 1,4-Dioxane | 0.211 | 0.210 | 0.217 | 0.202 | 0.205 | 0.235 | 0.190 | 0.211 | 0.210 | 6.08 |
| 49) | T | 2,2,4-Trimethylpe | 1.459 | 1.421 | 1.232 | 1.243 | 1.233 | 1.428 | 1.112 | 1.229 | 1.295 | 9.62 |
| 50) | T | Methyl Methacryla | 0.084 | 0.106 | 0.097 | 0.096 | 0.098 | 0.118 | 0.098 | 0.112 | 0.101 | 10.64 |
| 51) | T | n-Heptane | 0.330 | 0.309 | 0.283 | 0.282 | 0.275 | 0.328 | 0.259 | 0.294 | 0.295 | 8.56 |
| 52) | T | cis-1,3-Dichlorop | 0.492 | 0.469 | 0.422 | 0.433 | 0.431 | 0.517 | 0.421 | 0.476 | 0.458 | 7.87 |
| 53) | T | 4-Methyl-2-pentan | 0.262 | 0.275 | 0.257 | 0.255 | 0.252 | 0.302 | 0.239 | 0.271 | 0.264 | 7.19 |
| 54) | T | trans-1,3-Dichlor | 0.492 | 0.436 | 0.391 | 0.413 | 0.408 | 0.489 | 0.399 | 0.452 | 0.435 | 9.06 |
| 55) | T | 1,1,2-Trichloroet | 0.248 | 0.251 | 0.226 | 0.234 | 0.227 | 0.270 | 0.220 | 0.254 | 0.241 | 7.12 |
| 56) | IR | Chlorobenzene-d5 | ---------- | ---------- | ---------- | ISTD | ---------- | ---------- | ---------- | ---------- | | |
| 57) | S | Toluene-d8 (SS2) | 2.196 | 2.196 | 2.181 | 2.184 | 2.176 | 2.177 | 2.188 | 2.177 | 2.184 | 0.37 |

(#) Out of Range ### Number of calibration levels exceeded format ###

Method : J:\MS13\METHODS\R13080609.M (RTE Integrator)
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

Calibration Files
0.1 =08060914.D 0.2 =08060915.D 0.5 =08060916.D 1.0 =08060917.D 5.0 =08060918.D
25 =08060919.D 50 =08060920.D 100 =08060921.D = =

| | | Compound | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 25 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 58) | T | Toluene | 2.598 | 2.282 | 2.011 | 2.028 | 1.956 | 2.323 | 1.860 | 2.115 | 2.147 | 11.21 |
| 59) | T | 2-Hexanone | 1.631 | 1.475 | 1.347 | 1.365 | 1.367 | 1.586 | 1.255 | 1.396 | 1.428 | 8.91 |
| 60) | T | Dibromochlorometh | 0.488 | 0.496 | 0.473 | 0.476 | 0.482 | 0.597 | 0.487 | 0.566 | 0.508 | 9.17 |
| 61) | T | 1,2-Dibromoethane | 0.567 | 0.548 | 0.480 | 0.512 | 0.510 | 0.617 | 0.496 | 0.577 | 0.539 | 8.68 |
| 62) | T | n-Butyl Acetate | 1.970 | 1.781 | 1.544 | 1.562 | 1.554 | 1.839 | 1.464 | 1.748 | 1.683 | 10.51 |
| 63) | T | n-Octane | 0.560 | 0.571 | 0.505 | 0.499 | 0.491 | 0.570 | 0.450 | 0.506 | 0.519 | 8.42 |
| 64) | T | Tetrachloroethene | 0.482 | 0.483 | 0.476 | 0.481 | 0.458 | 0.568 | 0.469 | 0.556 | 0.497 | 8.29 |
| 65) | T | Chlorobenzene | 1.590 | 1.363 | 1.215 | 1.270 | 1.217 | 1.454 | 1.169 | 1.348 | 1.328 | 10.63 |
| 66) | T | Ethylbenzene | 2.854 | 2.575 | 2.315 | 2.330 | 2.298 | 2.695 | 2.145 | 2.421 | 2.454 | 9.60 |
| 67) | T | m- & p-Xylenes | 2.378 | 2.159 | 1.844 | 1.903 | 1.829 | 2.151 | 1.706 | 1.913 | 1.985 | 11.21 |
| 68) | T | Bromoform | 0.336 | 0.384 | 0.393 | 0.381 | 0.411 | 0.521 | 0.432 | 0.516 | 0.422 | 15.56 |
| 69) | T | Styrene | 1.591 | 1.461 | 1.301 | 1.326 | 1.336 | 1.629 | 1.314 | 1.522 | 1.435 | 9.31 |
| 70) | T | o-Xylene | 2.315 | 2.130 | 1.894 | 1.892 | 1.861 | 2.164 | 1.722 | 1.945 | 1.990 | 9.78 |
| 71) | T | n-Nonane | 1.652 | 1.463 | 1.265 | 1.289 | 1.228 | 1.399 | 1.084 | 1.200 | 1.323 | 13.39 |
| 72) | T | 1,1,2,2-Tetrachlo | 0.950 | 0.931 | 0.839 | 0.860 | 0.839 | 0.977 | 0.776 | 0.894 | 0.883 | 7.62 |
| 73) | S | Bromofluorobenzen | 0.571 | 0.566 | 0.563 | 0.563 | 0.577 | 0.579 | 0.594 | 0.595 | 0.576 | 2.23 |
| 74) | T | Cumene | 3.046 | 2.701 | 2.336 | 2.364 | 2.307 | 2.723 | 2.181 | 2.456 | 2.514 | 11.39 |
| 75) | T | alpha-Pinene | 1.405 | 1.389 | 1.184 | 1.219 | 1.220 | 1.431 | 1.152 | 1.311 | 1.289 | 8.49 |
| 76) | T | n-Propylbenzene | 3.730 | 3.286 | 2.971 | 3.088 | 2.984 | 3.473 | 2.742 | 3.012 | 3.161 | 10.05 |
| 77) | T | 3-Ethyltoluene | 2.856 | 2.585 | 2.264 | 2.204 | 2.239 | 2.593 | 2.105 | 2.377 | 2.403 | 10.55 |
| 78) | T | 4-Ethyltoluene | 2.821 | 2.428 | 2.122 | 2.235 | 2.150 | 2.576 | 2.035 | 2.260 | 2.328 | 11.34 |
| 79) | T | 1,3,5-Trimethylbe | 2.371 | 1.981 | 1.833 | 1.859 | 1.835 | 2.153 | 1.724 | 1.953 | 1.964 | 10.62 |
| 80) | T | alpha-Methylstyre | 1.173 | 1.018 | 0.919 | 0.971 | 1.006 | 1.205 | 0.983 | 1.135 | 1.051 | 9.98 |
| 81) | T | 2-Ethyltoluene | 2.866 | 2.524 | 2.246 | 2.299 | 2.267 | 2.666 | 2.132 | 2.386 | 2.423 | 10.14 |
| 82) | T | 1,2,4-Trimethylbe | 2.204 | 2.160 | 1.885 | 1.969 | 1.896 | 2.217 | 1.758 | 1.932 | 2.003 | 8.49 |
| 83) | T | n-Decane | 1.505 | 1.419 | 1.273 | 1.281 | 1.242 | 1.408 | 1.089 | 1.199 | 1.302 | 10.36 |
| 84) | T | Benzyl Chloride | 1.924 | 1.912 | 1.669 | 1.773 | 1.834 | 2.197 | 1.749 | 1.959 | 1.877 | 8.66 |
| 85) | T | 1,3-Dichlorobenze | 1.163 | 0.993 | 0.903 | 0.959 | 0.940 | 1.131 | 0.925 | 1.094 | 1.013 | 9.96 |
| 86) | T | 1,4-Dichlorobenze | 1.251 | 1.103 | 0.995 | 0.996 | 0.980 | 1.192 | 0.979 | 1.149 | 1.081 | 9.99 |
| 87) | T | sec-Butylbenzene | 3.139 | 2.866 | 2.554 | 2.575 | 2.546 | 2.985 | 2.364 | 2.613 | 2.705 | 9.71 |

235

(#) Out of Range ### Number of calibration levels exceeded format ###

Method : J:\MS13\METHODS\R13080609.M (RTE Integrator)
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

Calibration Files
0.1 =08060914.D 0.2 =08060915.D 0.5 =08060916.D 1.0 =08060917.D 5.0 =08060918.D
25 =08060919.D 50 =08060920.D 100 =08060921.D = =

| | | Compound | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 25 | 50 | 100 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 88) | T | 4-Isopropyltoluen | 2.658 | 2.459 | 2.338 | 2.329 | 2.319 | 2.712 | 2.154 | 2.330 | 2.412 | 7.80 |
| 89) | T | 1,2,3-Trimethylbe | 2.247 | 2.205 | 1.983 | 1.961 | 1.936 | 2.249 | 1.789 | 1.951 | 2.040 | 8.39 |
| 90) | T | 1,2-Dichlorobenze | 1.053 | 0.935 | 0.895 | 0.923 | 0.908 | 1.091 | 0.885 | 0.997 | 0.961 | 8.06 |
| 91) | T | d-Limonene | 0.947 | 0.884 | 0.819 | 0.808 | 0.816 | 0.953 | 0.756 | 0.831 | 0.852 | 8.22 |
| 92) | T | 1,2-Dibromo-3-Chl | 0.255 | 0.322 | 0.281 | 0.316 | 0.334 | 0.407 | 0.333 | 0.395 | 0.330 | 15.52 |
| 93) | T | n-Undecane | 1.637 | 1.515 | 1.310 | 1.387 | 1.321 | 1.489 | 1.157 | 1.266 | 1.385 | 11.15 |
| 94) | T | 1,2,4-Trichlorobe | 0.633 | 0.617 | 0.569 | 0.628 | 0.635 | 0.782 | 0.647 | 0.775 | 0.661 | 11.53 |
| 95) | T | Naphthalene | 3.212 | 2.782 | 2.370 | 2.515 | 2.600 | 3.038 | 2.466 | 2.774 | 2.720 | 10.71 |
| 96) | T | n-Dodecane | 2.008 | 1.787 | 1.580 | 1.604 | 1.487 | 1.664 | 1.312 | 1.433 | 1.609 | 13.47 |
| 97) | T | Hexachlorobutadie | 0.508 | 0.450 | 0.382 | 0.370 | 0.364 | 0.452 | 0.378 | 0.458 | 0.420 | 12.69 |
| 98) | T | Cyclohexanone | 1.058 | 0.930 | 0.839 | 0.840 | 0.827 | 0.975 | 0.777 | 0.870 | 0.889 | 10.33 |
| 99) | T | tert-Butylbenzene | 2.338 | 1.994 | 1.824 | 1.861 | 1.804 | 2.116 | 1.695 | 1.873 | 1.938 | 10.59 |
| 100) | T | n-Butylbenzene | 2.495 | 2.246 | 2.121 | 2.16 | 2.160 | 2.504 | 1.975 | 2.174 | 2.231 | 8.20 |

(#) Out of Range ### Number of calibration levels exceeded format ###

# Primary Source Standards Concentrations
## (Working & Initial Calibration)

4ng/L Std. ID: S20-07240912
20ng/L Std. ID: S20-07310903
200ng/L Std. ID: S20-07310901

| Dilution Factors: | | 5 | 50 | 250 |
|---|---|---|---|---|
| | Source Std. | Primary Working Standards | | |
| Compounds | mg/m³ | 200ng/L | 20ng/L | 4ng/L |
| Propene | 1.07 | 214 | 21.4 | 4.28 |
| Dichlorodifluoromethane | 1.05 | 210 | 21.0 | 4.20 |
| Chloromethane | 1.00 | 200 | 20.0 | 4.00 |
| Freon-114 | 1.06 | 212 | 21.2 | 4.24 |
| Vinyl Chloride | 1.01 | 202 | 20.2 | 4.04 |
| 1,3-Butadiene | 1.20 | 240 | 24.0 | 4.80 |
| Bromomethane | 1.02 | 204 | 20.4 | 4.08 |
| Chloroethane | 1.01 | 202 | 20.2 | 4.04 |
| Ethanol | 5.20 | 1040 | 104 | 20.8 |
| Acetonitrile | 1.05 | 210 | 21.0 | 4.20 |
| Acrolein | 1.08 | 216 | 21.6 | 4.32 |
| Acetone | 5.50 | 1100 | 110 | 22.0 |
| Trichlorofluoromethane | 1.05 | 210 | 21.0 | 4.20 |
| Isopropanol | 1.89 | 378 | 37.8 | 7.56 |
| Acrylonitrile | 1.06 | 212 | 21.2 | 4.24 |
| 1,1-Dichloroethene | 1.10 | 220 | 22.0 | 4.40 |
| tert-Butanol | 2.02 | 404 | 40.4 | 8.08 |
| Methylene Chloride | 1.07 | 214 | 21.4 | 4.28 |
| Allyl Chloride | 1.08 | 216 | 21.6 | 4.32 |
| Trichlorotrifluoroethane | 1.10 | 220 | 22.0 | 4.40 |
| Carbon Disulfide | 1.07 | 214 | 21.4 | 4.28 |
| trans-1,2-Dichloroethene | 1.06 | 212 | 21.2 | 4.24 |
| 1,1-Dichloroethane | 1.06 | 212 | 21.2 | 4.24 |
| Methyl tert-Butyl Ether | 1.09 | 218 | 21.8 | 4.36 |
| Vinyl Acetate | 5.02 | 1004 | 100 | 20.1 |
| 2-Butanone | 1.10 | 220 | 22.0 | 4.40 |
| cis-1,2-Dichloroethene | 1.09 | 218 | 21.8 | 4.36 |
| Diisopropyl Ether | 1.07 | 214 | 21.4 | 4.28 |
| Ethyl Acetate | 2.13 | 426 | 42.6 | 8.52 |
| n-Hexane | 1.09 | 218 | 21.8 | 4.36 |
| Chloroform | 1.07 | 214 | 21.4 | 4.28 |
| Tetrahydrofuran | 1.10 | 220 | 22.0 | 4.40 |
| Ethyl tert-Butyl Ether | 1.03 | 206 | 20.6 | 4.12 |
| 1,2-Dichloroethane | 1.06 | 212 | 21.2 | 4.24 |
| 1,1,1-Trichloroethane | 1.05 | 210 | 21.0 | 4.20 |
| Isopropyl Acetate | 2.09 | 418 | 41.8 | 8.36 |
| 1-Butanol | 2.07 | 414 | 41.4 | 8.28 |
| Benzene | 1.06 | 212 | 21.2 | 4.24 |
| Carbon Tetrachloride | 1.08 | 216 | 21.6 | 4.32 |
| Cyclohexane | 2.15 | 430 | 43.0 | 8.60 |
| tert-Amyl Methyl Ether | 1.04 | 208 | 20.8 | 4.16 |
| 1,2-Dichloropropane | 1.05 | 210 | 21.0 | 4.20 |
| Bromodichloromethane | 1.08 | 216 | 21.6 | 4.32 |
| Trichloroethene | 1.06 | 212 | 21.2 | 4.24 |
| 1,4-Dioxane | 1.07 | 214 | 21.4 | 4.28 |
| Isooctane | 1.04 | 208 | 20.8 | 4.16 |
| Methyl Methacrylate | 2.13 | 426 | 42.6 | 8.52 |
| n-Heptane | 1.06 | 212 | 21.2 | 4.24 |
| cis-1,3-Dichloropropene | 0.99 | 198 | 19.8 | 3.96 |
| 4-Methyl-2-pentanone | 1.10 | 220 | 22.0 | 4.40 |
| trans-1,3-Dichloropropene | 1.10 | 220 | 22.0 | 4.40 |
| 1,1,2-Trichloroethane | 1.05 | 210 | 21.0 | 4.20 |
| Toluene | 1.08 | 216 | 21.6 | 4.32 |
| 2-Hexanone | 1.10 | 220 | 22.0 | 4.40 |
| Dibromochloromethane | 1.15 | 230 | 23.0 | 4.60 |
| 1,2-Dibromoethane | 1.06 | 212 | 21.2 | 4.24 |
| n-Butyl Acetate | 1.10 | 220 | 22.0 | 4.40 |
| n-Octane | 1.07 | 214 | 21.4 | 4.28 |
| Tetrachloroethene | 1.02 | 204 | 20.4 | 4.08 |
| Chlorobenzene | 1.08 | 216 | 21.6 | 4.32 |
| Ethylbenzene | 1.06 | 212 | 21.2 | 4.24 |
| m-&p-Xylene | 2.08 | 416 | 41.6 | 8.32 |

| Working STD Conc.(ng/L): | ICAL Concentrations (Primary Source) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 4 | 4 | 20 | 20 | 20 | 200 | 200 | 200 |
| Injection (L): | 0.025 | 0.05 | 0.025 | 0.050 | 0.25 | 0.125 | 0.25 | 0.50 |
| ICAL Points: | 0.1ng | 0.2ng | 0.5ng | 1ng | 5ng | 25ng | 50ng | 100ng |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| | 0.100 | 0.200 | 0.500 | 1.00 | 5.00 | 25.0 | 50.0 | 100 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.101 | 0.202 | 0.505 | 1.01 | 5.05 | 25.3 | 50.5 | 101 |
| | 0.120 | 0.240 | 0.600 | 1.20 | 6.00 | 30.0 | 60.0 | 120 |
| | 0.102 | 0.204 | 0.510 | 1.02 | 5.10 | 25.5 | 51.0 | 102 |
| | 0.101 | 0.202 | 0.505 | 1.01 | 5.05 | 25.3 | 50.5 | 101 |
| | 0.520 | 1.040 | 2.60 | 5.20 | 26.0 | 130 | 260 | 520 |
| | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| | 0.550 | 1.100 | 2.75 | 5.50 | 27.5 | 138 | 275 | 550 |
| | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| | 0.189 | 0.378 | 0.945 | 1.89 | 9.45 | 47.3 | 94.5 | 189 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.202 | 0.404 | 1.01 | 2.02 | 10.1 | 50.5 | 101 | 202 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| | 0.502 | 1.004 | 2.51 | 5.02 | 25.1 | 126 | 251 | 502 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.213 | 0.426 | 1.07 | 2.13 | 10.7 | 53.3 | 107 | 213 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| | 0.209 | 0.418 | 1.05 | 2.09 | 10.5 | 52.3 | 105 | 209 |
| | 0.207 | 0.414 | 1.04 | 2.07 | 10.4 | 51.8 | 104 | 207 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| | 0.215 | 0.430 | 1.08 | 2.15 | 10.8 | 53.8 | 108 | 215 |
| | 0.104 | 0.208 | 0.520 | 1.04 | 5.20 | 26.0 | 52.0 | 104 |
| | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.104 | 0.208 | 0.520 | 1.04 | 5.20 | 26.0 | 52.0 | 104 |
| | 0.213 | 0.426 | 1.07 | 2.13 | 10.7 | 53.3 | 107 | 213 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.099 | 0.198 | 0.495 | 0.990 | 4.95 | 24.8 | 49.5 | 99.0 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.115 | 0.230 | 0.575 | 1.15 | 5.75 | 28.8 | 57.5 | 115 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.102 | 0.204 | 0.510 | 1.02 | 5.10 | 25.5 | 51.0 | 102 |
| | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.208 | 0.416 | 1.04 | 2.08 | 10.4 | 52.0 | 104 | 208 |



8/11/09

# Primary Source Standards Concentrations
## (Working & Initial Calibration)

4ng/L Std. ID: S20-07240912
20ng/L Std. ID:
200ng/L Std. ID:
Dilution Factors: 5 50 250

| Compounds | Source Std. mg/m³ | Primary Working Standards 200ng/L | 20ng/L | 4ng/L |
|---|---|---|---|---|
| Bromoform | 1.03 | 206 | 20.6 | 4.12 |
| Styrene | 1.07 | 214 | 21.4 | 4.28 |
| o-Xylene | 1.06 | 212 | 21.2 | 4.24 |
| n-Nonane | 1.06 | 212 | 21.2 | 4.24 |
| 1,1,2,2-Tetrachloroethane | 1.07 | 214 | 21.4 | 4.28 |
| Cumene | 1.03 | 206 | 20.6 | 4.12 |
| alpha-Pinene | 1.01 | 202 | 20.2 | 4.04 |
| n-Propylbenzene | 1.03 | 206 | 20.6 | 4.12 |
| 3-Ethyltoluene | 1.09 | 218 | 21.8 | 4.36 |
| 4-Ethyltoluene | 1.09 | 218 | 21.8 | 4.36 |
| 1,3,5-Trimethylbenzene | 1.09 | 218 | 21.8 | 4.36 |
| alpha-Methylstyrene | 1.07 | 214 | 21.4 | 4.28 |
| 2-Ethyltoluene | 1.05 | 210 | 21.0 | 4.20 |
| 1,2,4-Trimethylbenzene | 1.06 | 212 | 21.2 | 4.24 |
| n-Decane | 1.08 | 216 | 21.6 | 4.32 |
| Benzyl Chloride | 1.10 | 220 | 22.0 | 4.40 |
| 1,3-Dichlorobenzene | 1.09 | 218 | 21.8 | 4.36 |
| 1,4-Dichlorobenzene | 1.06 | 212 | 21.2 | 4.24 |
| sec-Butylbenzene | 1.06 | 212 | 21.2 | 4.24 |
| p-Isopropyltoluene | 1.03 | 206 | 20.6 | 4.12 |
| 1,2,3-Trimethylbenzene | 1.07 | 214 | 21.4 | 4.28 |
| 1,2-Dichlorobenzene | 1.06 | 212 | 21.2 | 4.24 |
| d-Limonene | 1.09 | 218 | 21.8 | 4.36 |
| chloropropane | 1.10 | 220 | 22.0 | 4.40 |
| n-Undecane | 1.09 | 218 | 21.8 | 4.36 |
| 1,2,4-Trichlorobenzene | 1.12 | 224 | 22.4 | 4.48 |
| Naphthalene | 1.06 | 212 | 21.2 | 4.24 |
| n-Dodecane | 0.99 | 198 | 19.8 | 3.96 |
| Hexachloro-1,3-butadiene | 1.10 | 220 | 22.0 | 4.40 |
| Methacrylonitrile | 1.06 | 212 | 21.2 | 4.24 |
| Cyclohexanone | 0.98 | 196 | 19.6 | 3.92 |
| tert-Butylbenzene | 1.06 | 212 | 21.2 | 4.24 |
| n-Butylbenzene | 1.09 | 218 | 21.8 | 4.36 |

| Working STD Conc.(ng/L): | ICAL Concentrations (Primary Source) 4 | 4 | 20 | 20 | 20 | 200 | 200 | 200 |
|---|---|---|---|---|---|---|---|---|
| Injection (L): | 0.025 | 0.050 | 0.025 | 0.05 | 0.25 | 0.125 | 0.25 | 0.50 |
| ICAL Points: | 0.1ng | 0.2ng | 0.5ng | 1ng | 5ng | 25ng | 50ng | 100ng |
| | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| | 0.101 | 0.202 | 0.505 | 1.01 | 5.05 | 25.3 | 50.5 | 101 |
| | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.105 | 0.210 | 0.525 | 1.05 | 5.25 | 26.3 | 52.5 | 105 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.108 | 0.216 | 0.540 | 1.08 | 5.40 | 27.0 | 54.0 | 108 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.103 | 0.206 | 0.515 | 1.03 | 5.15 | 25.8 | 51.5 | 103 |
| | 0.107 | 0.214 | 0.535 | 1.07 | 5.35 | 26.8 | 53.5 | 107 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |
| | 0.112 | 0.224 | 0.560 | 1.12 | 5.60 | 28.0 | 56.0 | 112 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.099 | 0.198 | 0.495 | 0.990 | 4.95 | 24.8 | 49.5 | 99.0 |
| | 0.110 | 0.220 | 0.550 | 1.10 | 5.50 | 27.5 | 55.0 | 110 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.098 | 0.196 | 0.490 | 0.980 | 4.90 | 24.5 | 49.0 | 98.0 |
| | 0.106 | 0.212 | 0.530 | 1.06 | 5.30 | 26.5 | 53.0 | 106 |
| | 0.109 | 0.218 | 0.545 | 1.09 | 5.45 | 27.3 | 54.5 | 109 |

*Enter Information in the Solid Shaded Areas ONLY.

Calibration Status Report GCMS13

Method Path : J:\MS13\METHODS\
Method File : R13080609.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Aug 06 17:14:07 2009
Response Via : Initial Calibration

| # | ID | Conc | ISTD Conc | Path\File |
|---|---|---|---|---|
| 1 | 0.1 | 0 | 25 | J:\MS13\DATA\2009_08\06\08060914.D |
| 2 | 0.2 | 0 | 25 | J:\MS13\DATA\2009_08\06\08060915.D |
| 3 | 0.5 | 1 | 25 | J:\MS13\DATA\2009_08\06\08060916.D |
| 4 | 1.0 | 1 | 25 | J:\MS13\DATA\2009_08\06\08060917.D |
| 5 | 5.0 | 5 | 25 | J:\MS13\DATA\2009_08\06\08060918.D |
| 6 | 25 | 27 | 25 | J:\MS13\DATA\2009_08\06\08060919.D |
| 7 | 50 | 54 | 25 | J:\MS13\DATA\2009_08\06\08060920.D |
| 8 | 100 | 107 | 25 | J:\MS13\DATA\2009_08\06\08060921.D |

| # | ID | Update Time | Quant Time | Acquisition Time |
|---|---|---|---|---|
| 1 | 0.1 | Aug 06 17:09 2009 | Aug 06 13:44 2009 | 06 Aug 2009 11:55 |
| 2 | 0.2 | Aug 06 17:10 2009 | Aug 06 13:51 2009 | 06 Aug 2009 12:36 |
| 3 | 0.5 | Aug 06 17:10 2009 | Aug 06 13:52 2009 | 06 Aug 2009 13:17 |
| 4 | 1.0 | Aug 06 17:10 2009 | Aug 06 14:32 2009 | 06 Aug 2009 13:57 |
| 5 | 5.0 | Aug 06 17:10 2009 | Aug 06 15:06 2009 | 06 Aug 2009 14:38 |
| 6 | 25 | Aug 06 17:11 2009 | Aug 06 16:11 2009 | 06 Aug 2009 15:18 |
| 7 | 50 | Aug 06 17:13 2009 | Aug 06 17:00 2009 | 06 Aug 2009 15:59 |
| 8 | 100 | Aug 06 17:14 2009 | Aug 06 17:08 2009 | 06 Aug 2009 16:39 |

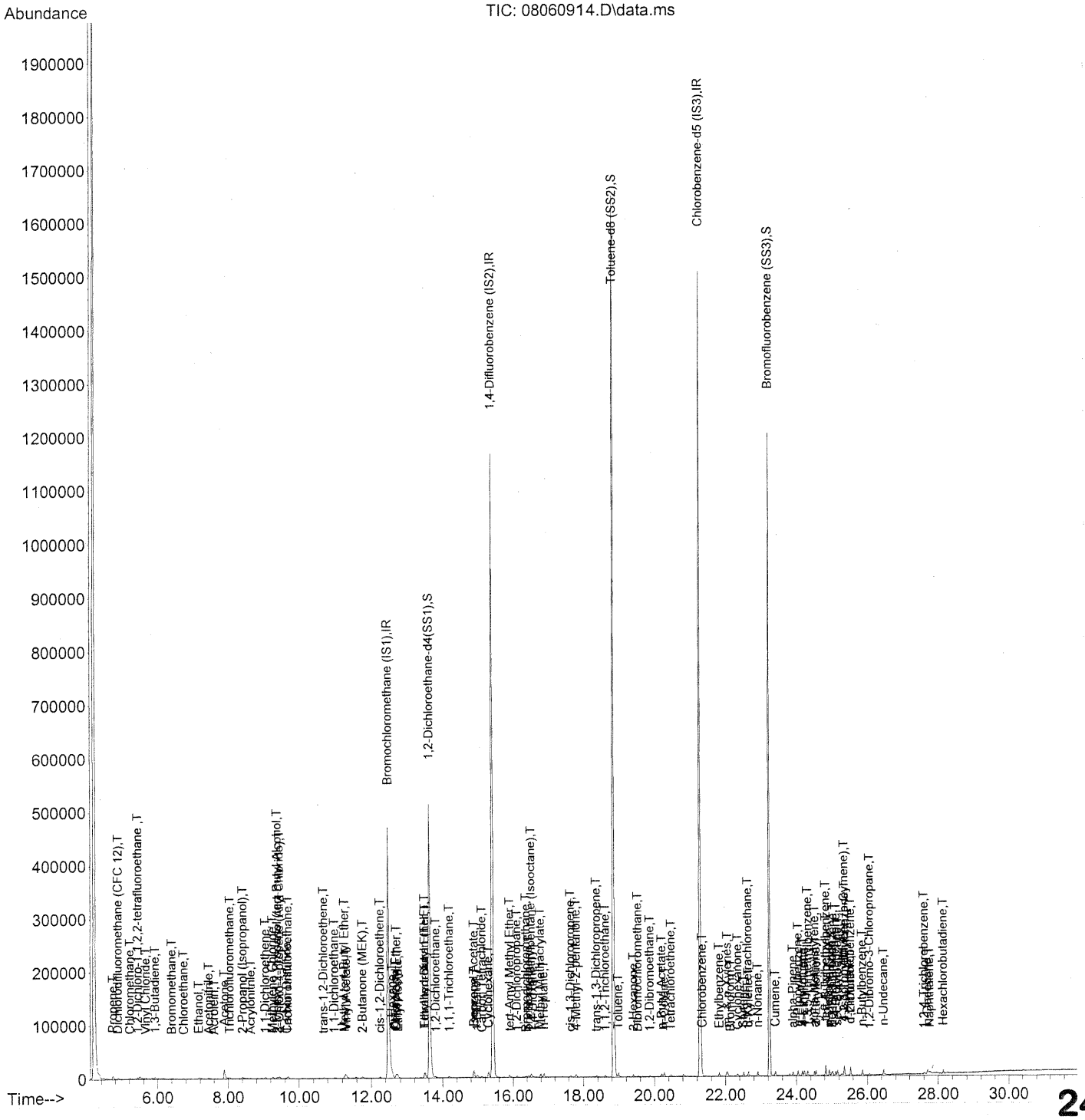
R13080609.M Thu Aug 06 17:33:51 2009

LSA 8/6/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:44:21 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:44:21 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 255549 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.42 | 114 | 1302832 | 25.000 | ng | | -0.01 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 644252 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 557049 | 23.882 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 95.52% | | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1414545 | 25.331 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 101.32% | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 367818 | 25.794 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 103.16% | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.73 | 42 | 2278m | 0.115 | ng | | |
| 3) Dichlorodifluoromethan... | 4.88 | 85 | 3433 | 0.104 | ng | # | 94 |
| 4) Chloromethane | 5.22 | 50 | 2007 | 0.097 | ng | | 65 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.44 | 135 | 1275 | 0.099 | ng | # | 57 |
| 6) Vinyl Chloride | 5.66 | 62 | 1780 | 0.088 | ng | | 74 |
| 7) 1,3-Butadiene | 5.93 | 54 | 1480 | 0.102 | ng | # | 57 |
| 8) Bromomethane | 6.41 | 94 | 1318 | 0.141 | ng | | 87 |
| 9) Chloroethane | 6.74 | 64 | 1110 | 0.099 | ng | # | 41 |
| 10) Ethanol | 7.16 | 45 | 7147 | 0.588 | ng | | 69 |
| 11) Acetonitrile | 7.45 | 41 | 4069 | 0.095 | ng | | 91 |
| 12) Acrolein | 7.61 | 56 | 811 | 0.069 | ng | # | 31 |
| 13) Acetone | 7.89 | 58 | 11564 | 0.833 | ng | | 96 |
| 14) Trichlorofluoromethane | 8.05 | 101 | 2930 | 0.103 | ng | | 93 |
| 15) 2-Propanol (Isopropanol) | 8.41 | 45 | 10270 | 0.224 | ng | | 74 |
| 16) Acrylonitrile | 8.64 | 53 | 1328m | 0.066 | ng | | |
| 17) 1,1-Dichloroethene | 9.05 | 96 | 1235 | 0.096 | ng | | 87 |
| 18) 2-Methyl-2-Propanol (t... | 9.38 | 59 | 9529 | 0.242 | ng | # | 74 |
| 19) Methylene Chloride | 9.25 | 84 | 1883 | 0.126 | ng | | 97 |
| 20) 3-Chloro-1-propene (Al... | 9.45 | 41 | 3293m | 0.136 | ng | | |
| 21) Trichlorotrifluoroethane | 9.69 | 151 | 962 | 0.092 | ng | # | 76 |
| 22) Carbon Disulfide | 9.66 | 76 | 5999 | 0.117 | ng | # | 74 |
| 23) trans-1,2-Dichloroethene | 10.68 | 61 | 2002 | 0.090 | ng | | 97 |
| 24) 1,1-Dichloroethane | 10.98 | 63 | 2893 | 0.104 | ng | | 89 |
| 25) Methyl tert-Butyl Ether | 11.26 | 73 | 4584 | 0.102 | ng | | 94 |
| 26) Vinyl Acetate | 11.31 | 86 | 1182 | 0.392 | ng | # | 1 |
| 27) 2-Butanone (MEK) | 11.76 | 72 | 1112 | 0.111 | ng | # | 28 |
| 28) cis-1,2-Dichloroethene | 12.25 | 61 | 2132 | 0.099 | ng | | 90 |
| 29) Diisopropyl Ether | 12.70 | 87 | 1108 | 0.091 | ng | # | 1 |
| 30) Ethyl Acetate | 12.74 | 61 | 860 | 0.165 | ng | # | 73 |
| 31) n-Hexane | 12.59 | 57 | 3082 | 0.112 | ng | | 70 |



8/16/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:44:21 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.68 | 83 | 2517 | 0.100 | ng | | 93 |
| 34) Tetrahydrofuran (THF) | 13.49 | 72 | 2071 | 0.175 | ng | # | 78 |
| 35) Ethyl tert-Butyl Ether | 13.50 | 87 | 1839 | 0.099 | ng | # | 87 |
| 36) 1,2-Dichloroethane | 13.80 | 62 | 2282 | 0.103 | ng | # | 62 |
| 38) 1,1,1-Trichloroethane | 14.19 | 97 | 2700 | 0.112 | ng | | 89 |
| 39) Isopropyl Acetate | 14.88 | 61 | 2167 | 0.217 | ng | # | 92 |
| 40) 1-Butanol | 14.97 | 56 | 4795 | 0.282 | ng | # | 79 |
| 41) Benzene | 14.88 | 78 | 7680 | 0.120 | ng | | 96 |
| 42) Carbon Tetrachloride | 15.11 | 117 | 1945 | 0.096 | ng | | 94 |
| 43) Cyclohexane | 15.30 | 84 | 5207 | 0.231 | ng | | 98 |
| 44) tert-Amyl Methyl Ether | 15.91 | 73 | 5009 | 0.107 | ng | | 91 |
| 45) 1,2-Dichloropropane | 16.11 | 63 | 1549 | 0.100 | ng | | 99 |
| 46) Bromodichloromethane | 16.37 | 83 | 2109 | 0.107 | ng | | 98 |
| 47) Trichloroethene | 16.45 | 130 | 1409 | 0.106 | ng | | 98 |
| 48) 1,4-Dioxane | 16.57 | 88 | 1174 | 0.103 | ng | # | 56 |
| 49) 2,2,4-Trimethylpentane... | 16.52 | 57 | 7907 | 0.112 | ng | | 98 |
| 50) Methyl Methacrylate | 16.79 | 100 | 927 | 0.171 | ng | # | 35 |
| 51) n-Heptane | 16.89 | 71 | 1821 | 0.109 | ng | # | 88 |
| 52) cis-1,3-Dichloropropene | 17.66 | 75 | 2536 | 0.105 | ng | | 86 |
| 53) 4-Methyl-2-pentanone | 17.81 | 58 | 1504 | 0.104 | ng | | 85 |
| 54) trans-1,3-Dichloropropene | 18.36 | 75 | 2818 | 0.128 | ng | | 86 |
| 55) 1,1,2-Trichloroethane | 18.61 | 97 | 1358 | 0.101 | ng | | 92 |
| 58) Toluene | 18.98 | 91 | 7232 | 0.125 | ng | | 97 |
| 59) 2-Hexanone | 19.41 | 43 | 4623 | 0.119 | ng | | 91 |
| 60) Dibromochloromethane | 19.53 | 129 | 1445 | 0.107 | ng | | 97 |
| 61) 1,2-Dibromoethane | 19.87 | 107 | 1548 | 0.111 | ng | | 98 |
| 62) n-Butyl Acetate | 20.21 | 43 | 5583 | 0.127 | ng | | 97 |
| 63) n-Octane | 20.28 | 57 | 1545 | 0.106 | ng | | 95 |
| 64) Tetrachloroethene | 20.47 | 166 | 1267 | 0.096 | ng | | 98 |
| 65) Chlorobenzene | 21.35 | 112 | 4424 | 0.127 | ng | | 91 |
| 66) Ethylbenzene | 21.82 | 91 | 7796 | 0.119 | ng | | 99 |
| 67) m- & p-Xylenes | 22.06 | 91 | 12746 | 0.242 | ng | # | 30 |
| 68) Bromoform | 22.15 | 173 | 892 | 0.081 | ng | | 95 |
| 69) Styrene | 22.51 | 104 | 4388 | 0.119 | ng | | 97 |
| 70) o-Xylene | 22.66 | 91 | 6325 | 0.119 | ng | | 98 |
| 71) n-Nonane | 22.91 | 43 | 4513 | 0.122 | ng | | 93 |
| 72) 1,1,2,2-Tetrachloroethane | 22.64 | 83 | 2620 | 0.112 | ng | | 100 |
| 74) Cumene | 23.41 | 105 | 8086 | 0.125 | ng | | 97 |
| 75) alpha-Pinene | 23.91 | 93 | 3657 | 0.107 | ng | | 94 |
| 76) n-Propylbenzene | 24.05 | 91 | 9900 | 0.119 | ng | | 97 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 8022 | 0.131 | ng | | 93 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 7924 | 0.128 | ng | | 98 |
| 79) 1,3,5-Trimethylbenzene | 24.33 | 105 | 6660 | 0.126 | ng | | 97 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:44:21 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

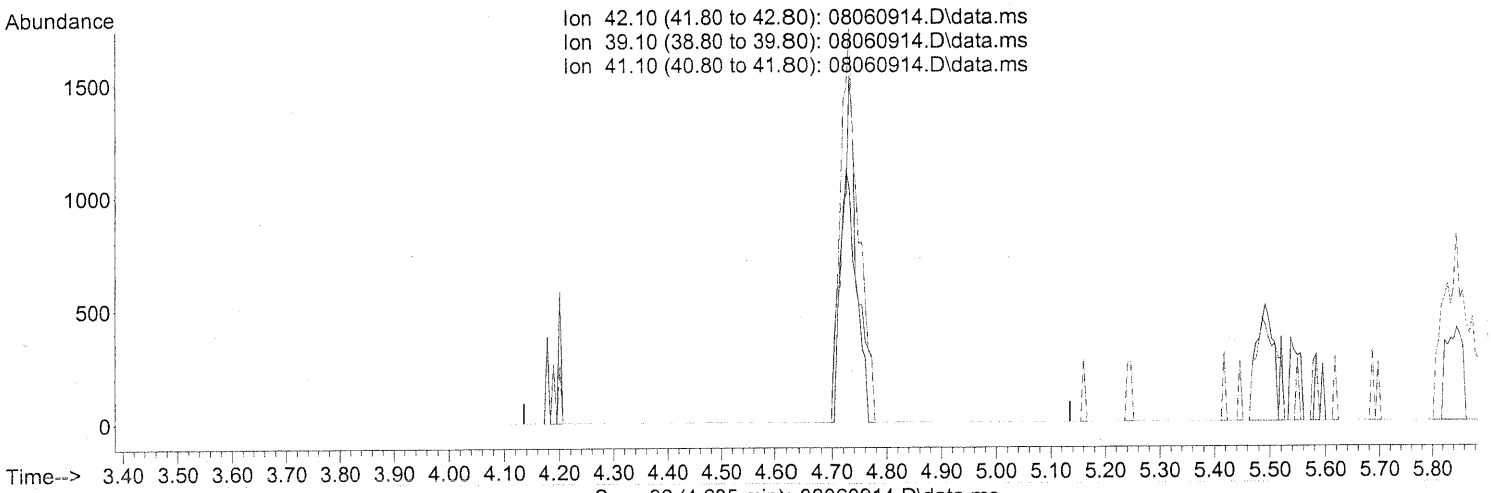
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.52 | 118 | 3235 | 0.121 | ng | | 93 |
| 81) 2-Ethyltoluene | 24.56 | 105 | 7755 | 0.121 | ng | | 95 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 6020 | 0.114 | ng | | 98 |
| 83) n-Decane | 24.93 | 57 | 4190 | 0.120 | ng | | 96 |
| 84) Benzyl Chloride | 25.01 | 91 | 5455 | 0.120 | ng | | 96 |
| 85) 1,3-Dichlorobenzene | 25.03 | 146 | 3266 | 0.129 | ng | | 95 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 3418 | 0.127 | ng | | 96 |
| 87) sec-Butylbenzene | 25.17 | 105 | 8575 | 0.121 | ng | | 94 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 7056 | 0.112 | ng | | 94 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 6195 | 0.115 | ng | | 95 |
| 90) 1,2-Dichlorobenzene | 25.53 | 146 | 2877 | 0.118 | ng | | 94 |
| 91) d-Limonene | 25.53 | 68 | 2659 | 0.116 | ng | | 97 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 724 | 0.093 | ng | # | 73 |
| 93) n-Undecane | 26.46 | 57 | 4598 | 0.129 | ng | | 92 |
| 94) 1,2,4-Trichlorobenzene | 27.61 | 180 | 1826 | 0.118 | ng | # | 75 |
| 95) Naphthalene | 27.77 | 128 | 8775 | 0.145 | ng | | 72 |
| 96) n-Dodecane | 27.71 | 57 | 5122m | 0.135 | ng | | |
| 97) Hexachlorobutadiene | 28.15 | 225 | 1439 | 0.145 | ng | | 94 |
| 98) Cyclohexanone | 22.35 | 55 | 2671 | 0.101 | ng | | 91 |
| 99) tert-Butylbenzene | 24.83 | 119 | 6387 | 0.126 | ng | | 92 |
| 100) n-Butylbenzene | 25.86 | 91 | 7008 | 0.122 | ng | | 96 |

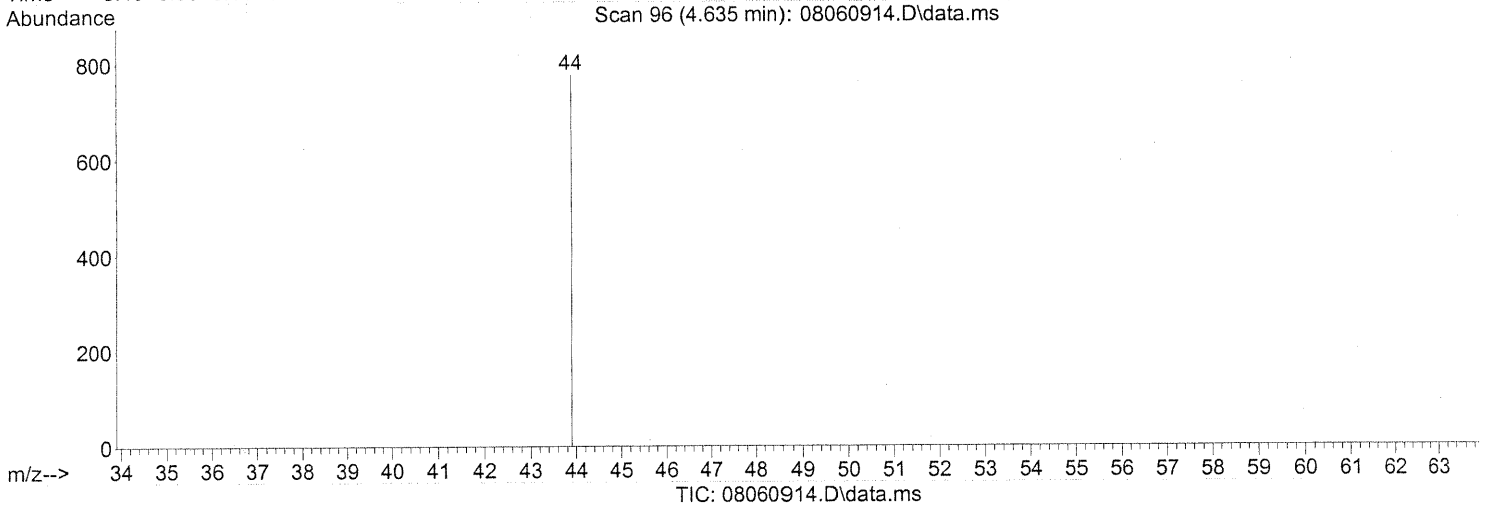
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:40:33 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




(2) Propene (T)

4.635min (-4.635) 0.00ng

response 0

HP

| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 0.00 |
| 39.10 | 111.90 | 0.00# |
| 41.10 | 150.20 | 0.00# |
| 0.00 | 0.00 | 0.00 |

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
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Operator : WA
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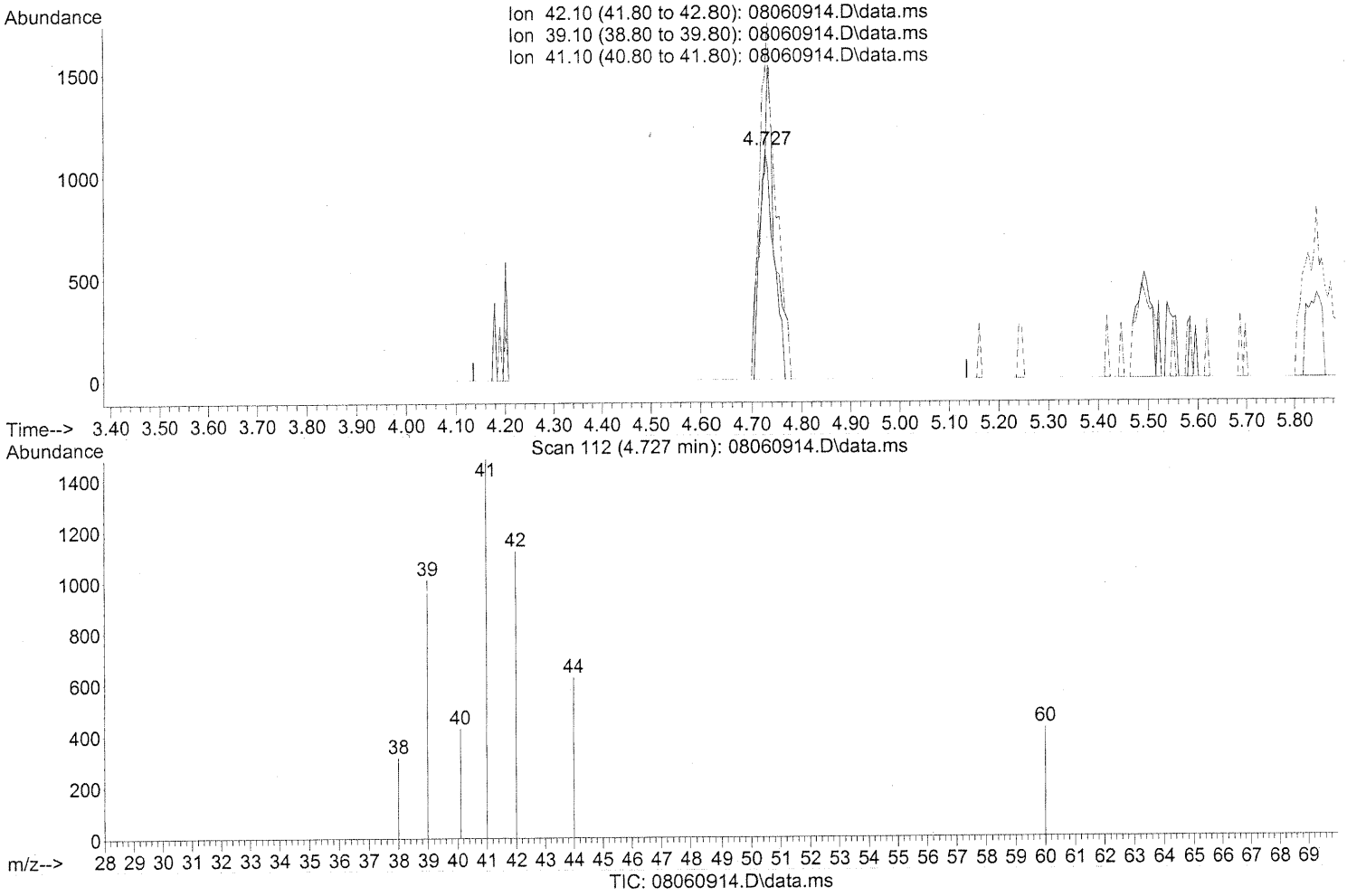
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:40:33 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




(2) Propene (T)

4.727min (+0.092) 0.12ng m

response 2278

| Ion | Exp% | Act% |
|---|---|---|
| 42.10 | 100 | 100 |
| 39.10 | 111.90 | 0.00# |
| 41.10 | 150.20 | 0.00# |
| 0.00 | 0.00 | 0.00 |

HP-7 1C

8/6/09

8/11/09

Quantitation Report (Qedit)

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Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
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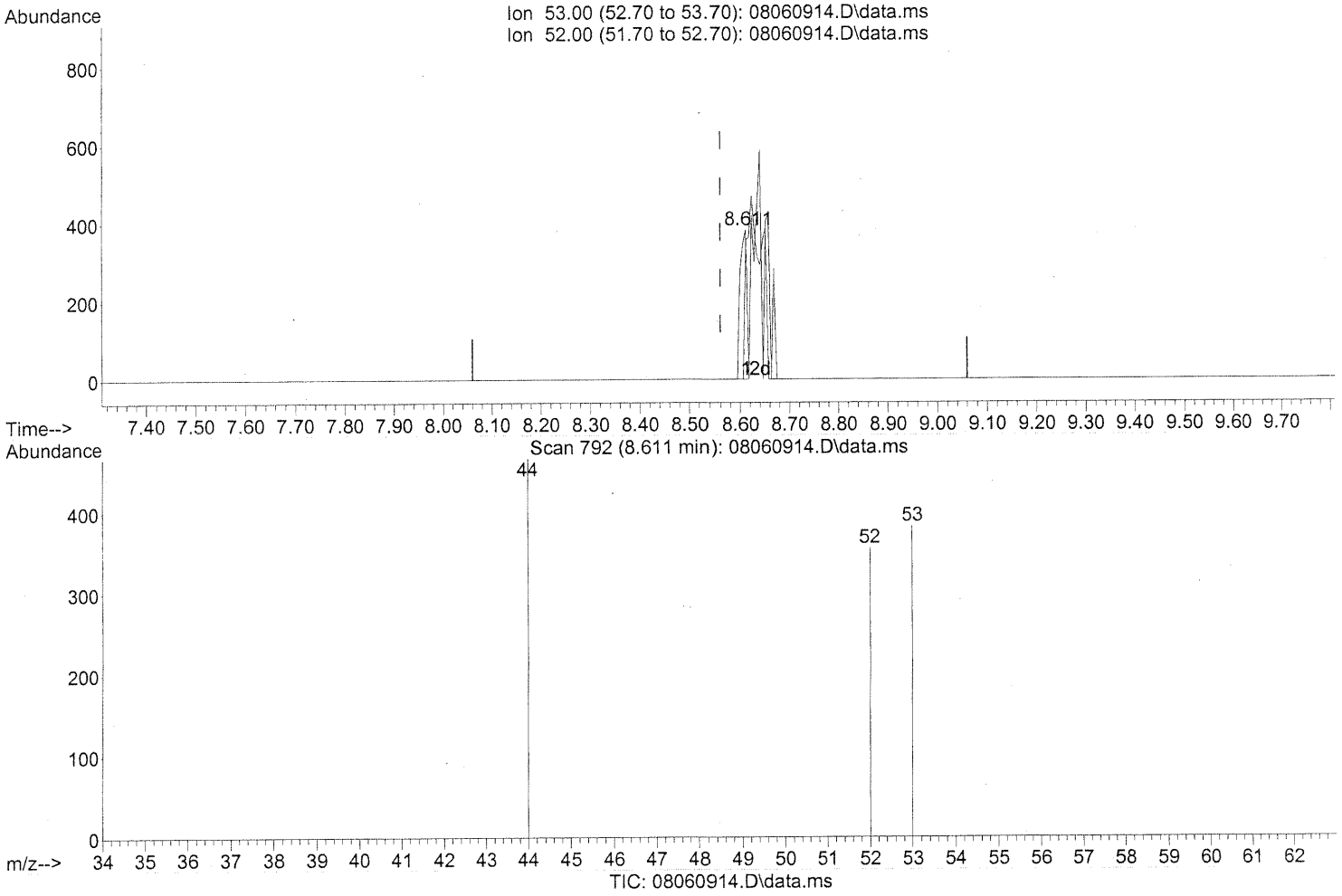
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




(16) Acrylonitrile (T)

8.611min (+0.052) 0.02ng

response 347

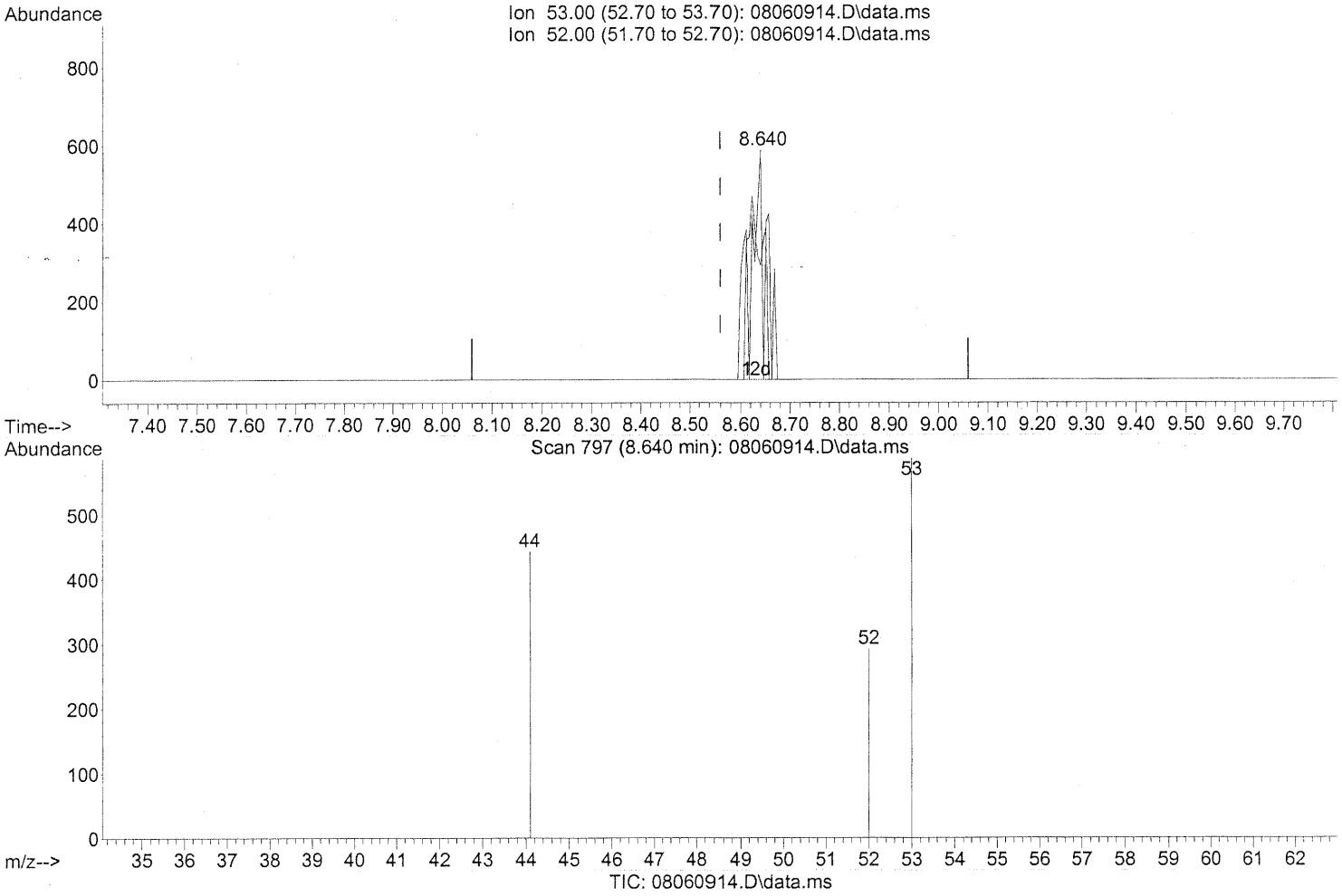
| Ion | Exp% | Act% |
|---|---|---|
| 53.00 | 100 | 100 |
| 52.00 | 81.20 | 289.91# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

MP

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:40:33 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




(16) Acrylonitrile (T)

8.640min (+0.080) 0.07ng m

response 1328

| Ion | Exp% | Act% |
|---|---|---|
| 53.00 | 100 | 100 |
| 52.00 | 81.20 | 75.75 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

HP-7 IC

8/16/09

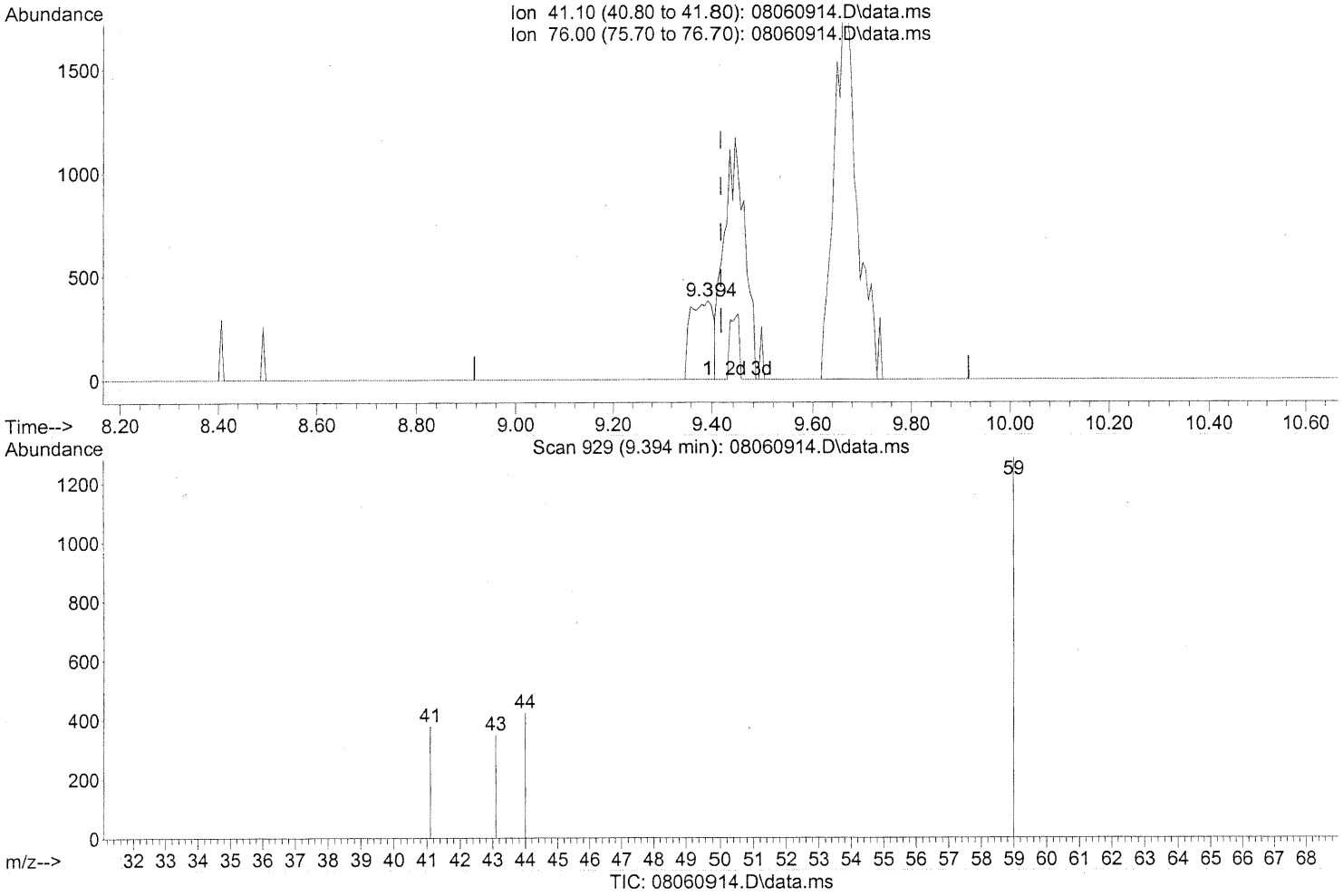
8/11/09

247

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:40:33 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




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

9.394min (-0.023) 0.05ng

response 1147

IP1

| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 76.00 | 31.40 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
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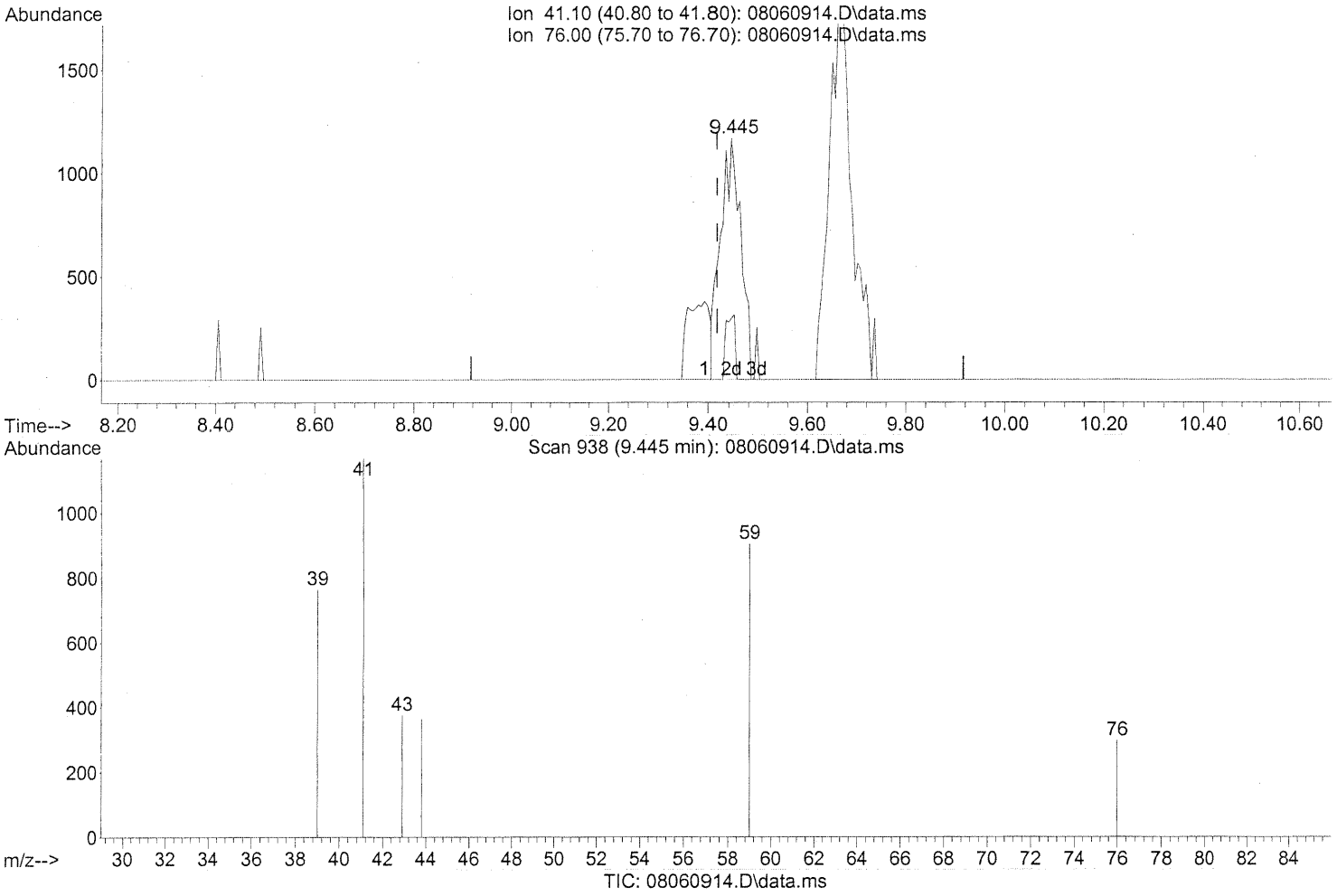
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




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

9.445min (+0.029) 0.14ng m

response 3293

| Ion | Exp% | Act% |
|---|---|---|
| 41.10 | 100 | 100 |
| 76.00 | 31.40 | 0.00# |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

IPI → IC

SA 8/16/09

LH 8/11/09

249

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:40:33 2009
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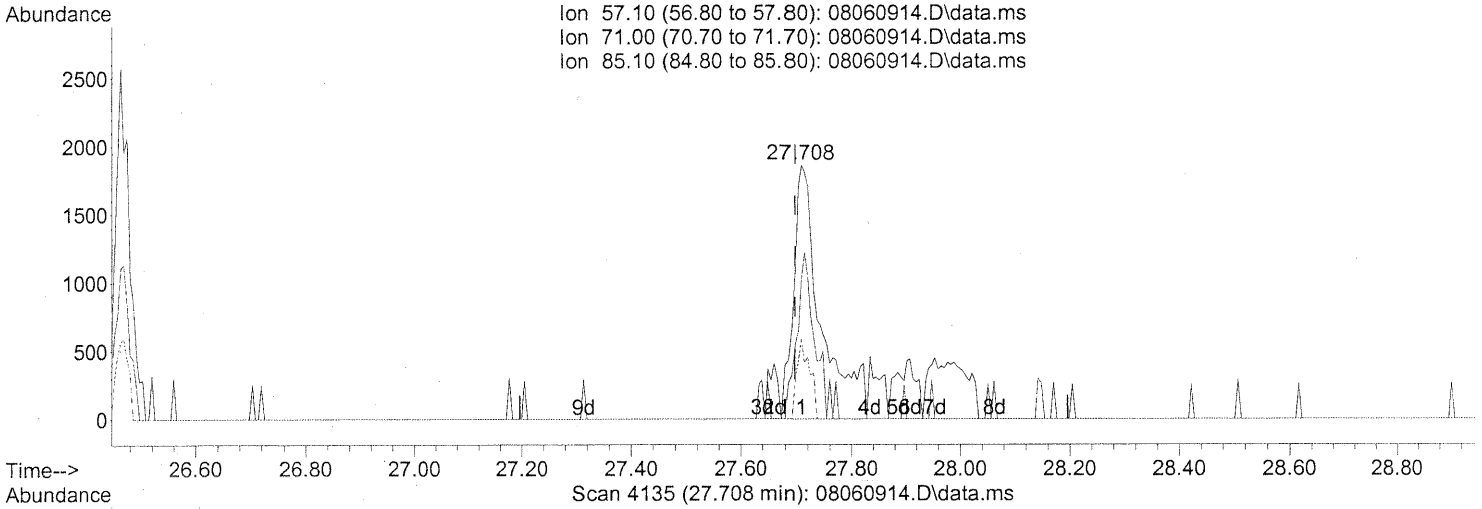
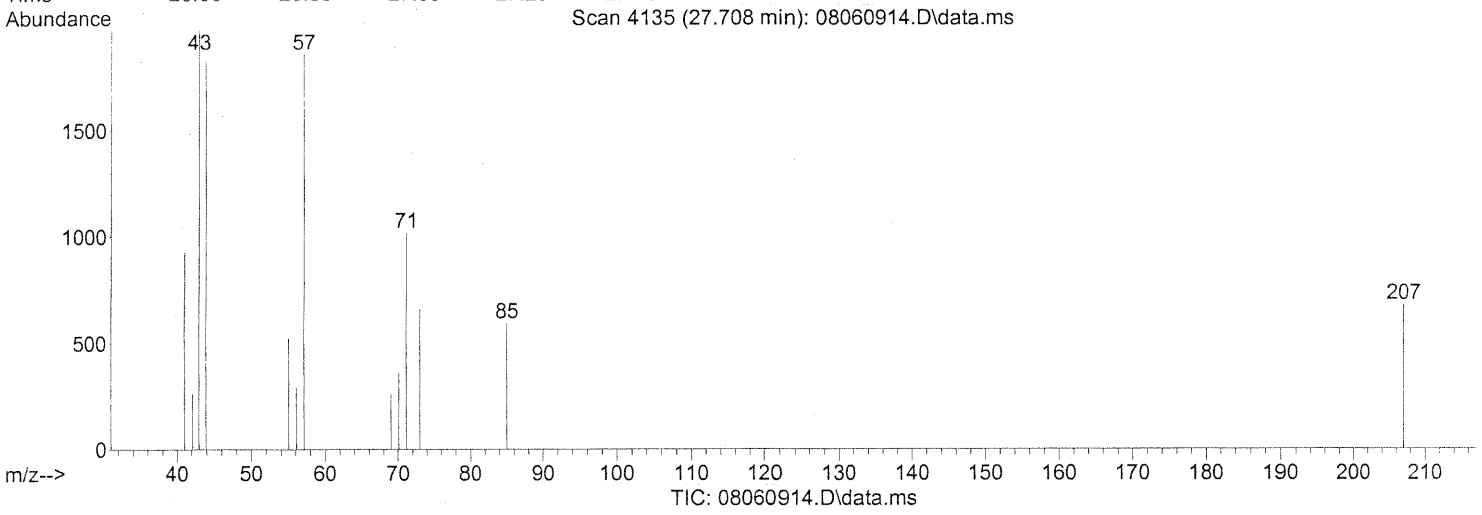
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




TIC: 08060914.D\data.ms

(96) n-Dodecane (T)

27.708min (+0.012) 0.17ng

response 6461

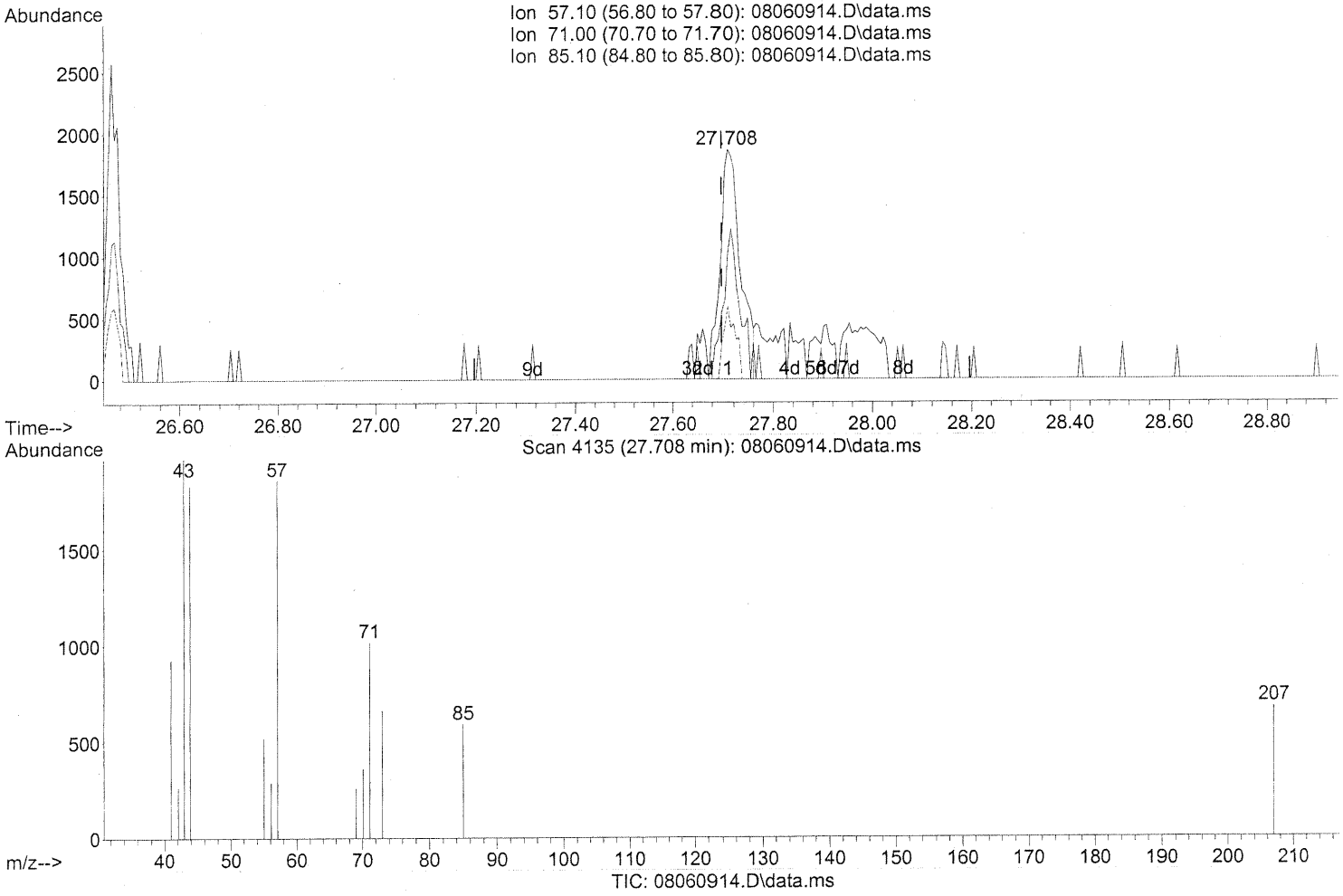
PT

| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 71.00 | 55.20 | 44.30 |
| 85.10 | 31.00 | 15.03 |
| 0.00 | 0.00 | 0.00 |

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060914.D
Acq On : 6 Aug 2009 11:55
Operator : WA
Sample : 0.1ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:40:33 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




TIC: 08060914.D\data.ms

(96) n-Dodecane (T)

27.708min (+0.012) 0.14ng m

response 5122

| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 71.00 | 55.20 | 55.88 |
| 85.10 | 31.00 | 18.96 |
| 0.00 | 0.00 | 0.00 |

PT-7 IC

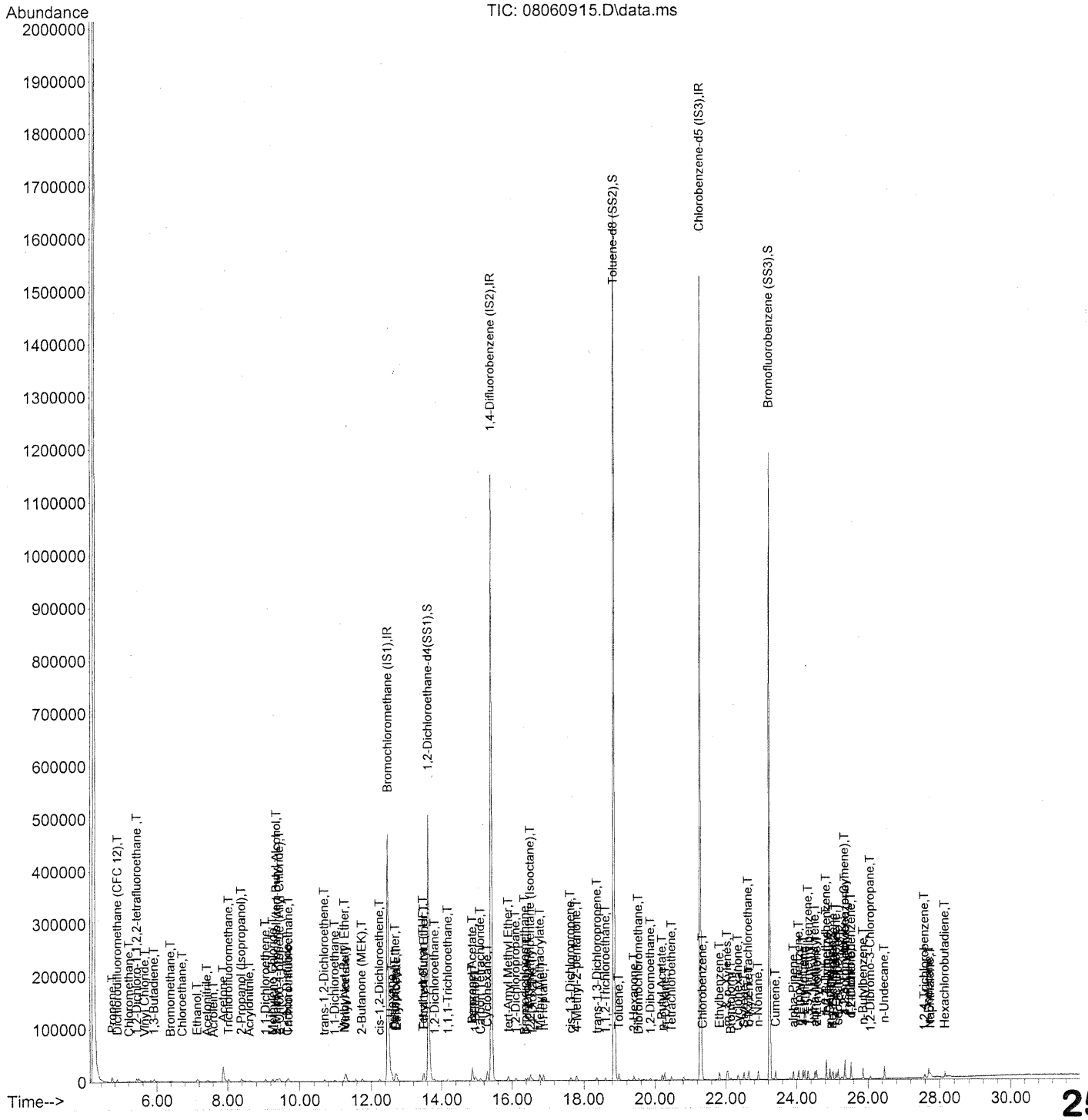
8/6/09

8/11/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060915.D
Acq On : 6 Aug 2009 12:36
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:51:56 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060915.D
Acq On : 6 Aug 2009 12:36
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:51:56 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 252357 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.43 | 114 | 1287515 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 648408 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 555188 | 24.104 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = 96.40% | | | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1423881 | 25.335 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 101.32% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 367233 | 25.587 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 102.36% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.72 | 42 | 4419 | 0.226 | ng | | 95 |
| 3) Dichlorodifluoromethan... | 4.88 | 85 | 6369 | 0.196 | ng | # | 87 |
| 4) Chloromethane | 5.21 | 50 | 4086 | 0.199 | ng | | 83 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.43 | 135 | 2817 | 0.221 | ng | | 91 |
| 6) Vinyl Chloride | 5.65 | 62 | 3579 | 0.178 | ng | | 98 |
| 7) 1,3-Butadiene | 5.92 | 54 | 3131 | 0.218 | ng | # | 84 |
| 8) Bromomethane | 6.39 | 94 | 2208 | 0.240 | ng | | 96 |
| 9) Chloroethane | 6.73 | 64 | 2365 | 0.214 | ng | | 76 |
| 10) Ethanol | 7.14 | 45 | 12938 | 1.079 | ng | | 90 |
| 11) Acetonitrile | 7.43 | 41 | 8087 | 0.191 | ng | | 98 |
| 12) Acrolein | 7.61 | 56 | 1996 | 0.172 | ng | | 97 |
| 13) Acetone | 7.88 | 58 | 19631 | 1.432 | ng | | 90 |
| 14) Trichlorofluoromethane | 8.03 | 101 | 5515 | 0.196 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.39 | 45 | 18213 | 0.402 | ng | | 92 |
| 16) Acrylonitrile | 8.61 | 53 | 4154 | 0.208 | ng | # | 68 |
| 17) 1,1-Dichloroethene | 9.06 | 96 | 2579 | 0.203 | ng | | 95 |
| 18) 2-Methyl-2-Propanol (t... | 9.36 | 59 | 16711 | 0.430 | ng | # | 72 |
| 19) Methylene Chloride | 9.26 | 84 | 3503 | 0.237 | ng | | 87 |
| 20) 3-Chloro-1-propene (Al... | 9.45 | 41 | 6518 | 0.274 | ng | | 75 |
| 21) Trichlorotrifluoroethane | 9.70 | 151 | 2010 | 0.194 | ng | | 88 |
| 22) Carbon Disulfide | 9.66 | 76 | 11291 | 0.222 | ng | | 89 |
| 23) trans-1,2-Dichloroethene | 10.69 | 61 | 4685 | 0.213 | ng | | 98 |
| 24) 1,1-Dichloroethane | 10.99 | 63 | 5901 | 0.215 | ng | | 94 |
| 25) Methyl tert-Butyl Ether | 11.26 | 73 | 8904 | 0.200 | ng | | 96 |
| 26) Vinyl Acetate | 11.29 | 86 | 2463 | 0.826 | ng | # | 18 |
| 27) 2-Butanone (MEK) | 11.74 | 72 | 2236 | 0.225 | ng | # | 50 |
| 28) cis-1,2-Dichloroethene | 12.24 | 61 | 4357 | 0.205 | ng | | 93 |
| 29) Diisopropyl Ether | 12.69 | 87 | 2973 | 0.247 | ng | # | 1 |
| 30) Ethyl Acetate | 12.72 | 61 | 2207 | 0.428 | ng | | 92 |
| 31) n-Hexane | 12.59 | 57 | 6299 | 0.232 | ng | | 94 |



8/6/09

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060915.D
Acq On : 6 Aug 2009 12:36
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:51:56 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.68 | 83 | 4817 | 0.193 | ng | | 98 |
| 34) Tetrahydrofuran (THF) | 13.47 | 72 | 3093 | 0.264 | ng | # | 79 |
| 35) Ethyl tert-Butyl Ether | 13.50 | 87 | 3408 | 0.185 | ng | | 93 |
| 36) 1,2-Dichloroethane | 13.80 | 62 | 4457 | 0.203 | ng | | 93 |
| 38) 1,1,1-Trichloroethane | 14.18 | 97 | 4737 | 0.198 | ng | | 94 |
| 39) Isopropyl Acetate | 14.88 | 61 | 4379 | 0.444 | ng | # | 93 |
| 40) 1-Butanol | 14.96 | 56 | 8215 | 0.489 | ng | | 83 |
| 41) Benzene | 14.87 | 78 | 14131 | 0.224 | ng | | 100 |
| 42) Carbon Tetrachloride | 15.11 | 117 | 3903 | 0.195 | ng | | 90 |
| 43) Cyclohexane | 15.30 | 84 | 9304 | 0.418 | ng | | 95 |
| 44) tert-Amyl Methyl Ether | 15.90 | 73 | 9698 | 0.210 | ng | | 97 |
| 45) 1,2-Dichloropropane | 16.11 | 63 | 3093 | 0.202 | ng | | 90 |
| 46) Bromodichloromethane | 16.37 | 83 | 4318 | 0.222 | ng | | 99 |
| 47) Trichloroethene | 16.43 | 130 | 2706 | 0.206 | ng | | 96 |
| 48) 1,4-Dioxane | 16.59 | 88 | 2311 | 0.204 | ng | | 80 |
| 49) 2,2,4-Trimethylpentane... | 16.52 | 57 | 15224 | 0.219 | ng | | 98 |
| 50) Methyl Methacrylate | 16.80 | 100 | 2319 | 0.433 | ng | # | 89 |
| 51) n-Heptane | 16.89 | 71 | 3376 | 0.205 | ng | | 94 |
| 52) cis-1,3-Dichloropropene | 17.65 | 75 | 4783 | 0.201 | ng | | 95 |
| 53) 4-Methyl-2-pentanone | 17.81 | 58 | 3120 | 0.219 | ng | | 83 |
| 54) trans-1,3-Dichloropropene | 18.37 | 75 | 4944 | 0.227 | ng | | 98 |
| 55) 1,1,2-Trichloroethane | 18.61 | 97 | 2714 | 0.205 | ng | | 97 |
| 58) Toluene | 18.98 | 91 | 12787 | 0.220 | ng | | 99 |
| 59) 2-Hexanone | 19.41 | 43 | 8414 | 0.215 | ng | | 94 |
| 60) Dibromochloromethane | 19.53 | 129 | 2958 | 0.217 | ng | | 97 |
| 61) 1,2-Dibromoethane | 19.87 | 107 | 3012 | 0.214 | ng | | 96 |
| 62) n-Butyl Acetate | 20.20 | 43 | 10164 | 0.229 | ng | | 95 |
| 63) n-Octane | 20.28 | 57 | 3172 | 0.216 | ng | | 90 |
| 64) Tetrachloroethene | 20.47 | 166 | 2555 | 0.193 | ng | | 91 |
| 65) Chlorobenzene | 21.35 | 112 | 7635 | 0.217 | ng | | 94 |
| 66) Ethylbenzene | 21.82 | 91 | 14159 | 0.215 | ng | | 100 |
| 67) m- & p-Xylenes | 22.04 | 91 | 23298 | 0.439 | ng | # | 30 |
| 68) Bromoform | 22.15 | 173 | 2052 | 0.184 | ng | | 92 |
| 69) Styrene | 22.51 | 104 | 8110 | 0.219 | ng | | 96 |
| 70) o-Xylene | 22.65 | 91 | 11714 | 0.220 | ng | | 99 |
| 71) n-Nonane | 22.91 | 43 | 8045 | 0.216 | ng | | 83 |
| 72) 1,1,2,2-Tetrachloroethane | 22.63 | 83 | 5167 | 0.220 | ng | | 91 |
| 74) Cumene | 23.41 | 105 | 14433 | 0.222 | ng | | 97 |
| 75) alpha-Pinene | 23.91 | 93 | 7275 | 0.211 | ng | | 82 |
| 76) n-Propylbenzene | 24.05 | 91 | 17557 | 0.210 | ng | | 99 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 14616 | 0.237 | ng | | 95 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 13728 | 0.220 | ng | | 98 |
| 79) 1,3,5-Trimethylbenzene | 24.33 | 105 | 11202 | 0.210 | ng | | 98 |

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060915.D
Acq On : 6 Aug 2009 12:36
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:51:56 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

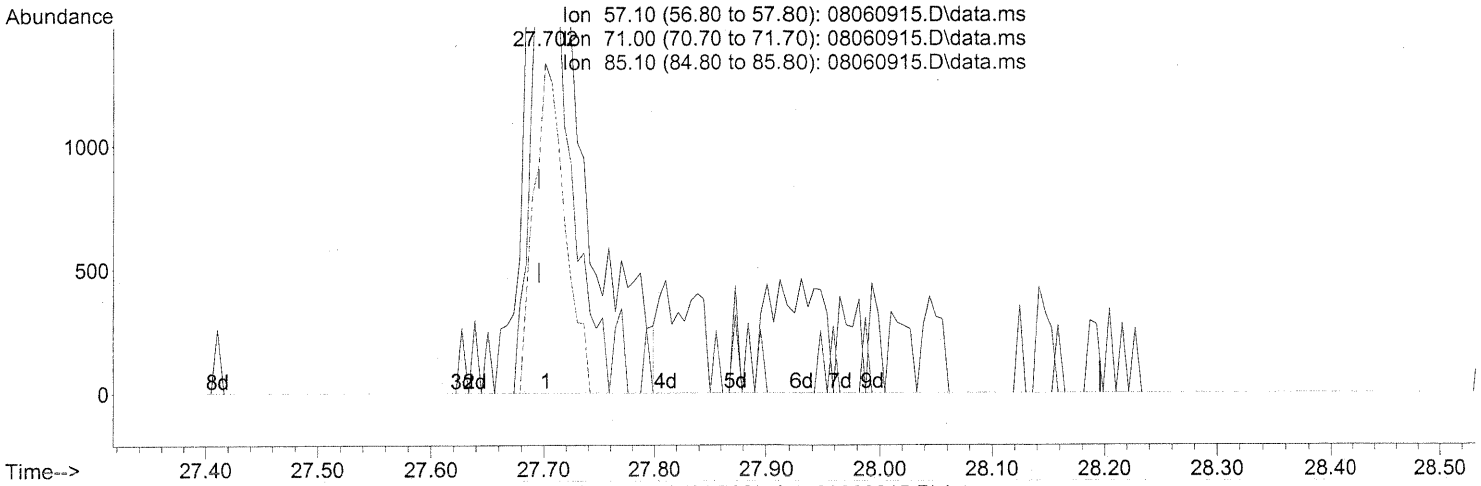
| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 5651 | 0.210 | ng | | 99 |
| 81) 2-Ethyltoluene | 24.57 | 105 | 13747 | 0.213 | ng | | 99 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 11876 | 0.224 | ng | | 98 |
| 83) n-Decane | 24.93 | 57 | 7948 | 0.226 | ng | | 95 |
| 84) Benzyl Chloride | 25.00 | 91 | 10911 | 0.238 | ng | | 97 |
| 85) 1,3-Dichlorobenzene | 25.03 | 146 | 5614 | 0.221 | ng | | 98 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 6064 | 0.225 | ng | | 94 |
| 87) sec-Butylbenzene | 25.17 | 105 | 15761 | 0.221 | ng | | 96 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 13140 | 0.207 | ng | | 95 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 12238 | 0.227 | ng | | 97 |
| 90) 1,2-Dichlorobenzene | 25.53 | 146 | 5142 | 0.209 | ng | | 95 |
| 91) d-Limonene | 25.53 | 68 | 5001 | 0.217 | ng | | 93 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 1840 | 0.234 | ng | | 93 |
| 93) n-Undecane | 26.46 | 57 | 8565 | 0.238 | ng | | 94 |
| 94) 1,2,4-Trichlorobenzene | 27.58 | 180 | 3584 | 0.231 | ng | # | 89 |
| 95) Naphthalene | 27.74 | 128 | 15295 | 0.251 | ng | | 84 |
| 96) n-Dodecane | 27.70 | 57 | 9176m | 0.241 | ng | | |
| 97) Hexachlorobutadiene | 28.14 | 225 | 2566 | 0.257 | ng | | 96 |
| 98) Cyclohexanone | 22.34 | 55 | 4726 | 0.178 | ng | | 94 |
| 99) tert-Butylbenzene | 24.83 | 119 | 10963 | 0.214 | ng | | 100 |
| 100) n-Butylbenzene | 25.87 | 91 | 12700 | 0.219 | ng | | 99 |

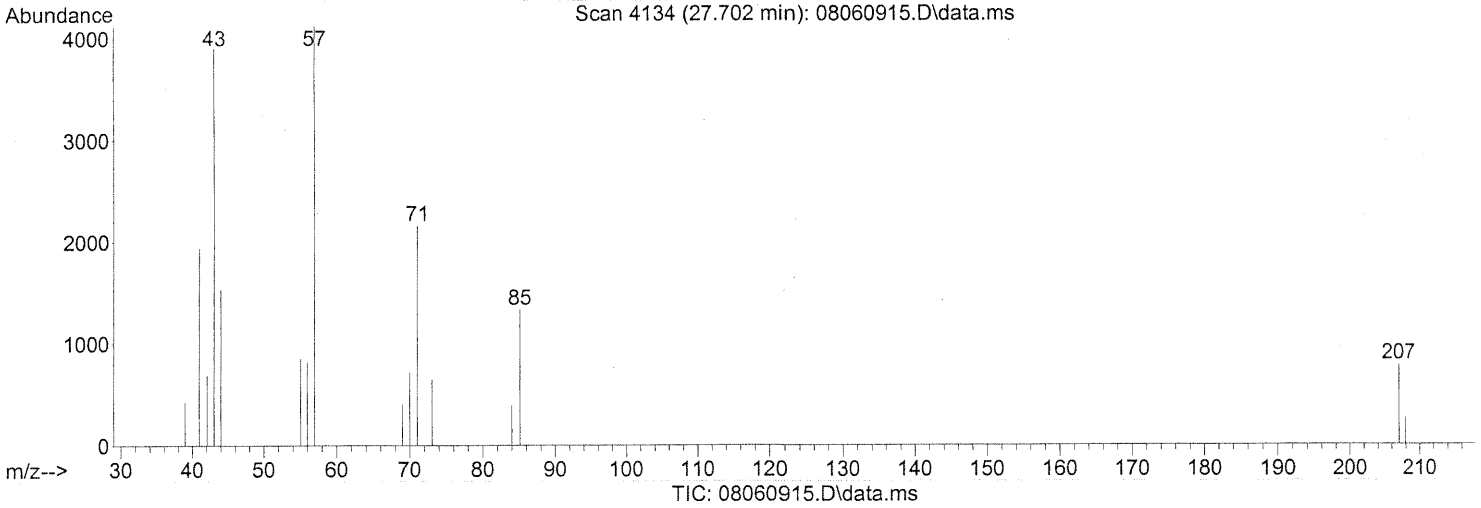
(#) = qualifier out of range (m) = manual integration (+) = signals summed

# Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060915.D
Acq On : 6 Aug 2009 12:36
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:44:57 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




(96) n-Dodecane (T)

27.702min (+0.006) 0.27ng

response 10324

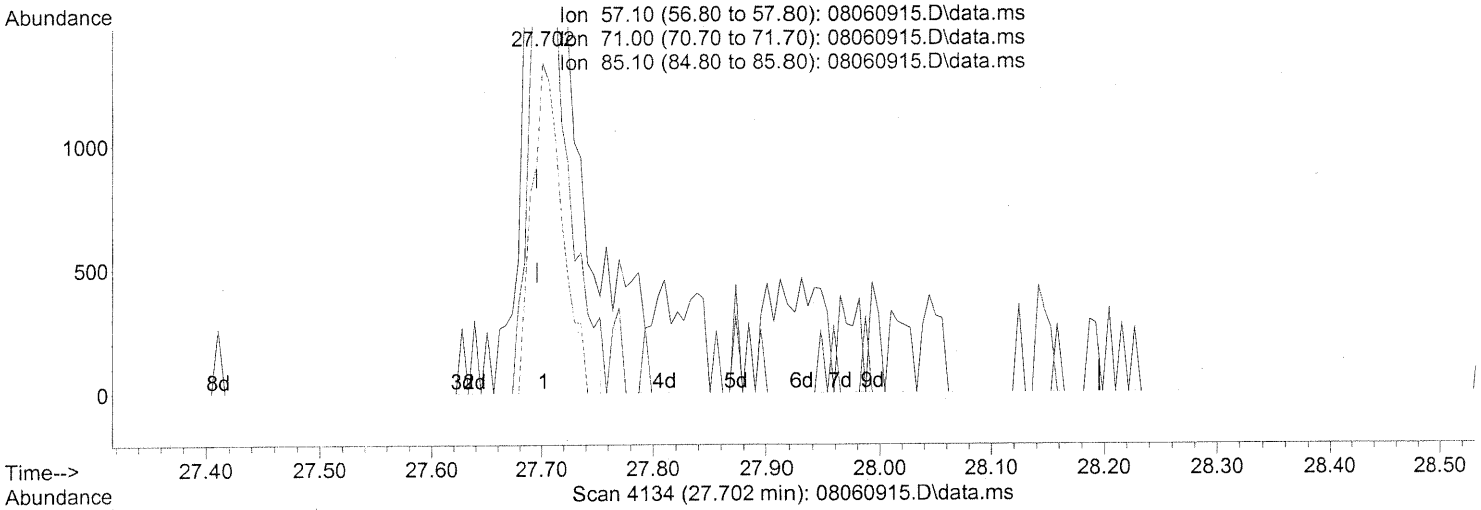
| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 71.00 | 55.20 | 48.39 |
| 85.10 | 31.00 | 24.76 |
| 0.00 | 0.00 | 0.00 |

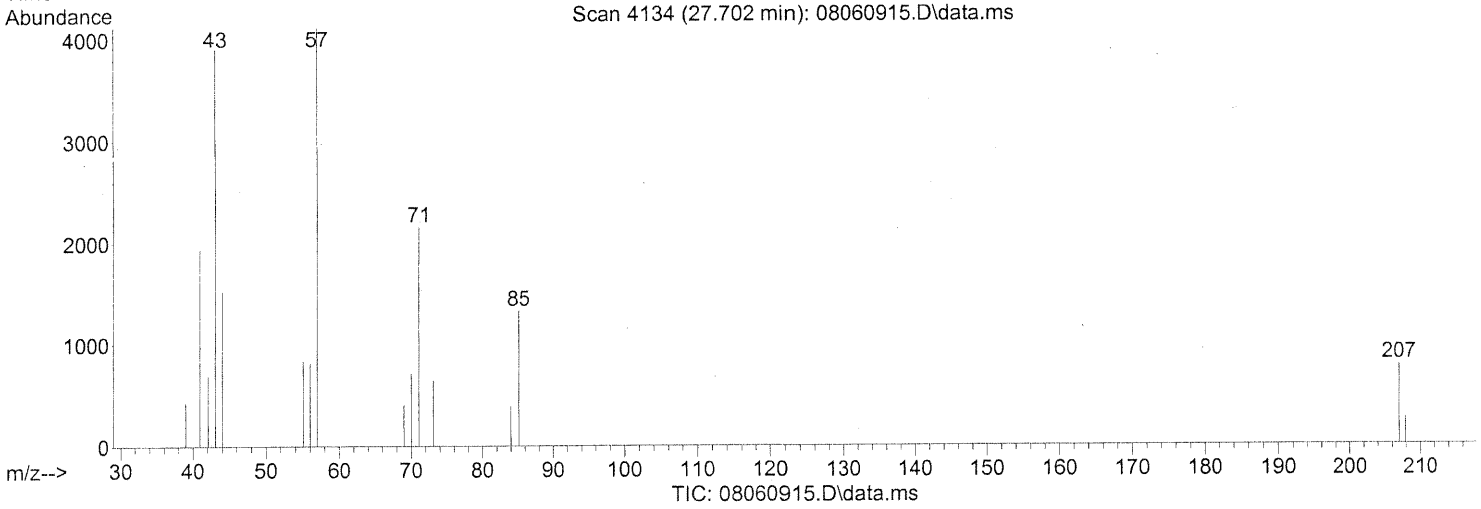
PT

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060915.D
Acq On : 6 Aug 2009 12:36
Operator : WA
Sample : 0.2ng TO-15 ICAL STD
Misc : S20-07200902/S20-07240912
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 06 13:44:57 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration




(96) n-Dodecane (T)

27.702min (+0.006) 0.24ng m

response 9176

| Ion | Exp% | Act% |
|---|---|---|
| 57.10 | 100 | 100 |
| 71.00 | 55.20 | 54.45 |
| 85.10 | 31.00 | 27.86 |
| 0.00 | 0.00 | 0.00 |

PT → IC

DA 8/6/09

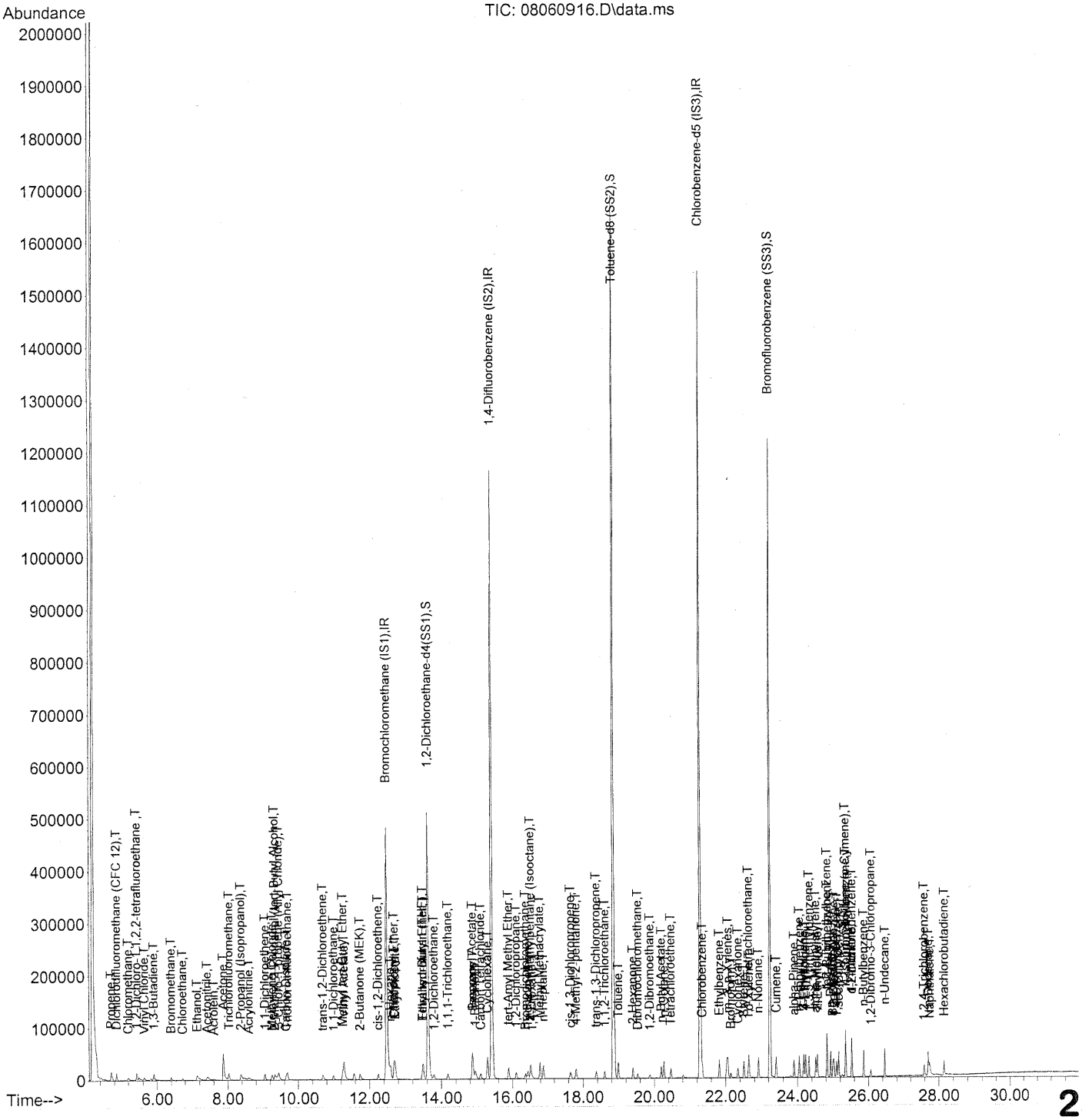
LH 8/11/09

257

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060916.D
Acq On : 6 Aug 2009 13:17
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 13:52:36 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060916.D
Acq On : 6 Aug 2009 13:17
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 13:52:36 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 251360 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.43 | 114 | 1297306 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 659325 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 555033 | 24.193 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 96.76% | | | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1438185 | 25.165 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 100.68% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 371243 | 25.439 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 101.76% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.70 | 42 | 8216 | 0.422 | ng | | 95 |
| 3) Dichlorodifluoromethan... | 4.86 | 85 | 14734 | 0.455 | ng | | 97 |
| 4) Chloromethane | 5.20 | 50 | 9411 | 0.460 | ng | | 96 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.42 | 135 | 6371 | 0.503 | ng | | 100 |
| 6) Vinyl Chloride | 5.64 | 62 | 8565 | 0.428 | ng | | 99 |
| 7) 1,3-Butadiene | 5.91 | 54 | 7445 | 0.520 | ng | | 95 |
| 8) Bromomethane | 6.40 | 94 | 5266 | 0.574 | ng | | 94 |
| 9) Chloroethane | 6.73 | 64 | 4665 | 0.424 | ng | | 97 |
| 10) Ethanol | 7.13 | 45 | 26864 | 2.249 | ng | | 95 |
| 11) Acetonitrile | 7.42 | 41 | 16894 | 0.401 | ng | | 99 |
| 12) Acrolein | 7.61 | 56 | 4162 | 0.360 | ng | | 96 |
| 13) Acetone | 7.87 | 58 | 32266 | 2.363 | ng | | 95 |
| 14) Trichlorofluoromethane | 8.03 | 101 | 13358 | 0.476 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.37 | 45 | 40537 | 0.898 | ng | | 83 |
| 16) Acrylonitrile | 8.59 | 53 | 9433 | 0.475 | ng | | 98 |
| 17) 1,1-Dichloroethene | 9.06 | 96 | 6255 | 0.494 | ng | | 91 |
| 18) 2-Methyl-2-Propanol (t... | 9.33 | 59 | 37768 | 0.976 | ng | | 82 |
| 19) Methylene Chloride | 9.26 | 84 | 6743 | 0.459 | ng | | 98 |
| 20) 3-Chloro-1-propene (Al... | 9.44 | 41 | 15298 | 0.645 | ng | | 80 |
| 21) Trichlorotrifluoroethane | 9.70 | 151 | 4915 | 0.477 | ng | | 96 |
| 22) Carbon Disulfide | 9.65 | 76 | 24760 | 0.489 | ng | # | 74 |
| 23) trans-1,2-Dichloroethene | 10.69 | 61 | 10278 | 0.469 | ng | | 99 |
| 24) 1,1-Dichloroethane | 10.99 | 63 | 12065 | 0.442 | ng | | 98 |
| 25) Methyl tert-Butyl Ether | 11.25 | 73 | 19979 | 0.451 | ng | | 99 |
| 26) Vinyl Acetate | 11.29 | 86 | 5981 | 2.014 | ng | # | 48 |
| 27) 2-Butanone (MEK) | 11.74 | 72 | 5062 | 0.512 | ng | # | 88 |
| 28) cis-1,2-Dichloroethene | 12.24 | 61 | 9809 | 0.463 | ng | | 99 |
| 29) Diisopropyl Ether | 12.69 | 87 | 6520 | 0.544 | ng | # | 1 |
| 30) Ethyl Acetate | 12.72 | 61 | 5291 | 1.030 | ng | | 97 |
| 31) n-Hexane | 12.58 | 57 | 12706 | 0.470 | ng | | 91 |



8/16/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060916.D
Acq On : 6 Aug 2009 13:17
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 13:52:36 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.68 | 83 | 11191 | 0.451 | ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.48 | 72 | 5678 | 0.487 | ng | # | 86 |
| 35) Ethyl tert-Butyl Ether | 13.49 | 87 | 8229 | 0.448 | ng | | 97 |
| 36) 1,2-Dichloroethane | 13.80 | 62 | 10322 | 0.472 | ng | | 97 |
| 38) 1,1,1-Trichloroethane | 14.18 | 97 | 10785 | 0.448 | ng | | 98 |
| 39) Isopropyl Acetate | 14.87 | 61 | 9606 | 0.968 | ng | # | 90 |
| 40) 1-Butanol | 14.96 | 56 | 16246 | 0.959 | ng | | 85 |
| 41) Benzene | 14.88 | 78 | 29072 | 0.458 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.11 | 117 | 9173 | 0.455 | ng | | 100 |
| 43) Cyclohexane | 15.30 | 84 | 21267 | 0.948 | ng | | 99 |
| 44) tert-Amyl Methyl Ether | 15.89 | 73 | 21956 | 0.472 | ng | | 98 |
| 45) 1,2-Dichloropropane | 16.11 | 63 | 7082 | 0.459 | ng | | 98 |
| 46) Bromodichloromethane | 16.37 | 83 | 9525 | 0.486 | ng | | 99 |
| 47) Trichloroethene | 16.45 | 130 | 6343 | 0.479 | ng | | 98 |
| 48) 1,4-Dioxane | 16.57 | 88 | 6011 | 0.528 | ng | | 89 |
| 49) 2,2,4-Trimethylpentane... | 16.52 | 57 | 33244 | 0.475 | ng | | 99 |
| 50) Methyl Methacrylate | 16.79 | 100 | 5377 | 0.998 | ng | | 95 |
| 51) n-Heptane | 16.88 | 71 | 7790 | 0.470 | ng | | 99 |
| 52) cis-1,3-Dichloropropene | 17.66 | 75 | 10842 | 0.453 | ng | | 98 |
| 53) 4-Methyl-2-pentanone | 17.80 | 58 | 7333 | 0.511 | ng | | 91 |
| 54) trans-1,3-Dichloropropene | 18.36 | 75 | 11151 | 0.509 | ng | | 100 |
| 55) 1,1,2-Trichloroethane | 18.61 | 97 | 6160 | 0.462 | ng | | 98 |
| 58) Toluene | 18.99 | 91 | 28640 | 0.484 | ng | | 99 |
| 59) 2-Hexanone | 19.40 | 43 | 19538 | 0.492 | ng | | 97 |
| 60) Dibromochloromethane | 19.53 | 129 | 7167 | 0.517 | ng | | 93 |
| 61) 1,2-Dibromoethane | 19.87 | 107 | 6714 | 0.470 | ng | | 98 |
| 62) n-Butyl Acetate | 20.20 | 43 | 22390 | 0.496 | ng | | 99 |
| 63) n-Octane | 20.28 | 57 | 7129 | 0.478 | ng | | 100 |
| 64) Tetrachloroethene | 20.46 | 166 | 6404 | 0.475 | ng | | 100 |
| 65) Chlorobenzene | 21.34 | 112 | 17302 | 0.484 | ng | | 100 |
| 66) Ethylbenzene | 21.82 | 91 | 32353 | 0.484 | ng | | 98 |
| 67) m- & p-Xylenes | 22.06 | 91 | 50569 | 0.938 | ng | # | 30 |
| 68) Bromoform | 22.15 | 173 | 5337 | 0.471 | ng | | 97 |
| 69) Styrene | 22.51 | 104 | 18352 | 0.488 | ng | | 98 |
| 70) o-Xylene | 22.65 | 91 | 26471 | 0.488 | ng | | 97 |
| 71) n-Nonane | 22.91 | 43 | 17683 | 0.467 | ng | | 93 |
| 72) 1,1,2,2-Tetrachloroethane | 22.63 | 83 | 11841 | 0.496 | ng | | 95 |
| 74) Cumene | 23.41 | 105 | 31734 | 0.479 | ng | | 97 |
| 75) alpha-Pinene | 23.90 | 93 | 15763 | 0.450 | ng | | 95 |
| 76) n-Propylbenzene | 24.05 | 91 | 40346 | 0.474 | ng | | 99 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 32540 | 0.519 | ng | | 95 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 30506 | 0.480 | ng | | 100 |
| 79) 1,3,5-Trimethylbenzene | 24.32 | 105 | 26350 | 0.487 | ng | | 100 |

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060916.D
Acq On : 6 Aug 2009 13:17
Operator : WA
Sample : 0.5ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 13:52:36 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

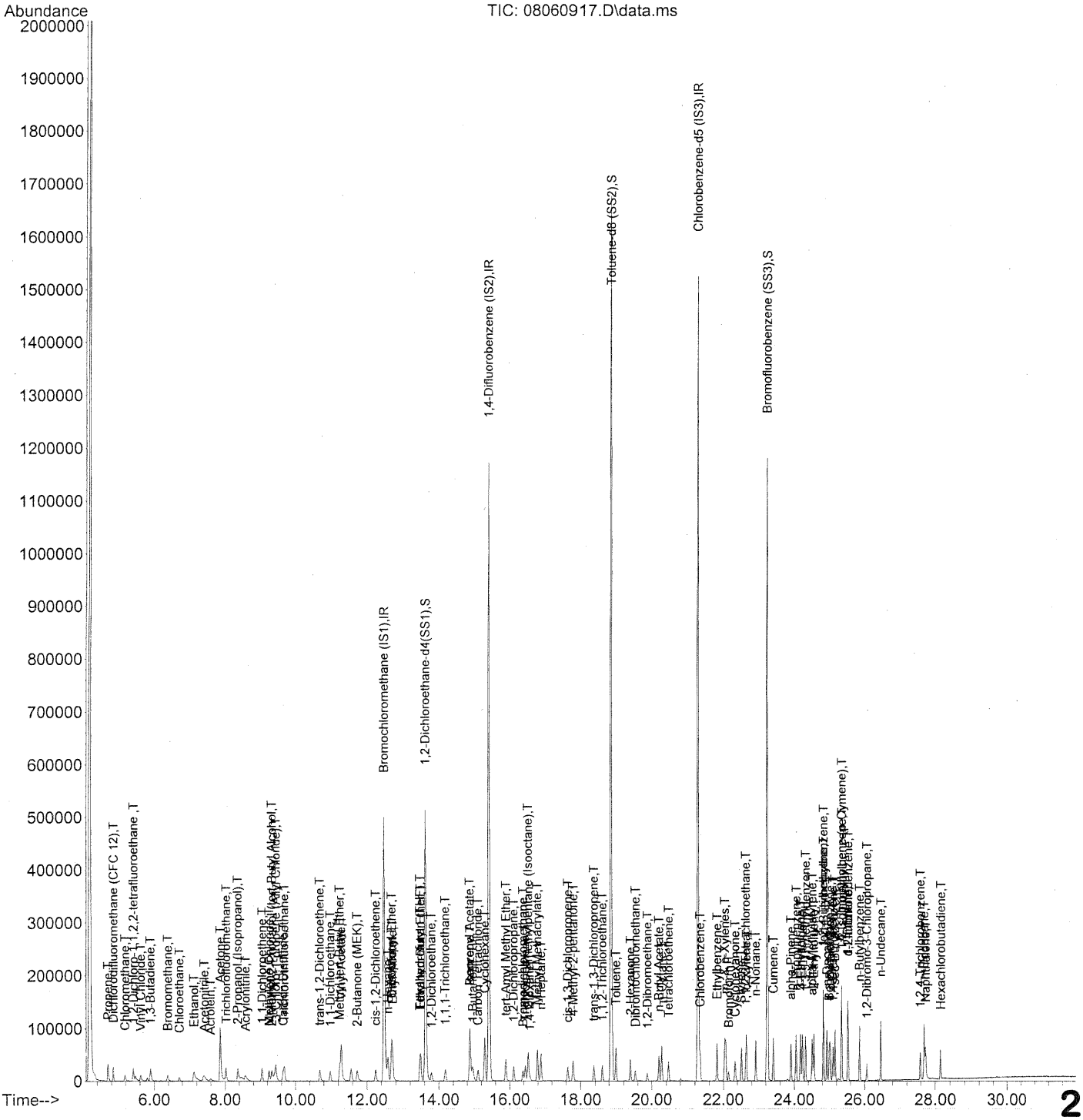
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 12971 | 0.473 | ng | 97 |
| 81) 2-Ethyltoluene | 24.57 | 105 | 31095 | 0.473 | ng | 99 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 26353 | 0.488 | ng | 96 |
| 83) n-Decane | 24.94 | 57 | 18126 | 0.506 | ng | 98 |
| 84) Benzyl Chloride | 25.00 | 91 | 24206 | 0.520 | ng | 100 |
| 85) 1,3-Dichlorobenzene | 25.03 | 146 | 12977 | 0.502 | ng | 98 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 13901 | 0.506 | ng | 97 |
| 87) sec-Butylbenzene | 25.17 | 105 | 35698 | 0.493 | ng | 98 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 31753 | 0.493 | ng | 99 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 27977 | 0.510 | ng | 100 |
| 90) 1,2-Dichlorobenzene | 25.53 | 146 | 12508 | 0.501 | ng | 98 |
| 91) d-Limonene | 25.53 | 68 | 11768 | 0.502 | ng | 97 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 4075 | 0.510 | ng | 90 |
| 93) n-Undecane | 26.46 | 57 | 18836 | 0.515 | ng | 99 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 8410 | 0.533 | ng | 97 |
| 95) Naphthalene | 27.74 | 128 | 33134 | 0.535 | ng | 93 |
| 96) n-Dodecane | 27.70 | 57 | 20632 | 0.533 | ng | 95 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 5535 | 0.546 | ng | 100 |
| 98) Cyclohexanone | 22.34 | 55 | 10843 | 0.402 | ng | 97 |
| 99) tert-Butylbenzene | 24.83 | 119 | 25490 | 0.490 | ng | 97 |
| 100) n-Butylbenzene | 25.86 | 91 | 30481 | 0.517 | ng | 98 |

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060917.D
Acq On : 6 Aug 2009 13:57
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 14:32:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060917.D
Acq On : 6 Aug 2009 13:57
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 14:32:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 253159 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.42 | 114 | 1287874 | 25.000 | ng | | -0.01 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 650609 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 554603 | 24.002 | ng | | -0.01 |
| Spiked Amount 25.000 | | | Recovery = | 96.00% | | | |
| 57) Toluene-d8 (SS2) | 18.85 | 98 | 1420867 | 25.196 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 100.80% | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 366142 | 25.425 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 101.72% | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.70 | 42 | 15729 | 0.803 | ng | | 98 |
| 3) Dichlorodifluoromethan... | 4.86 | 85 | 28962 | 0.889 | ng | | 99 |
| 4) Chloromethane | 5.18 | 50 | 19165 | 0.931 | ng | | 97 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.42 | 135 | 11280 | 0.884 | ng | | 99 |
| 6) Vinyl Chloride | 5.62 | 62 | 17901 | 0.889 | ng | | 98 |
| 7) 1,3-Butadiene | 5.89 | 54 | 14844 | 1.029 | ng | | 95 |
| 8) Bromomethane | 6.38 | 94 | 10788 | 1.167 | ng | | 95 |
| 9) Chloroethane | 6.71 | 64 | 10224 | 0.923 | ng | | 92 |
| 10) Ethanol | 7.12 | 45 | 54360 | 4.518 | ng | | 98 |
| 11) Acetonitrile | 7.42 | 41 | 31256 | 0.737 | ng | | 99 |
| 12) Acrolein | 7.59 | 56 | 8675 | 0.746 | ng | | 98 |
| 13) Acetone | 7.86 | 58 | 59842 | 4.351 | ng | | 99 |
| 14) Trichlorofluoromethane | 8.03 | 101 | 25722 | 0.909 | ng | | 98 |
| 15) 2-Propanol (Isopropanol) | 8.35 | 45 | 78074 | 1.717 | ng | | 95 |
| 16) Acrylonitrile | 8.58 | 53 | 19833 | 0.991 | ng | | 100 |
| 17) 1,1-Dichloroethene | 9.05 | 96 | 12813 | 1.005 | ng | | 91 |
| 18) 2-Methyl-2-Propanol (t... | 9.32 | 59 | 75842 | 1.947 | ng | | 80 |
| 19) Methylene Chloride | 9.25 | 84 | 13644 | 0.922 | ng | | 99 |
| 20) 3-Chloro-1-propene (Al... | 9.44 | 41 | 30907 | 1.293 | ng | | 82 |
| 21) Trichlorotrifluoroethane | 9.68 | 151 | 9982 | 0.961 | ng | | 98 |
| 22) Carbon Disulfide | 9.65 | 76 | 49774 | 0.977 | ng | | 100 |
| 23) trans-1,2-Dichloroethene | 10.68 | 61 | 21976 | 0.995 | ng | | 99 |
| 24) 1,1-Dichloroethane | 10.98 | 63 | 26037 | 0.946 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.24 | 73 | 39678 | 0.890 | ng | | 100 |
| 26) Vinyl Acetate | 11.28 | 86 | 12172 | 4.070 | ng | # | 63 |
| 27) 2-Butanone (MEK) | 11.72 | 72 | 9933 | 0.997 | ng | # | 84 |
| 28) cis-1,2-Dichloroethene | 12.24 | 61 | 20467 | 0.958 | ng | | 96 |
| 29) Diisopropyl Ether | 12.68 | 87 | 13497 | 1.117 | ng | # | 1 |
| 30) Ethyl Acetate | 12.71 | 61 | 10334 | 1.998 | ng | | 99 |
| 31) n-Hexane | 12.58 | 57 | 26377 | 0.968 | ng | | 95 |



8/6/09

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060917.D
Acq On : 6 Aug 2009 13:57
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 14:32:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.68 | 83 | 23278 | 0.931 | ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.47 | 72 | 10036 | 0.854 | ng | # | 89 |
| 35) Ethyl tert-Butyl Ether | 13.49 | 87 | 16455 | 0.890 | ng | | 99 |
| 36) 1,2-Dichloroethane | 13.79 | 62 | 20046 | 0.910 | ng | | 98 |
| 38) 1,1,1-Trichloroethane | 14.17 | 97 | 21730 | 0.909 | ng | | 96 |
| 39) Isopropyl Acetate | 14.87 | 61 | 18933 | 1.921 | ng | # | 82 |
| 40) 1-Butanol | 14.95 | 56 | 31282 | 1.861 | ng | | 83 |
| 41) Benzene | 14.88 | 78 | 55682 | 0.883 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.10 | 117 | 18312 | 0.914 | ng | | 99 |
| 43) Cyclohexane | 15.30 | 84 | 42338 | 1.901 | ng | | 99 |
| 44) tert-Amyl Methyl Ether | 15.89 | 73 | 42797 | 0.926 | ng | | 98 |
| 45) 1,2-Dichloropropane | 16.11 | 63 | 14488 | 0.946 | ng | | 100 |
| 46) Bromodichloromethane | 16.38 | 83 | 19155 | 0.984 | ng | | 98 |
| 47) Trichloroethene | 16.44 | 130 | 12738 | 0.969 | ng | | 99 |
| 48) 1,4-Dioxane | 16.57 | 88 | 11142 | 0.985 | ng | # | 68 |
| 49) 2,2,4-Trimethylpentane... | 16.52 | 57 | 66591 | 0.958 | ng | | 97 |
| 50) Methyl Methacrylate | 16.79 | 100 | 10587 | 1.978 | ng | | 96 |
| 51) n-Heptane | 16.89 | 71 | 15425 | 0.937 | ng | | 99 |
| 52) cis-1,3-Dichloropropene | 17.65 | 75 | 22102 | 0.930 | ng | | 100 |
| 53) 4-Methyl-2-pentanone | 17.80 | 58 | 14470 | 1.016 | ng | | 94 |
| 54) trans-1,3-Dichloropropene | 18.36 | 75 | 23424 | 1.078 | ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.61 | 97 | 12640 | 0.955 | ng | | 96 |
| 58) Toluene | 18.99 | 91 | 57012 | 0.977 | ng | | 99 |
| 59) 2-Hexanone | 19.40 | 43 | 39077 | 0.996 | ng | | 99 |
| 60) Dibromochloromethane | 19.54 | 129 | 14256 | 1.042 | ng | | 99 |
| 61) 1,2-Dibromoethane | 19.87 | 107 | 14117 | 1.001 | ng | | 100 |
| 62) n-Butyl Acetate | 20.20 | 43 | 44725 | 1.004 | ng | | 99 |
| 63) n-Octane | 20.28 | 57 | 13890 | 0.944 | ng | | 97 |
| 64) Tetrachloroethene | 20.47 | 166 | 12781 | 0.961 | ng | | 97 |
| 65) Chlorobenzene | 21.35 | 112 | 35691 | 1.012 | ng | | 99 |
| 66) Ethylbenzene | 21.82 | 91 | 64286 | 0.974 | ng | | 100 |
| 67) m- & p-Xylenes | 22.04 | 91 | 102993 | 1.935 | ng | # | 30 |
| 68) Bromoform | 22.16 | 173 | 10221 | 0.914 | ng | | 96 |
| 69) Styrene | 22.51 | 104 | 36918 | 0.995 | ng | | 98 |
| 70) o-Xylene | 22.65 | 91 | 52204 | 0.975 | ng | | 100 |
| 71) n-Nonane | 22.91 | 43 | 35568 | 0.951 | ng | | 96 |
| 72) 1,1,2,2-Tetrachloroethane | 22.63 | 83 | 23941 | 1.017 | ng | | 98 |
| 74) Cumene | 23.41 | 105 | 63375 | 0.970 | ng | | 98 |
| 75) alpha-Pinene | 23.90 | 93 | 32053 | 0.926 | ng | | 96 |
| 76) n-Propylbenzene | 24.05 | 91 | 82766 | 0.986 | ng | | 98 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 62532 | 1.011 | ng | | 99 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 63400 | 1.011 | ng | | 100 |
| 79) 1,3,5-Trimethylbenzene | 24.32 | 105 | 52731 | 0.987 | ng | | 100 |

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060917.D
Acq On : 6 Aug 2009 13:57
Operator : WA
Sample : 1.0ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 14:32:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

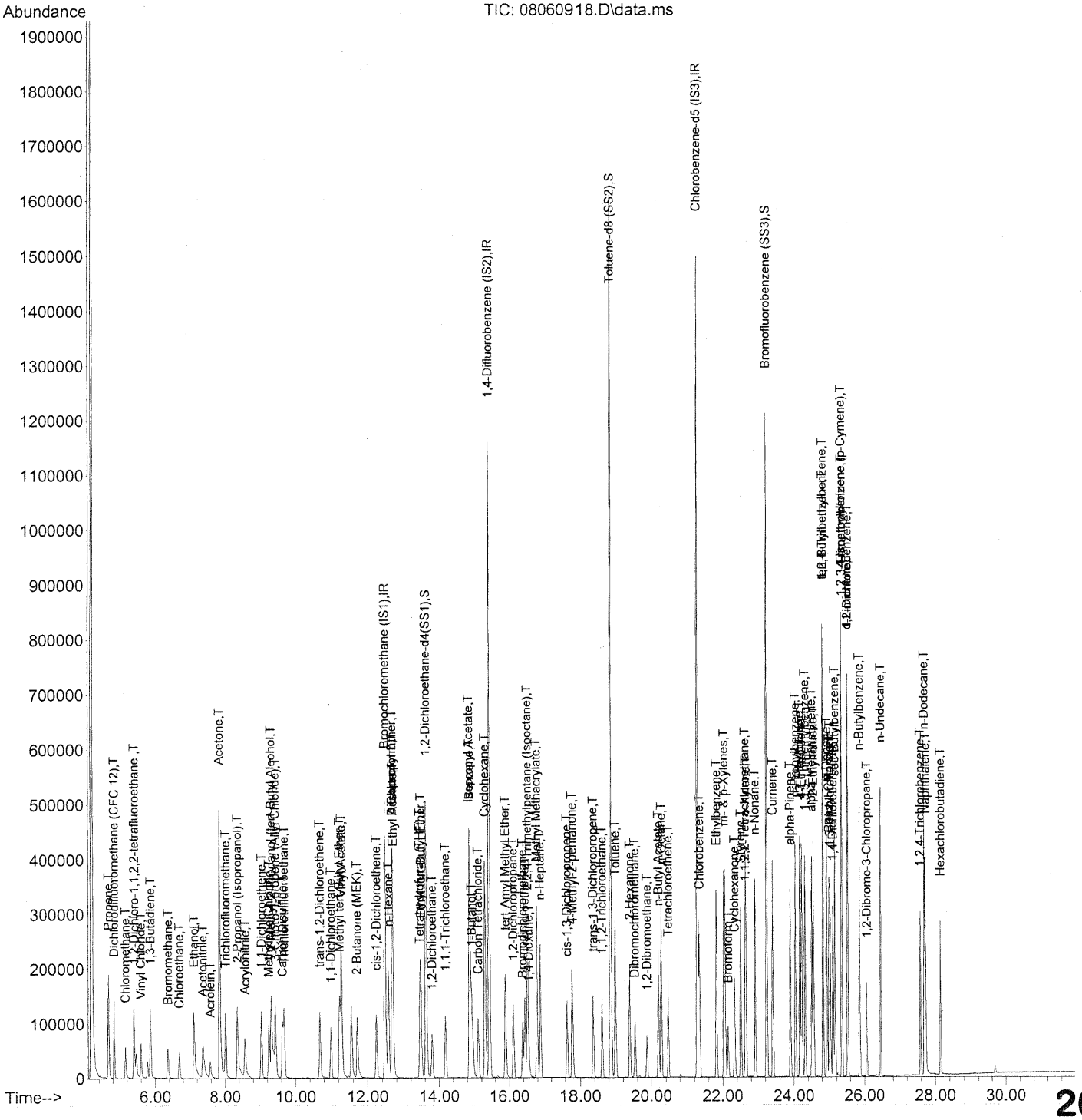
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 27052 | 1.000 | ng | 96 |
| 81) 2-Ethyltoluene | 24.56 | 105 | 62808 | 0.968 | ng | 99 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 54320 | 1.019 | ng | 99 |
| 83) n-Decane | 24.94 | 57 | 36002 | 1.019 | ng | 99 |
| 84) Benzyl Chloride | 25.00 | 91 | 50759 | 1.106 | ng | 97 |
| 85) 1,3-Dichlorobenzene | 25.03 | 146 | 27203 | 1.066 | ng | 98 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 27477 | 1.014 | ng | 100 |
| 87) sec-Butylbenzene | 25.17 | 105 | 71023 | 0.994 | ng | 98 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 62425 | 0.982 | ng | 97 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 54604 | 1.008 | ng | 98 |
| 90) 1,2-Dichlorobenzene | 25.53 | 146 | 25453 | 1.032 | ng | 99 |
| 91) d-Limonene | 25.53 | 68 | 22906 | 0.991 | ng | 99 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 9032 | 1.145 | ng | 96 |
| 93) n-Undecane | 26.46 | 57 | 39335 | 1.089 | ng | 97 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 18307 | 1.175 | ng | 98 |
| 95) Naphthalene | 27.74 | 128 | 69383 | 1.134 | ng | 97 |
| 96) n-Dodecane | 27.70 | 57 | 41338 | 1.082 | ng | 95 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 10594 | 1.059 | ng | 98 |
| 98) Cyclohexanone | 22.34 | 55 | 21416 | 0.805 | ng | 99 |
| 99) tert-Butylbenzene | 24.83 | 119 | 51340 | 1.000 | ng | 98 |
| 100) n-Butylbenzene | 25.86 | 91 | 61539 | 1.058 | ng | 99 |

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060918.D
Acq On : 6 Aug 2009 14:38
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 15:06:30 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060918.D
Acq On : 6 Aug 2009 14:38
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 15:06:30 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.48 | 130 | 249215 | 25.000 | ng | | 0.00 |
| 37) 1,4-Difluorobenzene (IS2) | 15.43 | 114 | 1269404 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 640609 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.63 | 65 | 541276 | 23.796 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 95.20% | | | |
| 57) Toluene-d8 (SS2) | 18.86 | 98 | 1393939 | 25.104 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 100.40% | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 369692 | 26.072 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 104.28% | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.67 | 42 | 89432 | 4.636 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 4.84 | 85 | 140828 | 4.390 | ng | | 99 |
| 4) Chloromethane | 5.15 | 50 | 84961 | 4.191 | ng | | 100 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.40 | 135 | 54919 | 4.370 | ng | | 97 |
| 6) Vinyl Chloride | 5.59 | 62 | 89033 | 4.491 | ng | | 100 |
| 7) 1,3-Butadiene | 5.87 | 54 | 73562 | 5.181 | ng | | 98 |
| 8) Bromomethane | 6.36 | 94 | 52677 | 5.786 | ng | | 99 |
| 9) Chloroethane | 6.69 | 64 | 52005 | 4.770 | ng | | 95 |
| 10) Ethanol | 7.11 | 45 | 258014 | 21.785 | ng | | 100 |
| 11) Acetonitrile | 7.37 | 41 | 150692 | 3.611 | ng | | 99 |
| 12) Acrolein | 7.57 | 56 | 44402 | 3.876 | ng | | 99 |
| 13) Acetone | 7.84 | 58 | 278483 | 20.568 | ng | | 96 |
| 14) Trichlorofluoromethane | 8.02 | 101 | 123504 | 4.435 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.35 | 45 | 301287 | 6.731 | ng | | 97 |
| 16) Acrylonitrile | 8.57 | 53 | 100540 | 5.104 | ng | | 100 |
| 17) 1,1-Dichloroethene | 9.04 | 96 | 62068 | 4.946 | ng | | 93 |
| 18) 2-Methyl-2-Propanol (t... | 9.31 | 59 | 359931 | 9.384 | ng | | 95 |
| 19) Methylene Chloride | 9.24 | 84 | 65696 | 4.508 | ng | | 99 |
| 20) 3-Chloro-1-propene (Al... | 9.43 | 41 | 129259 | 5.493 | ng | | 92 |
| 21) Trichlorotrifluoroethane | 9.68 | 151 | 47871 | 4.683 | ng | | 96 |
| 22) Carbon Disulfide | 9.63 | 76 | 243057 | 4.846 | ng | | 100 |
| 23) trans-1,2-Dichloroethene | 10.68 | 61 | 107824 | 4.959 | ng | | 99 |
| 24) 1,1-Dichloroethane | 10.99 | 63 | 124688 | 4.604 | ng | | 99 |
| 25) Methyl tert-Butyl Ether | 11.23 | 73 | 197911 | 4.509 | ng | | 99 |
| 26) Vinyl Acetate | 11.28 | 86 | 44312 | 15.052 | ng | # | 69 |
| 27) 2-Butanone (MEK) | 11.71 | 72 | 50182 | 5.115 | ng | # | 92 |
| 28) cis-1,2-Dichloroethene | 12.24 | 61 | 102666 | 4.883 | ng | | 99 |
| 29) Diisopropyl Ether | 12.68 | 87 | 64732 | 5.444 | ng | # | 1 |
| 30) Ethyl Acetate | 12.71 | 61 | 52338 | 10.281 | ng | | 97 |
| 31) n-Hexane | 12.58 | 57 | 123098 | 4.588 | ng | | 98 |



DH 8/6/09

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060918.D
Acq On : 6 Aug 2009 14:38
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 15:06:30 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.69 | 83 | 113521 | 4.612 | ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.46 | 72 | 47151 | 4.075 | ng | | 95 |
| 35) Ethyl tert-Butyl Ether | 13.48 | 87 | 77046 | 4.234 | ng | | 99 |
| 36) 1,2-Dichloroethane | 13.80 | 62 | 97747 | 4.510 | ng | | 97 |
| 38) 1,1,1-Trichloroethane | 14.18 | 97 | 104481 | 4.435 | ng | | 98 |
| 39) Isopropyl Acetate | 14.86 | 61 | 94088 | 9.685 | ng | # | 84 |
| 40) 1-Butanol | 14.92 | 56 | 150422 | 9.077 | ng | | 82 |
| 41) Benzene | 14.88 | 78 | 266073 | 4.281 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.11 | 117 | 92233 | 4.673 | ng | | 99 |
| 43) Cyclohexane | 15.30 | 84 | 209843 | 9.557 | ng | | 98 |
| 44) tert-Amyl Methyl Ether | 15.89 | 73 | 204750 | 4.496 | ng | | 100 |
| 45) 1,2-Dichloropropane | 16.11 | 63 | 69671 | 4.617 | ng | | 100 |
| 46) Bromodichloromethane | 16.38 | 83 | 93085 | 4.854 | ng | | 99 |
| 47) Trichloroethene | 16.45 | 130 | 62720 | 4.839 | ng | | 98 |
| 48) 1,4-Dioxane | 16.56 | 88 | 55737 | 5.001 | ng | # | 73 |
| 49) 2,2,4-Trimethylpentane... | 16.52 | 57 | 325558 | 4.752 | ng | | 96 |
| 50) Methyl Methacrylate | 16.79 | 100 | 53436 | 10.131 | ng | | 96 |
| 51) n-Heptane | 16.88 | 71 | 74028 | 4.561 | ng | | 98 |
| 52) cis-1,3-Dichloropropene | 17.65 | 75 | 108231 | 4.619 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 17.79 | 58 | 70345 | 5.011 | ng | | 97 |
| 54) trans-1,3-Dichloropropene | 18.36 | 75 | 114007 | 5.321 | ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.61 | 97 | 60472 | 4.636 | ng | | 100 |
| 58) Toluene | 18.99 | 91 | 270680 | 4.712 | ng | | 99 |
| 59) 2-Hexanone | 19.39 | 43 | 192690 | 4.989 | ng | | 99 |
| 60) Dibromochloromethane | 19.53 | 129 | 70986 | 5.272 | ng | | 98 |
| 61) 1,2-Dibromoethane | 19.87 | 107 | 69321 | 4.990 | ng | | 98 |
| 62) n-Butyl Acetate | 20.20 | 43 | 218998 | 4.994 | ng | | 100 |
| 63) n-Octane | 20.28 | 57 | 67291 | 4.644 | ng | | 97 |
| 64) Tetrachloroethene | 20.47 | 166 | 59893 | 4.573 | ng | | 98 |
| 65) Chlorobenzene | 21.35 | 112 | 168463 | 4.853 | ng | | 99 |
| 66) Ethylbenzene | 21.82 | 91 | 312047 | 4.800 | ng | | 100 |
| 67) m- & p-Xylenes | 22.04 | 91 | 487391 | 9.302 | ng | # | 30 |
| 68) Bromoform | 22.15 | 173 | 54281 | 4.930 | ng | | 100 |
| 69) Styrene | 22.51 | 104 | 183096 | 5.011 | ng | | 97 |
| 70) o-Xylene | 22.66 | 91 | 252696 | 4.794 | ng | | 98 |
| 71) n-Nonane | 22.91 | 43 | 166786 | 4.529 | ng | | 98 |
| 72) 1,1,2,2-Tetrachloroethane | 22.63 | 83 | 115016 | 4.963 | ng | | 100 |
| 74) Cumene | 23.41 | 105 | 304404 | 4.730 | ng | | 99 |
| 75) alpha-Pinene | 23.90 | 93 | 157830 | 4.632 | ng | | 98 |
| 76) n-Propylbenzene | 24.05 | 91 | 393830 | 4.766 | ng | | 99 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 312687 | 5.133 | ng | | 99 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 300258 | 4.865 | ng | | 99 |
| 79) 1,3,5-Trimethylbenzene | 24.32 | 105 | 256223 | 4.871 | ng | | 100 |

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060918.D
Acq On : 6 Aug 2009 14:38
Operator : WA
Sample : 5.0ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310903
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 15:06:30 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

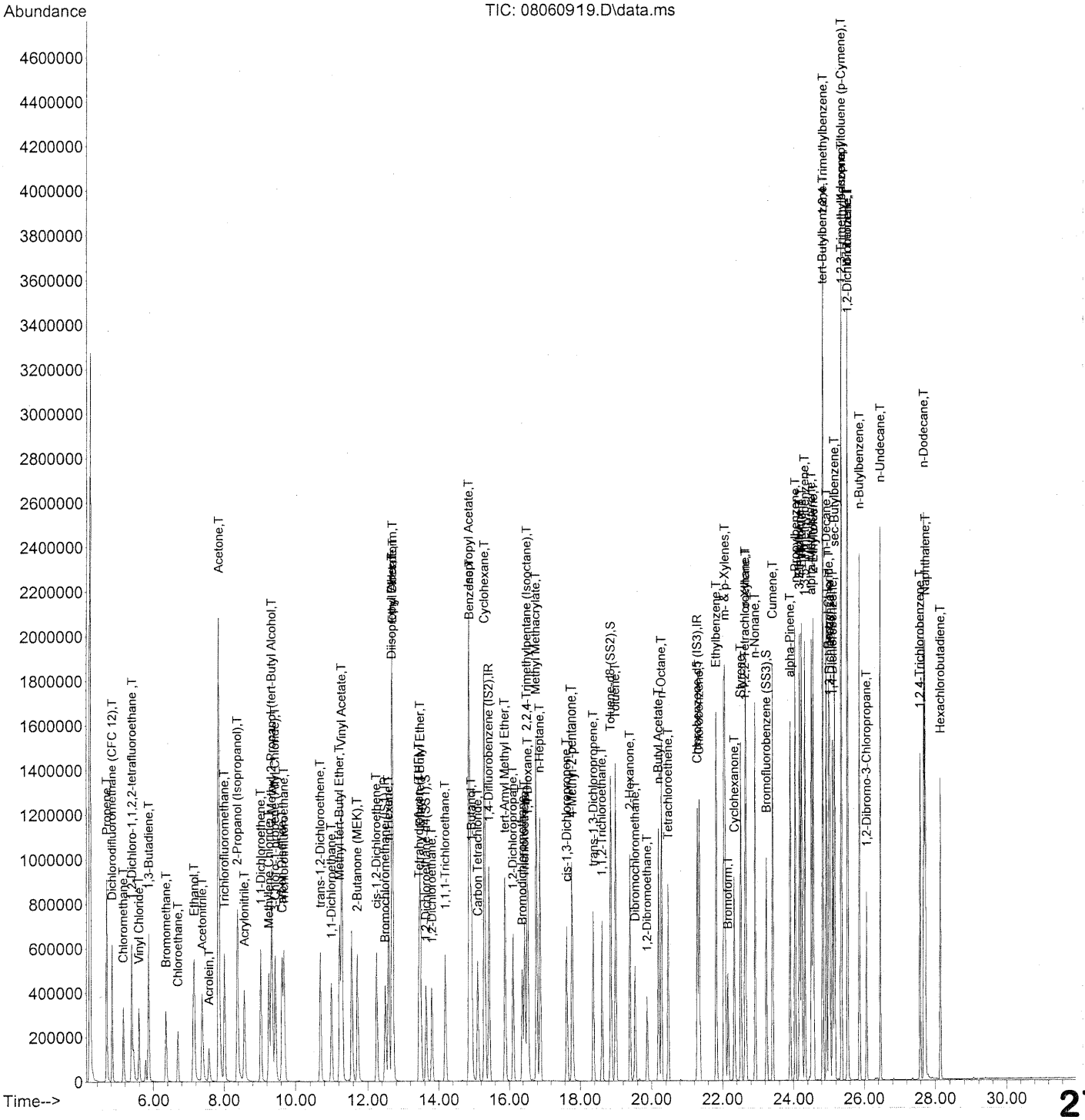
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 137848 | 5.174 | ng | 98 |
| 81) 2-Ethyltoluene | 24.56 | 105 | 305024 | 4.773 | ng | 100 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 257449 | 4.905 | ng | 99 |
| 83) n-Decane | 24.94 | 57 | 171862 | 4.941 | ng | 99 |
| 84) Benzyl Chloride | 25.01 | 91 | 258427 | 5.717 | ng | 99 |
| 85) 1,3-Dichlorobenzene | 25.03 | 146 | 131275 | 5.227 | ng | 97 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 133153 | 4.993 | ng | 100 |
| 87) sec-Butylbenzene | 25.17 | 105 | 345740 | 4.915 | ng | 99 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 305963 | 4.889 | ng | 98 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 265359 | 4.975 | ng | 98 |
| 90) 1,2-Dichlorobenzene | 25.53 | 146 | 123261 | 5.077 | ng | 100 |
| 91) d-Limonene | 25.53 | 68 | 113934 | 5.005 | ng | 98 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 47123 | 6.066 | ng | 96 |
| 93) n-Undecane | 26.46 | 57 | 184521 | 5.189 | ng | 99 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 91111 | 5.938 | ng | 99 |
| 95) Naphthalene | 27.73 | 128 | 353074 | 5.862 | ng | 100 |
| 96) n-Dodecane | 27.70 | 57 | 188594 | 5.016 | ng | 99 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 51370 | 5.213 | ng | 100 |
| 98) Cyclohexanone | 22.33 | 55 | 103876 | 3.963 | ng | 99 |
| 99) tert-Butylbenzene | 24.83 | 119 | 245043 | 4.847 | ng | 99 |
| 100) n-Butylbenzene | 25.86 | 91 | 301669 | 5.270 | ng | 100 |

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060919.D
Acq On : 6 Aug 2009 15:18
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 16:11:17 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060919.D
Acq On : 6 Aug 2009 15:18
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 16:11:17 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.50 | 130 | 207495 | 25.000 | ng | | 0.01 |
| 37) 1,4-Difluorobenzene (IS2) | 15.43 | 114 | 1056146 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 528644 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.64 | 65 | 447374 | 23.622 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 94.48% | | | | |
| 57) Toluene-d8 (SS2) | 18.86 | 98 | 1150944 | 25.118 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 100.48% | | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 306340 | 26.180 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = 104.72% | | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.67 | 42 | 397150 | 24.727 | ng | | 100 |
| 3) Dichlorodifluoromethan... | 4.83 | 85 | 635550 | 23.796 | ng | | 99 |
| 4) Chloromethane | 5.15 | 50 | 453590 | 26.875 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.40 | 135 | 260375 | 24.887 | ng | | 98 |
| 6) Vinyl Chloride | 5.59 | 62 | 431248 | 26.129 | ng | | 98 |
| 7) 1,3-Butadiene | 5.87 | 54 | 374047 | 31.641 | ng | | 98 |
| 8) Bromomethane | 6.35 | 94 | 273614 | 36.099 | ng | | 99 |
| 9) Chloroethane | 6.69 | 64 | 246290 | 27.134 | ng | | 97 |
| 10) Ethanol | 7.15 | 45 | 1215448 | 123.257 | ng | | 100 |
| 11) Acetonitrile | 7.38 | 41 | 708708 | 20.399 | ng | | 100 |
| 12) Acrolein | 7.57 | 56 | 210551 | 22.077 | ng | | 98 |
| 13) Acetone | 7.85 | 58 | 1259513 | 111.728 | ng | | 97 |
| 14) Trichlorofluoromethane | 8.01 | 101 | 614629 | 26.506 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.38 | 45 | 1639705 | 43.999 | ng | | 99 |
| 16) Acrylonitrile | 8.57 | 53 | 497820 | 30.352 | ng | | 99 |
| 17) 1,1-Dichloroethene | 9.03 | 96 | 310280 | 29.696 | ng | | 93 |
| 18) 2-Methyl-2-Propanol (t... | 9.34 | 59 | 1766301 | 55.312 | ng | | 98 |
| 19) Methylene Chloride | 9.26 | 84 | 317656 | 26.180 | ng | | 98 |
| 20) 3-Chloro-1-propene (Al... | 9.43 | 41 | 596921 | 30.468 | ng | | 99 |
| 21) Trichlorotrifluoroethane | 9.68 | 151 | 242878 | 28.535 | ng | | 100 |
| 22) Carbon Disulfide | 9.63 | 76 | 1185465 | 28.386 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 10.69 | 61 | 536758 | 29.651 | ng | | 99 |
| 24) 1,1-Dichloroethane | 10.99 | 63 | 626914 | 27.802 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.23 | 73 | 988001 | 27.035 | ng | | 99 |
| 26) Vinyl Acetate | 11.29 | 86 | 232023 | 94.663 | ng | # | 94 |
| 27) 2-Butanone (MEK) | 11.71 | 72 | 244752 | 29.962 | ng | | 99 |
| 28) cis-1,2-Dichloroethene | 12.25 | 61 | 508498 | 29.050 | ng | | 99 |
| 29) Diisopropyl Ether | 12.68 | 87 | 316984 | 32.016 | ng | # | 1 |
| 30) Ethyl Acetate | 12.71 | 61 | 248217 | 58.562 | ng | | 99 |
| 31) n-Hexane | 12.59 | 57 | 594541 | 26.616 | ng | | [illegible] |



DA 8/6/09

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060919.D
Acq On : 6 Aug 2009 15:18
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 16:11:17 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.70 | 83 | 541847 | 26.440 | ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.45 | 72 | 234041 | 24.295 | ng | | 95 |
| 35) Ethyl tert-Butyl Ether | 13.48 | 87 | 375069 | 24.759 | ng | | 99 |
| 36) 1,2-Dichloroethane | 13.80 | 62 | 490990 | 27.208 | ng | | 98 |
| 38) 1,1,1-Trichloroethane | 14.19 | 97 | 521245 | 26.595 | ng | | 98 |
| 39) Isopropyl Acetate | 14.87 | 61 | 456771 | 56.511 | ng | # | 86 |
| 40) 1-Butanol | 14.93 | 56 | 723046 | 52.443 | ng | | 80 |
| 41) Benzene | 14.88 | 78 | 1276338 | 24.685 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.11 | 117 | 465095 | 28.320 | ng | | 98 |
| 43) Cyclohexane | 15.31 | 84 | 1000496 | 54.769 | ng | | 99 |
| 44) tert-Amyl Methyl Ether | 15.89 | 73 | 989673 | 26.122 | ng | | 99 |
| 45) 1,2-Dichloropropane | 16.12 | 63 | 347675 | 27.694 | ng | | 99 |
| 46) Bromodichloromethane | 16.39 | 83 | 465949 | 29.201 | ng | | 98 |
| 47) Trichloroethene | 16.45 | 130 | 316970 | 29.394 | ng | | 99 |
| 48) 1,4-Dioxane | 16.55 | 88 | 266033 | 28.691 | ng | # | 71 |
| 49) 2,2,4-Trimethylpentane... | 16.53 | 57 | 1568435 | 27.515 | ng | | 96 |
| 50) Methyl Methacrylate | 16.79 | 100 | 266630 | 60.760 | ng | | 100 |
| 51) n-Heptane | 16.89 | 71 | 366787 | 27.159 | ng | | 99 |
| 52) cis-1,3-Dichloropropene | 17.66 | 75 | 541590 | 27.780 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 17.79 | 58 | 350647 | 30.023 | ng | | 98 |
| 54) trans-1,3-Dichloropropene | 18.37 | 75 | 568419 | 31.884 | ng | | 98 |
| 55) 1,1,2-Trichloroethane | 18.61 | 97 | 299989 | 27.639 | ng | | 98 |
| 58) Toluene | 18.99 | 91 | 1326296 | 27.980 | ng | | 99 |
| 59) 2-Hexanone | 19.39 | 43 | 922020 | 28.929 | ng | | 99 |
| 60) Dibromochloromethane | 19.54 | 129 | 363307 | 32.695 | ng | | 99 |
| 61) 1,2-Dibromoethane | 19.87 | 107 | 346018 | 30.184 | ng | | 99 |
| 62) n-Butyl Acetate | 20.20 | 43 | 1069244 | 29.546 | ng | | 99 |
| 63) n-Octane | 20.28 | 57 | 322871 | 27.000 | ng | | 96 |
| 64) Tetrachloroethene | 20.47 | 166 | 306228 | 28.331 | ng | | 99 |
| 65) Chlorobenzene | 21.35 | 112 | 830316 | 28.987 | ng | | 100 |
| 66) Ethylbenzene | 21.83 | 91 | 1510329 | 28.156 | ng | | 99 |
| 67) m- & p-Xylenes | 22.06 | 91 | 2364755 | 54.690 | ng | | 99 |
| 68) Bromoform | 22.16 | 173 | 284337 | 31.297 | ng | | 99 |
| 69) Styrene | 22.52 | 104 | 922923 | 30.607 | ng | | 99 |
| 70) o-Xylene | 22.66 | 91 | 1212719 | 27.879 | ng | | 98 |
| 71) n-Nonane | 22.92 | 43 | 783849 | 25.792 | ng | | 99 |
| 72) 1,1,2,2-Tetrachloroethane | 22.64 | 83 | 553928 | 28.964 | ng | | 100 |
| 74) Cumene | 23.41 | 105 | 1485450 | 27.968 | ng | | 99 |
| 75) alpha-Pinene | 23.91 | 93 | 765795 | 27.237 | ng | | 100 |
| 76) n-Propylbenzene | 24.05 | 91 | 1894473 | 27.785 | ng | | 100 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 1496922 | 29.775 | ng | | 100 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 1487030 | 29.196 | ng | | 99 |
| 79) 1,3,5-Trimethylbenzene | 24.33 | 105 | 1242874 | 28.633 | ng | | 99 |

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060919.D
Acq On : 6 Aug 2009 15:18
Operator : WA
Sample : 25ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 16:11:17 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

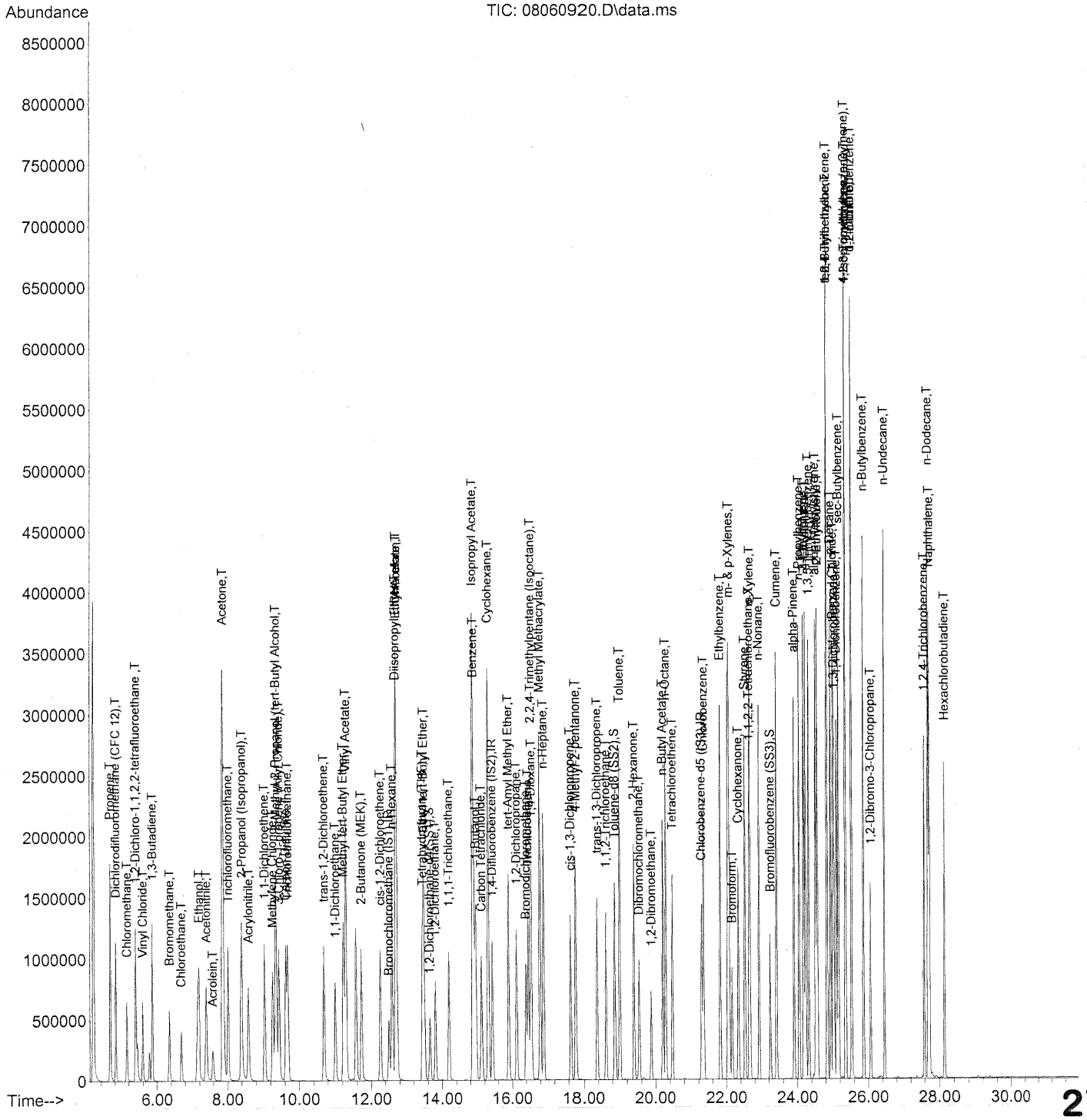
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 682695 | 31.049 | ng | 99 |
| 81) 2-Ethyltoluene | 24.57 | 105 | 1482611 | 28.115 | ng | 99 |
| 82) 1,2,4-Trimethylbenzene | 24.84 | 105 | 1242291 | 28.679 | ng | 100 |
| 83) n-Decane | 24.94 | 57 | 804056 | 28.011 | ng | 100 |
| 84) Benzyl Chloride | 25.01 | 91 | 1277690 | 34.250 | ng | 100 |
| 85) 1,3-Dichlorobenzene | 25.03 | 146 | 652647 | 31.489 | ng | 97 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 668115 | 30.359 | ng | 99 |
| 87) sec-Butylbenzene | 25.17 | 105 | 1672528 | 28.809 | ng | 99 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 1479621 | 28.648 | ng | 100 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 1274600 | 28.960 | ng | 97 |
| 90) 1,2-Dichlorobenzene | 25.54 | 146 | 611625 | 30.525 | ng | 99 |
| 91) d-Limonene | 25.53 | 68 | 550190 | 29.286 | ng | 99 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 236587 | 36.905 | ng | 94 |
| 93) n-Undecane | 26.46 | 57 | 859590 | 29.294 | ng | 100 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 463024 | 36.569 | ng | 100 |
| 95) Naphthalene | 27.74 | 128 | 1702428 | 34.252 | ng | 100 |
| 96) n-Dodecane | 27.70 | 57 | 872418 | 28.116 | ng | 99 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 262946 | 32.338 | ng | 99 |
| 98) Cyclohexanone | 22.33 | 55 | 505166 | 23.356 | ng | 99 |
| 99) tert-Butylbenzene | 24.83 | 119 | 1185720 | 28.423 | ng | 99 |
| 100) n-Butylbenzene | 25.87 | 91 | 1445418 | 30.597 | ng | 99 |

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060920.D
Acq On : 6 Aug 2009 15:59
Operator : WA
Sample : 50ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 17:00:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060920.D
Acq On : 6 Aug 2009 15:59
Operator : WA
Sample : 50ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 17:00:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.50 | 130 | 246064 | 25.000 | ng | | 0.02 |
| 37) 1,4-Difluorobenzene (IS2) | 15.44 | 114 | 1247385 | 25.000 | ng | | 0.00 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 628572 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.65 | 65 | 527588 | 23.491 | ng | | 0.01 |
| Spiked Amount 25.000 | | | Recovery = | 93.96% | | | |
| 57) Toluene-d8 (SS2) | 18.86 | 98 | 1375416 | 25.245 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 100.96% | | | |
| 73) Bromofluorobenzene (SS3) | 23.25 | 174 | 373273 | 26.829 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 107.32% | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.66 | 42 | 766697 | 40.253 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 4.82 | 85 | 1206456 | 38.091 | ng | | 99 |
| 4) Chloromethane | 5.14 | 50 | 847645 | 42.351 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.39 | 135 | 513921 | 41.422 | ng | | 99 |
| 6) Vinyl Chloride | 5.59 | 62 | 848331 | 43.343 | ng | | 98 |
| 7) 1,3-Butadiene | 5.87 | 54 | 730169 | 52.084 | ng | | 99 |
| 8) Bromomethane | 6.35 | 94 | 491871 | 54.723 | ng | | 99 |
| 9) Chloroethane | 6.69 | 64 | 469575 | 43.625 | ng | | 97 |
| 10) Ethanol | 7.18 | 45 | 2326754 | 198.970 | ng | | 100 |
| 11) Acetonitrile | 7.39 | 41 | 1338822 | 32.495 | ng | | 100 |
| 12) Acrolein | 7.58 | 56 | 402755 | 35.611 | ng | | 97 |
| 13) Acetone | 7.86 | 58 | 2311019 | 172.872 | ng | | 95 |
| 14) Trichlorofluoromethane | 8.01 | 101 | 1159734 | 42.175 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.40 | 45 | 2875108 | 65.056 | ng | | 100 |
| 16) Acrylonitrile | 8.58 | 53 | 940966 | 48.379 | ng | | 98 |
| 17) 1,1-Dichloroethene | 9.03 | 96 | 590850 | 47.685 | ng | | 92 |
| 18) 2-Methyl-2-Propanol (t... | 9.35 | 59 | 3260768 | 86.106 | ng | | 99 |
| 19) Methylene Chloride | 9.26 | 84 | 606273 | 42.136 | ng | | 98 |
| 20) 3-Chloro-1-propene (Al... | 9.44 | 41 | 1134104 | 48.813 | ng | | 100 |
| 21) Trichlorotrifluoroethane | 9.68 | 151 | 470831 | 46.646 | ng | | 99 |
| 22) Carbon Disulfide | 9.63 | 76 | 2221081 | 44.848 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 10.69 | 61 | 1011038 | 47.097 | ng | | 98 |
| 24) 1,1-Dichloroethane | 11.00 | 63 | 1184763 | 44.306 | ng | | 99 |
| 25) Methyl tert-Butyl Ether | 11.23 | 73 | 1897731 | 43.789 | ng | | 99 |
| 26) Vinyl Acetate | 11.30 | 86 | 408724 | 140.617 | ng | | 100 |
| 27) 2-Butanone (MEK) | 11.72 | 72 | 462913 | 47.786 | ng | | 99 |
| 28) cis-1,2-Dichloroethene | 12.26 | 61 | 959785 | 46.237 | ng | | 98 |
| 29) Diisopropyl Ether | 12.69 | 87 | 594750 | 50.655 | ng | # | 1 |
| 30) Ethyl Acetate | 12.71 | 61 | 462477 | 92.010 | ng | | 99 |
| 31) n-Hexane | 12.59 | 57 | 1123585 | 42.416 | ng | | 98 |



TOA 8/16/09

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060920.D
Acq On : 6 Aug 2009 15:59
Operator : WA
Sample : 50ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 17:00:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.71 | 83 | 1005869 | 41.389 | ng | | 99 |
| 34) Tetrahydrofuran (THF) | 13.45 | 72 | 435280 | 38.102 | ng | | 97 |
| 35) Ethyl tert-Butyl Ether | 13.49 | 87 | 712110 | 39.639 | ng | | 97 |
| 36) 1,2-Dichloroethane | 13.81 | 62 | 932796 | 43.588 | ng | | 98 |
| 38) 1,1,1-Trichloroethane | 14.19 | 97 | 995605 | 43.010 | ng | | 98 |
| 39) Isopropyl Acetate | 14.87 | 61 | 855760 | 89.642 | ng | # | 86 |
| 40) 1-Butanol | 14.96 | 56 | 1373976 | 84.377 | ng | # | 79 |
| 41) Benzene | 14.89 | 78 | 2375406 | 38.898 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.12 | 117 | 885200 | 45.637 | ng | | 99 |
| 43) Cyclohexane | 15.31 | 84 | 1889680 | 87.585 | ng | | 98 |
| 44) tert-Amyl Methyl Ether | 15.89 | 73 | 1834473 | 40.996 | ng | | 99 |
| 45) 1,2-Dichloropropane | 16.12 | 63 | 658137 | 44.386 | ng | | 99 |
| 46) Bromodichloromethane | 16.39 | 83 | 892711 | 47.368 | ng | | 99 |
| 47) Trichloroethene | 16.45 | 130 | 608434 | 47.772 | ng | | 98 |
| 48) 1,4-Dioxane | 16.55 | 88 | 507842 | 46.373 | ng | # | 75 |
| 49) 2,2,4-Trimethylpentane... | 16.53 | 57 | 2886330 | 42.872 | ng | | 97 |
| 50) Methyl Methacrylate | 16.80 | 100 | 522781 | 100.868 | ng | | 93 |
| 51) n-Heptane | 16.89 | 71 | 684826 | 42.934 | ng | | 99 |
| 52) cis-1,3-Dichloropropene | 17.66 | 75 | 1039036 | 45.124 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 17.80 | 58 | 654840 | 47.472 | ng | | 99 |
| 54) trans-1,3-Dichloropropene | 18.37 | 75 | 1094561 | 51.984 | ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.61 | 97 | 577490 | 45.049 | ng | | 97 |
| 58) Toluene | 19.00 | 91 | 2525620 | 44.811 | ng | | 98 |
| 59) 2-Hexanone | 19.40 | 43 | 1735363 | 45.792 | ng | | 99 |
| 60) Dibromochloromethane | 19.54 | 129 | 703485 | 53.244 | ng | | 98 |
| 61) 1,2-Dibromoethane | 19.88 | 107 | 661208 | 48.510 | ng | | 98 |
| 62) n-Butyl Acetate | 20.20 | 43 | 2024198 | 47.042 | ng | | 99 |
| 63) n-Octane | 20.28 | 57 | 605076 | 42.555 | ng | | 96 |
| 64) Tetrachloroethene | 20.48 | 166 | 601947 | 46.837 | ng | | 99 |
| 65) Chlorobenzene | 21.36 | 112 | 1587286 | 46.604 | ng | | 100 |
| 66) Ethylbenzene | 21.83 | 91 | 2858886 | 44.823 | ng | | 99 |
| 67) m- & p-Xylenes | 22.07 | 91 | 4460386 | 86.756 | ng | | 98 |
| 68) Bromoform | 22.16 | 173 | 558777 | 51.727 | ng | | 99 |
| 69) Styrene | 22.52 | 104 | 1767058 | 49.286 | ng | | 99 |
| 70) o-Xylene | 22.66 | 91 | 2294449 | 44.361 | ng | | 97 |
| 71) n-Nonane | 22.92 | 43 | 1444078 | 39.962 | ng | | 98 |
| 72) 1,1,2,2-Tetrachloroethane | 22.64 | 83 | 1043616 | 45.894 | ng | | 100 |
| 74) Cumene | 23.42 | 105 | 2823456 | 44.709 | ng | | 100 |
| 75) alpha-Pinene | 23.91 | 93 | 1462451 | 43.746 | ng | | 99 |
| 76) n-Propylbenzene | 24.06 | 91 | 3551148 | 43.802 | ng | | 99 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 2884181 | 48.248 | ng | | 99 |
| 78) 4-Ethyltoluene | 24.24 | 105 | 2788015 | 46.037 | ng | | 98 |
| 79) 1,3,5-Trimethylbenzene | 24.33 | 105 | 2362085 | 45.766 | ng | | 99 |

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060920.D
Acq On : 6 Aug 2009 15:59
Operator : WA
Sample : 50ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 17:00:10 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

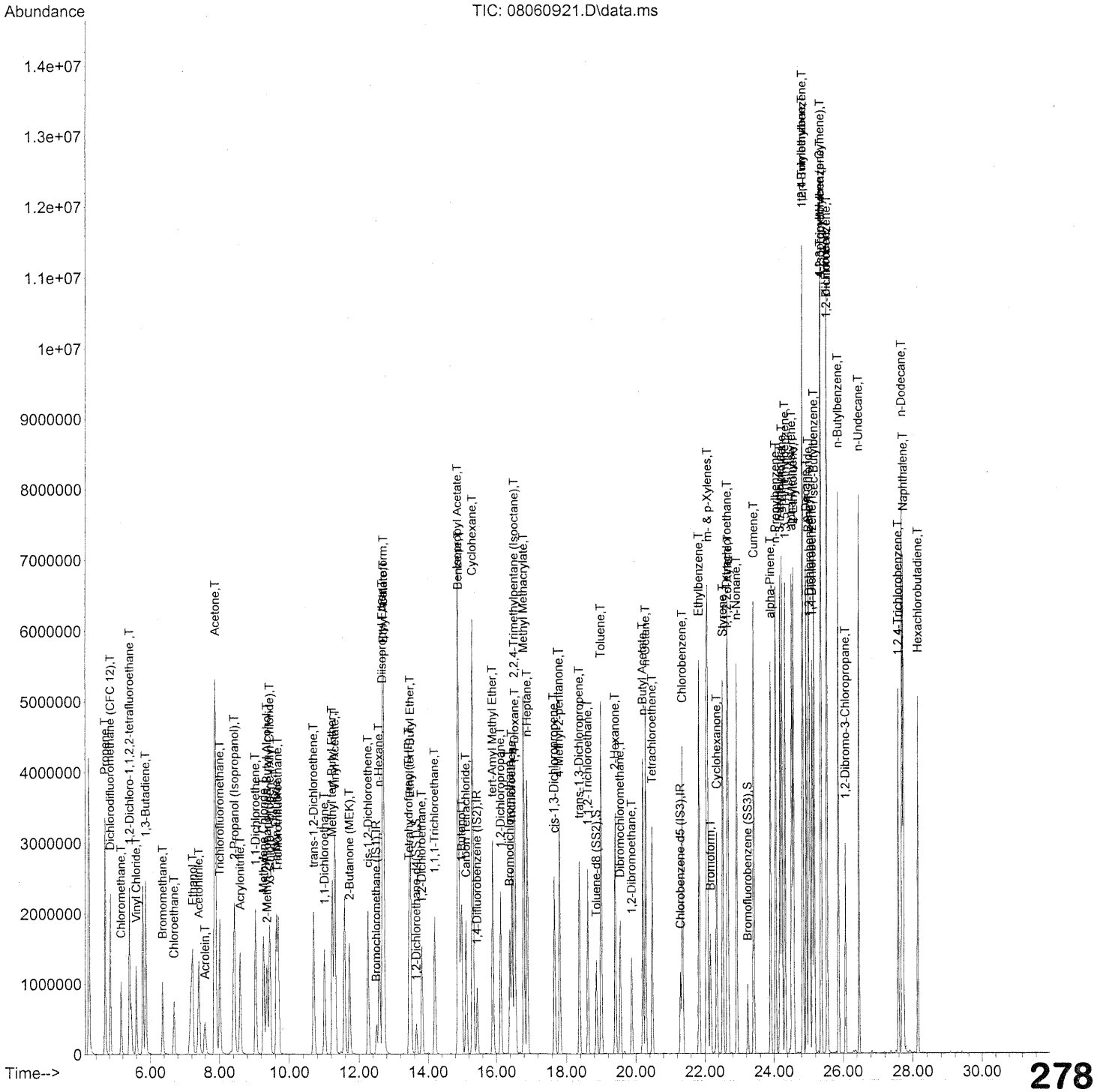
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.52 | 118 | 1322010 | 50.567 | ng | 96 |
| 81) 2-Ethyltoluene | 24.57 | 105 | 2813751 | 44.875 | ng | 99 |
| 82) 1,2,4-Trimethylbenzene | 24.84 | 105 | 2342546 | 45.481 | ng | 99 |
| 83) n-Decane | 24.94 | 57 | 1477979 | 43.303 | ng | 99 |
| 84) Benzyl Chloride | 25.01 | 91 | 2418762 | 54.530 | ng | 99 |
| 85) 1,3-Dichlorobenzene | 25.04 | 146 | 1268117 | 51.457 | ng | 97 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 1304869 | 49.866 | ng | 99 |
| 87) sec-Butylbenzene | 25.17 | 105 | 3150159 | 45.635 | ng | 99 |
| 88) 4-Isopropyltoluene (p-... | 25.36 | 119 | 2788519 | 45.407 | ng | 99 |
| 89) 1,2,3-Trimethylbenzene | 25.37 | 105 | 2406323 | 45.982 | ng | 97 |
| 90) 1,2-Dichlorobenzene | 25.54 | 146 | 1179498 | 49.508 | ng | 100 |
| 91) d-Limonene | 25.54 | 68 | 1035586 | 46.360 | ng | 98 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 460773 | 60.449 | ng | 91 |
| 93) n-Undecane | 26.46 | 57 | 1584968 | 45.428 | ng | 99 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 910868 | 60.503 | ng | 99 |
| 95) Naphthalene | 27.74 | 128 | 3285610 | 55.597 | ng | 99 |
| 96) n-Dodecane | 27.70 | 57 | 1632372 | 44.244 | ng | 99 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 522278 | 54.021 | ng | 99 |
| 98) Cyclohexanone | 22.34 | 55 | 957787 | 37.242 | ng | 98 |
| 99) tert-Butylbenzene | 24.84 | 119 | 2258738 | 45.537 | ng | 99 |
| 100) n-Butylbenzene | 25.87 | 91 | 2706705 | 48.188 | ng | 99 |

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060921.D
Acq On : 6 Aug 2009 16:39
Operator : WA
Sample : 100ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 17:08:49 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060921.D
Acq On : 6 Aug 2009 16:39
Operator : WA
Sample : 100ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 17:08:49 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.51 | 130 | 204063 | 25.000 | ng | | 0.02 |
| 37) 1,4-Difluorobenzene (IS2) | 15.44 | 114 | 1040695 | 25.000 | ng | | 0.01 |
| 56) Chlorobenzene-d5 (IS3) | 21.30 | 82 | 521975 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.66 | 65 | 435176 | 23.365 | ng | | 0.02 |
| Spiked Amount 25.000 | | | Recovery = | 93.44% | | | |
| 57) Toluene-d8 (SS2) | 18.86 | 98 | 1136569 | 25.121 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 100.48% | | | |
| 73) Bromofluorobenzene (SS3) | 23.25 | 174 | 310567 | 26.881 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 107.52% | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.66 | 42 | 1483597 | 93.924 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 4.83 | 85 | 2379344 | 90.583 | ng | | 99 |
| 4) Chloromethane | 5.15 | 50 | 1392812 | 83.913 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.39 | 135 | 1008644 | 98.029 | ng | | 98 |
| 6) Vinyl Chloride | 5.59 | 62 | 1677099 | 103.322 | ng | | 98 |
| 7) 1,3-Butadiene | 5.87 | 54 | 1425350 | 122.599 | ng | | 98 |
| 8) Bromomethane | 6.36 | 94 | 914093 | 122.628 | ng | | 99 |
| 9) Chloroethane | 6.70 | 64 | 916786 | 102.702 | ng | | 98 |
| 10) Ethanol | 7.23 | 45 | 4377562 | 451.390 | ng | | 100 |
| 11) Acetonitrile | 7.42 | 41 | 2583362 | 75.607 | ng | | 100 |
| 12) Acrolein | 7.59 | 56 | 784600 | 83.651 | ng | | 96 |
| 13) Acetone | 7.89 | 58 | 4244786 | 382.878 | ng | | 87 |
| 14) Trichlorofluoromethane | 8.02 | 101 | 2210255 | 96.921 | ng | | 99 |
| 15) 2-Propanol (Isopropanol) | 8.43 | 45 | 5177262 | 141.260 | ng | | 100 |
| 16) Acrylonitrile | 8.60 | 53 | 1796721 | 111.390 | ng | | 97 |
| 17) 1,1-Dichloroethene | 9.04 | 96 | 1160669 | 112.953 | ng | | 90 |
| 18) 2-Methyl-2-Propanol (t... | 9.37 | 59 | 2345913 | 74.698 | ng | | 100 |
| 19) Methylene Chloride | 9.27 | 84 | 1184348 | 99.253 | ng | | 96 |
| 20) 3-Chloro-1-propene (Al... | 9.45 | 41 | 2146772 | 111.416 | ng | | 98 |
| 21) Trichlorotrifluoroethane | 9.68 | 151 | 916963 | 109.542 | ng | | 96 |
| 22) Carbon Disulfide | 9.63 | 76 | 4236854 | 103.158 | ng | | 98 |
| 23) trans-1,2-Dichloroethene | 10.70 | 61 | 1929408 | 108.376 | ng | | 96 |
| 24) 1,1-Dichloroethane | 11.01 | 63 | 2255773 | 101.720 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.23 | 73 | 3661547 | 101.878 | ng | | 99 |
| 26) Vinyl Acetate | 11.31 | 86 | 640109 | 265.549 | ng | # | 93 |
| 27) 2-Butanone (MEK) | 11.73 | 72 | 687553 | 85.584 | ng | | 97 |
| 28) cis-1,2-Dichloroethene | 12.27 | 61 | 1822976 | 105.896 | ng | | 97 |
| 29) Diisopropyl Ether | 12.70 | 87 | 1137931 | 116.867 | ng | # | 1 |
| 30) Ethyl Acetate | 12.73 | 61 | 853386 | 204.726 | ng | | 100 |
| 31) n-Hexane | 12.59 | 57 | 2161223 | 98.379 | ng | | 99 |



EA 8/16/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060921.D
Acq On : 6 Aug 2009 16:39
Operator : WA
Sample : 100ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 17:08:49 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.72 | 83 | 1880936 | 93.325 | ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.45 | 72 | 810456 | 85.544 | ng | | 98 |
| 35) Ethyl tert-Butyl Ether | 13.50 | 87 | 1363054 | 91.490 | ng | | 96 |
| 36) 1,2-Dichloroethane | 13.82 | 62 | 1754433 | 98.856 | ng | | 97 |
| 38) 1,1,1-Trichloroethane | 14.20 | 97 | 1846555 | 95.614 | ng | | 98 |
| 39) Isopropyl Acetate | 14.88 | 61 | 1588242 | 199.413 | ng | | 95 |
| 40) 1-Butanol | 14.99 | 56 | 2511497 | 184.865 | ng | # | 77 |
| 41) Benzene | 14.90 | 78 | 4433680 | 87.021 | ng | | 100 |
| 42) Carbon Tetrachloride | 15.12 | 117 | 1694678 | 104.722 | ng | | 99 |
| 43) Cyclohexane | 15.32 | 84 | 3585086 | 199.167 | ng | | 97 |
| 44) tert-Amyl Methyl Ether | 15.90 | 73 | 3367820 | 90.211 | ng | | 99 |
| 45) 1,2-Dichloropropane | 16.13 | 63 | 1250257 | 101.067 | ng | | 99 |
| 46) Bromodichloromethane | 16.40 | 83 | 1669484 | 106.178 | ng | | 99 |
| 47) Trichloroethene | 16.47 | 130 | 1192304 | 112.208 | ng | | 99 |
| 48) 1,4-Dioxane | 16.56 | 88 | 940853 | 102.975 | ng | # | 76 |
| 49) 2,2,4-Trimethylpentane... | 16.54 | 57 | 5320898 | 94.731 | ng | | 97 |
| 50) Methyl Methacrylate | 16.81 | 100 | 995395 | 230.200 | ng | # | 90 |
| 51) n-Heptane | 16.91 | 71 | 1295628 | 97.360 | ng | | 98 |
| 52) cis-1,3-Dichloropropene | 17.67 | 75 | 1960789 | 102.068 | ng | | 99 |
| 53) 4-Methyl-2-pentanone | 17.80 | 58 | 1240802 | 107.815 | ng | | 100 |
| 54) trans-1,3-Dichloropropene | 18.38 | 75 | 2068198 | 117.733 | ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.62 | 97 | 1112067 | 103.980 | ng | | 96 |
| 58) Toluene | 19.00 | 91 | 4768847 | 101.891 | ng | | 98 |
| 59) 2-Hexanone | 19.41 | 43 | 3205631 | 101.863 | ng | | 97 |
| 60) Dibromochloromethane | 19.54 | 129 | 1359408 | 123.901 | ng | | 98 |
| 61) 1,2-Dibromoethane | 19.88 | 107 | 1277917 | 112.901 | ng | | 99 |
| 62) n-Butyl Acetate | 20.21 | 43 | 4015589 | 112.379 | ng | | 98 |
| 63) n-Octane | 20.29 | 57 | 1130161 | 95.715 | ng | | 95 |
| 64) Tetrachloroethene | 20.48 | 166 | 1184412 | 110.979 | ng | | 99 |
| 65) Chlorobenzene | 21.36 | 112 | 3039056 | 107.452 | ng | | 100 |
| 66) Ethylbenzene | 21.84 | 91 | 5357238 | 101.146 | ng | | 97 |
| 67) m- & p-Xylenes | 22.08 | 91 | 8307914 | 194.593 | ng | | 96 |
| 68) Bromoform | 22.17 | 173 | 1108833 | 123.609 | ng | | 99 |
| 69) Styrene | 22.53 | 104 | 3401279 | 114.239 | ng | | 98 |
| 70) o-Xylene | 22.67 | 91 | 4304194 | 100.212 | ng | | 96 |
| 71) n-Nonane | 22.93 | 43 | 2656292 | 88.519 | ng | | 97 |
| 72) 1,1,2,2-Tetrachloroethane | 22.65 | 83 | 1997850 | 105.799 | ng | | 100 |
| 74) Cumene | 23.42 | 105 | 5281477 | 100.712 | ng | | 99 |
| 75) alpha-Pinene | 23.91 | 93 | 2764527 | 99.583 | ng | | 98 |
| 76) n-Propylbenzene | 24.06 | 91 | 6477041 | 96.207 | ng | | 97 |
| 77) 3-Ethyltoluene | 24.19 | 105 | 5409334 | 108.970 | ng | | 98 |
| 78) 4-Ethyltoluene | 24.25 | 105 | 5142381 | 102.255 | ng | | 95 |
| 79) 1,3,5-Trimethylbenzene | 24.34 | 105 | 4445745 | 103.729 | ng | | 99 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060921.D
Acq On : 6 Aug 2009 16:39
Operator : WA
Sample : 100ng TO-15 ICAL STD
Misc : S20-07200902/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 06 17:08:49 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 07:59:49 2009
Response via : Initial Calibration

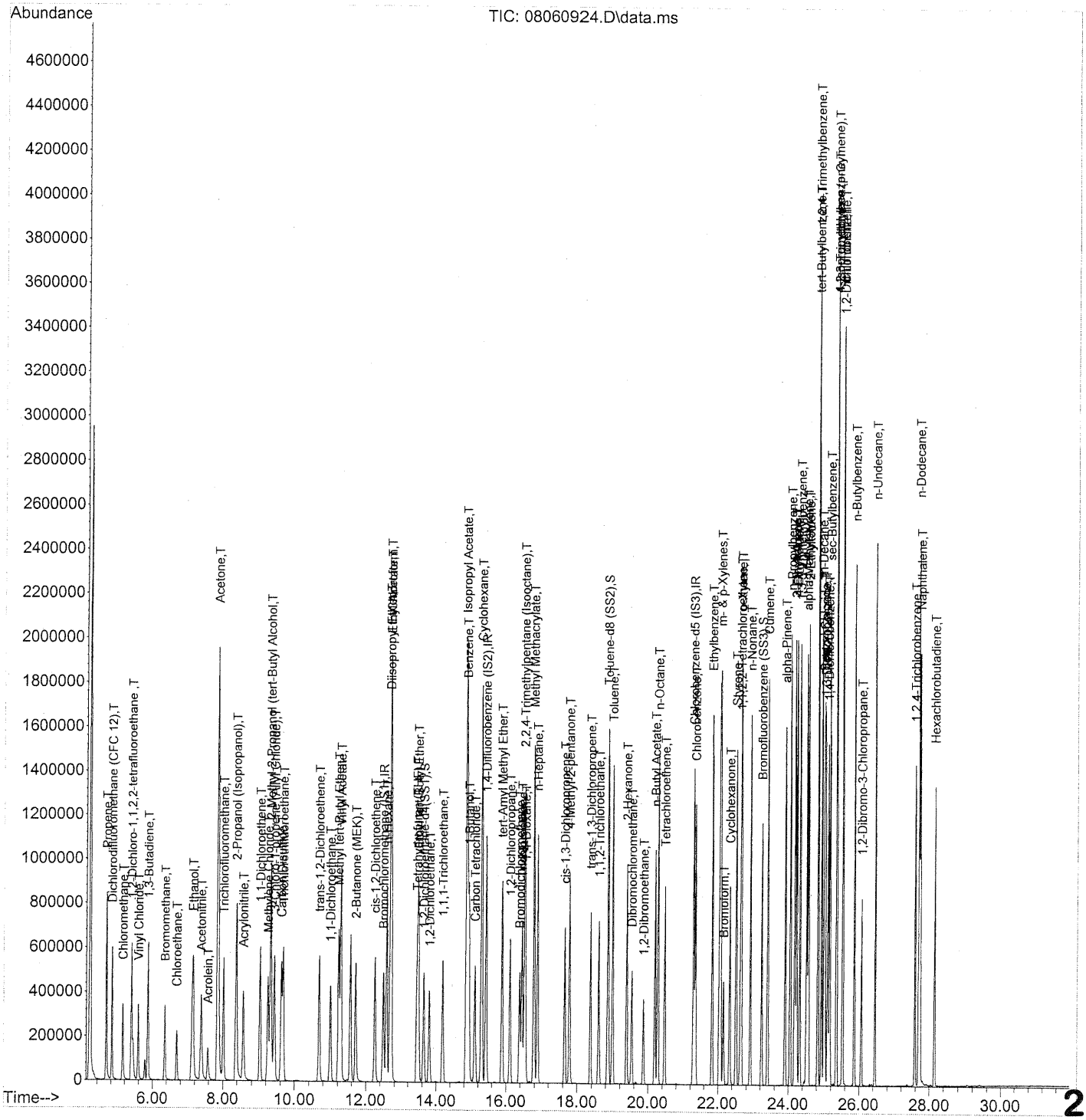
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.53 | 118 | 2536487 | 116.834 | ng | 96 |
| 81) 2-Ethyltoluene | 24.58 | 105 | 5229998 | 100.443 | ng | 97 |
| 82) 1,2,4-Trimethylbenzene | 24.85 | 105 | 4275494 | 99.962 | ng | 98 |
| 83) n-Decane | 24.95 | 57 | 2704263 | 95.412 | ng | 98 |
| 84) Benzyl Chloride | 25.02 | 91 | 4499020 | 122.142 | ng | 97 |
| 85) 1,3-Dichlorobenzene | 25.05 | 146 | 2490794 | 121.712 | ng | 97 |
| 86) 1,4-Dichlorobenzene | 25.13 | 146 | 2542028 | 116.984 | ng | 98 |
| 87) sec-Butylbenzene | 25.18 | 105 | 5783982 | 100.902 | ng | 98 |
| 88) 4-Isopropyltoluene (p-... | 25.37 | 119 | 5010569 | 98.251 | ng | 99 |
| 89) 1,2,3-Trimethylbenzene | 25.37 | 105 | 4359650 | 100.320 | ng | 95 |
| 90) 1,2-Dichlorobenzene | 25.55 | 146 | 2206686 | 111.538 | ng | 100 |
| 91) d-Limonene | 25.54 | 68 | 1890339 | 101.906 | ng | 98 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 907634 | 143.389 | ng | 86 |
| 93) n-Undecane | 26.47 | 57 | 2880684 | 99.426 | ng | 99 |
| 94) 1,2,4-Trichlorobenzene | 27.60 | 180 | 1811250 | 144.878 | ng | 100 |
| 95) Naphthalene | 27.74 | 128 | 6139171 | 125.097 | ng | 98 |
| 96) n-Dodecane | 27.70 | 57 | 2961251 | 96.654 | ng | 98 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 1052824 | 131.135 | ng | 99 |
| 98) Cyclohexanone | 22.35 | 55 | 1779789 | 83.337 | ng | 98 |
| 99) tert-Butylbenzene | 24.85 | 119 | 4145655 | 100.646 | ng | 98 |
| 100) n-Butylbenzene | 25.87 | 91 | 4947974 | 106.080 | ng | 97 |

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060924.D
Acq On : 6 Aug 2009 18:51
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-07200902/S20-07240917
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 06 19:33:01 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060924.D
Acq On : 6 Aug 2009 18:51
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-07200902/S20-07240917
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 06 19:33:01 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.50 | 130 | 238664 | 25.000 | ng | | -0.01 |
| 37) 1,4-Difluorobenzene (IS2) | 15.43 | 114 | 1224547 | 25.000 | ng | | -0.01 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 614774 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.64 | 65 | 510896 | 24.629 | ng | | -0.02 |
| Spiked Amount 25.000 | | | Recovery = | 98.52% | | | |
| 57) Toluene-d8 (SS2) | 18.86 | 98 | 1345950 | 25.056 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 100.24% | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 365031 | 25.768 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 103.08% | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.67 | 42 | 372783 | 22.762 | ng | | 99 |
| 3) Dichlorodifluoromethan... | 4.83 | 85 | 610303 | 22.800 | ng | | 99 |
| 4) Chloromethane | 5.15 | 50 | 470357 | 26.153 | ng | | 99 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.40 | 135 | 266041 | 24.462 | ng | | 98 |
| 6) Vinyl Chloride | 5.59 | 62 | 440187 | 25.475 | ng | | 98 |
| 7) 1,3-Butadiene | 5.87 | 54 | 341677 | 27.589 | ng | | 98 |
| 8) Bromomethane | 6.35 | 94 | 287643 | 27.346 | ng | | 99 |
| 9) Chloroethane | 6.69 | 64 | 244762 | 24.371 | ng | | 98 |
| 10) Ethanol | 7.15 | 45 | 1296320 | 124.871 | ng | | 100 |
| 11) Acetonitrile | 7.38 | 41 | 687211 | 22.604 | ng | | 100 |
| 12) Acrolein | 7.58 | 56 | 203458 | 25.747 | ng | | 98 |
| 13) Acetone | 7.85 | 58 | 1224977 | 125.059 | ng | | 98 |
| 14) Trichlorofluoromethane | 8.01 | 101 | 586848 | 24.249 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.38 | 45 | 1711755 | 44.469 | ng | | 100 |
| 16) Acrylonitrile | 8.57 | 53 | 479431 | 27.089 | ng | | 99 |
| 17) 1,1-Dichloroethene | 9.03 | 96 | 310330 | 27.616 | ng | | 92 |
| 18) 2-Methyl-2-Propanol (t... | 9.33 | 59 | 1753114 | 51.311 | ng | | 98 |
| 19) Methylene Chloride | 9.26 | 84 | 314029 | 23.873 | ng | | 98 |
| 20) 3-Chloro-1-propene (Al... | 9.43 | 41 | 592052 | 23.348 | ng | | 99 |
| 21) Trichlorotrifluoroethane | 9.68 | 151 | 249618 | 28.368 | ng | | 98 |
| 22) Carbon Disulfide | 9.63 | 76 | 1135664 | 24.487 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 10.69 | 61 | 514272 | 25.864 | ng | | 97 |
| 24) 1,1-Dichloroethane | 11.00 | 63 | 617936 | 25.628 | ng | | 99 |
| 25) Methyl tert-Butyl Ether | 11.23 | 73 | 950000 | 25.633 | ng | | 100 |
| 26) Vinyl Acetate | 11.30 | 86 | 177094 | 88.842 | ng | # | 94 |
| 27) 2-Butanone (MEK) | 11.71 | 72 | 233396 | 26.390 | ng | | 98 |
| 28) cis-1,2-Dichloroethene | 12.26 | 61 | 497051 | 26.856 | ng | | 98 |
| 29) Diisopropyl Ether | 12.68 | 87 | 313290 | 26.470 | ng | # | 1 |
| 30) Ethyl Acetate | 12.71 | 61 | 234351 | 50.865 | ng | | 100 |
| 31) n-Hexane | 12.59 | 57 | 571801 | 24.261 | ng | | 9 |



8/16/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060924.D
Acq On : 6 Aug 2009 18:51
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-07200902/S20-07240917
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 06 19:33:01 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 32) Chloroform | 12.70 | 83 | 539974 | 26.023 ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.45 | 72 | 224798 | 23.845 ng | | 97 |
| 35) Ethyl tert-Butyl Ether | 13.49 | 87 | 370406 | 24.192 ng | | 97 |
| 36) 1,2-Dichloroethane | 13.80 | 62 | 484412 | 25.544 ng | | 98 |
| 38) 1,1,1-Trichloroethane | 14.19 | 97 | 519036 | 24.987 ng | | 98 |
| 39) Isopropyl Acetate | 14.87 | 61 | 451344 | 49.686 ng | # | 86 |
| 40) 1-Butanol | 14.94 | 56 | 736605 | 46.349 ng | | 81 |
| 41) Benzene | 14.89 | 78 | 1265289 | 23.502 ng | | 99 |
| 42) Carbon Tetrachloride | 15.11 | 117 | 450418 | 26.249 ng | | 100 |
| 43) Cyclohexane | 15.31 | 84 | 972612 | 49.322 ng | | 98 |
| 44) tert-Amyl Methyl Ether | 15.89 | 73 | 971883 | 24.038 ng | | 100 |
| 45) 1,2-Dichloropropane | 16.12 | 63 | 344710 | 25.493 ng | | 100 |
| 46) Bromodichloromethane | 16.39 | 83 | 451868 | 25.469 ng | | 99 |
| 47) Trichloroethene | 16.45 | 130 | 316605 | 26.073 ng | | 98 |
| 48) 1,4-Dioxane | 16.55 | 88 | 267355 | 25.984 ng | # | 75 |
| 49) 2,2,4-Trimethylpentane... | 16.53 | 57 | 1523182 | 24.019 ng | | 97 |
| 50) Methyl Methacrylate | 16.79 | 100 | 272103 | 54.901 ng | | 95 |
| 51) n-Heptane | 16.89 | 71 | 350866 | 24.283 ng | | 99 |
| 52) cis-1,3-Dichloropropene | 17.66 | 75 | 537674 | 23.993 ng | | 99 |
| 53) 4-Methyl-2-pentanone | 17.79 | 58 | 336616 | 26.015 ng | | 99 |
| 54) trans-1,3-Dichloropropene | 18.37 | 75 | 569561 | 26.731 ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.61 | 97 | 303093 | 25.641 ng | | 97 |
| 58) Toluene | 18.99 | 91 | 1339186 | 25.367 ng | | 99 |
| 59) 2-Hexanone | 19.39 | 43 | 883623 | 25.170 ng | | 98 |
| 60) Dibromochloromethane | 19.54 | 129 | 352845 | 28.249 ng | | 98 |
| 61) 1,2-Dibromoethane | 19.87 | 107 | 345699 | 26.105 ng | | 98 |
| 62) n-Butyl Acetate | 20.20 | 43 | 981251 | 23.714 ng | | 100 |
| 63) n-Octane | 20.28 | 57 | 319723 | 25.050 ng | | 97 |
| 64) Tetrachloroethene | 20.48 | 166 | 313916 | 25.696 ng | | 99 |
| 65) Chlorobenzene | 21.35 | 112 | 837660 | 25.646 ng | | 100 |
| 66) Ethylbenzene | 21.83 | 91 | 1521202 | 25.207 ng | | 99 |
| 67) m- & p-Xylenes | 22.07 | 91 | 2387430 | 48.904 ng | | 99 |
| 68) Bromoform | 22.16 | 173 | 274178 | 26.436 ng | | 99 |
| 69) Styrene | 22.52 | 104 | 931476 | 26.398 ng | | 100 |
| 70) o-Xylene | 22.66 | 91 | 1225251 | 25.032 ng | | 98 |
| 71) n-Nonane | 22.92 | 43 | 765549 | 23.539 ng | | 98 |
| 72) 1,1,2,2-Tetrachloroethane | 22.64 | 83 | 551441 | 25.386 ng | | 100 |
| 74) Cumene | 23.41 | 105 | 1481888 | 23.968 ng | | 99 |
| 75) alpha-Pinene | 23.91 | 93 | 760032 | 23.981 ng | | 100 |
| 76) n-Propylbenzene | 24.05 | 91 | 1878570 | 24.170 ng | | 100 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 1492441 | 25.257 ng | | 99 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 1464128 | 25.572 ng | | 99 |
| 79) 1,3,5-Trimethylbenzene | 24.33 | 105 | 1255212 | 25.994 ng | | 99 |

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060924.D
Acq On : 6 Aug 2009 18:51
Operator : WA
Sample : 25ng TO-15 ICV STD
Misc : S20-07200902/S20-07240917
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 06 19:33:01 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 680016 | 26.303 | ng | 97 |
| 81) 2-Ethyltoluene | 24.57 | 105 | 1474596 | 24.747 | ng | 100 |
| 82) 1,2,4-Trimethylbenzene | 24.84 | 105 | 1248319 | 25.349 | ng | 100 |
| 83) n-Decane | 24.94 | 57 | 783579 | 24.473 | ng | 99 |
| 84) Benzyl Chloride | 25.01 | 91 | 1232630 | 26.703 | ng | 100 |
| 85) 1,3-Dichlorobenzene | 25.03 | 146 | 665342 | 26.696 | ng | 98 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 674734 | 25.391 | ng | 98 |
| 87) sec-Butylbenzene | 25.17 | 105 | 1664439 | 25.020 | ng | 100 |
| 88) 4-Isopropyltoluene (p-... | 25.36 | 119 | 1472106 | 24.816 | ng | 99 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 1264769 | 25.211 | ng | 97 |
| 90) 1,2-Dichlorobenzene | 25.54 | 146 | 618612 | 26.180 | ng | 100 |
| 91) d-Limonene | 25.53 | 68 | 540824 | 25.826 | ng | 98 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 235275 | 28.950 | ng | 92 |
| 93) n-Undecane | 26.46 | 57 | 834523 | 24.499 | ng | 99 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 459074 | 28.256 | ng | 99 |
| 95) Naphthalene | 27.74 | 128 | 1677315 | 25.080 | ng | 100 |
| 96) n-Dodecane | 27.70 | 57 | 837508 | 21.164 | ng | 99 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 258900 | 25.054 | ng | 99 |
| 98) Cyclohexanone | 22.34 | 55 | 491779 | 22.484 | ng | 98 |
| 99) tert-Butylbenzene | 24.83 | 119 | 1186643 | 24.898 | ng | 99 |
| 100) n-Butylbenzene | 25.87 | 91 | 1423055 | 25.944 | ng | 100 |

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

# INITIAL CALIBRATION VERIFICATION CHECK SHEET

Data File Name: 08060924.D
Data File Path: J:\MS13\DATA\2009_08\06\
Operator: WA
Date Acquired: 8/6/09 18:51
Acq. Method File: TO15.M
Name: 25ng TO-15 ICV STD
Misc Info: S20-07200902/S20-07240917
Instrument Name: GCMS13

| # | Compound | Ret. Time | Amt. (ng) | Spike Amt.(ng) | % Rec. | Lower Limit | Upper Limit | * OR Fail |
|---|---|---|---|---|---|---|---|---|
| 2) | Propene | 4.67 | 22.8 | 26.3 | 86.7 | 70 | 130 | * |
| 3) | Dichlorodifluoromethane (CFC | 4.83 | 22.8 | 26.0 | 87.7 | 70 | 130 | * |
| 4) | Chloromethane | 5.15 | 26.2 | 25.0 | 104.8 | 70 | 130 | * |
| 5) | 1,2-Dichloro-1,1,2,2-tetrafluoro( | 5.40 | 24.5 | 26.0 | 94.2 | 70 | 130 | * |
| 6) | Vinyl Chloride | 5.60 | 25.5 | 25.3 | 100.8 | 70 | 130 | * |
| 7) | 1,3-Butadiene | 5.87 | 27.6 | 26.8 | 103.0 | 70 | 130 | * |
| 8) | Bromomethane | 6.35 | 27.3 | 25.8 | 105.8 | 70 | 130 | * |
| 9) | Chloroethane | 6.69 | 24.4 | 25.5 | 95.7 | 70 | 130 | * |
| 10) | Ethanol | 7.15 | 124.9 | 130.0 | 96.1 | 70 | 130 | * |
| 11) | Acetonitrile | 7.38 | 22.6 | 26.0 | 86.9 | 70 | 130 | * |
| 12) | Acrolein | 7.58 | 25.7 | 26.3 | 97.7 | 70 | 130 | * |
| 13) | Acetone | 7.85 | 125.1 | 132.0 | 94.8 | 70 | 130 | * |
| 14) | Trichlorofluoromethane | 8.01 | 24.2 | 26.3 | 92.0 | 70 | 130 | * |
| 15) | 2-Propanol (Isopropanol) | 8.38 | 44.5 | 48.0 | 92.7 | 70 | 130 | * |
| 16) | Acrylonitrile | 8.57 | 27.1 | 25.8 | 105.0 | 70 | 130 | * |
| 17) | 1,1-Dichloroethene | 9.03 | 27.6 | 27.5 | 100.4 | 70 | 130 | * |
| 18) | 2-Methyl-2-Propanol (tert-Butyl Al | 9.33 | 51.3 | 50.0 | 102.6 | 70 | 130 | * |
| 19) | Methylene Chloride | 9.26 | 23.9 | 26.8 | 89.2 | 70 | 130 | * |
| 20) | 3-Chloro-1-propene (Allyl Chlor | 9.43 | 23.3 | 27.0 | 86.3 | 70 | 130 | * |
| 21) | Trichlorotrifluoroethane | 9.68 | 28.4 | 27.5 | 103.3 | 70 | 130 | * |
| 22) | Carbon Disulfide | 9.63 | 24.5 | 26.0 | 94.2 | 70 | 130 | * |
| 23) | trans-1,2-Dichloroethene | 10.69 | 25.9 | 25.5 | 101.6 | 70 | 130 | * |
| 24) | 1,1-Dichloroethane | 11.00 | 25.6 | 26.5 | 96.6 | 70 | 130 | * |
| 25) | Methyl tert-Butyl Ether | 11.23 | 25.6 | 26.3 | 97.3 | 70 | 130 | * |
| 26) | Vinyl Acetate | 11.30 | 88.8 | 126.0 | 70.5 | 70 | 130 | * |
| 27) | 2-Butanone (MEK) | 11.71 | 26.4 | 26.8 | 98.5 | 70 | 130 | * |
| 28) | cis-1,2-Dichloroethene | 12.26 | 26.9 | 27.0 | 99.6 | 70 | 130 | * |
| 29) | Diisopropyl Ether | 12.68 | 26.5 | 26.5 | 100.0 | 70 | 130 | * |
| 30) | Ethyl Acetate | 12.71 | 50.9 | 52.0 | 97.9 | 70 | 130 | * |
| 31) | n-Hexane | 12.59 | 24.3 | 26.0 | 93.5 | 70 | 130 | * |
| 32) | Chloroform | 12.70 | 26.0 | 27.5 | 94.5 | 70 | 130 | * |
| 34) | Tetrahydrofuran (THF) | 13.45 | 23.8 | 26.5 | 89.8 | 70 | 130 | * |
| 35) | Ethyl tert-Butyl Ether | 13.49 | 24.2 | 25.5 | 94.9 | 70 | 130 | * |
| 36) | 1,2-Dichloroethane | 13.80 | 25.5 | 26.3 | 97.0 | 70 | 130 | * |
| 38) | 1,1,1-Trichloroethane | 14.19 | 25.0 | 26.0 | 96.2 | 70 | 130 | * |
| 39) | Isopropyl Acetate | 14.87 | 49.7 | 52.3 | 95.0 | 70 | 130 | * |
| 40) | 1-Butanol | 14.94 | 46.3 | 52.8 | 87.7 | 70 | 130 | * |
| 41) | Benzene | 14.89 | 23.5 | 25.8 | 91.1 | 70 | 130 | * |
| 42) | Carbon Tetrachloride | 15.11 | 26.2 | 26.3 | 99.6 | 70 | 130 | * |
| 43) | Cyclohexane | 15.31 | 49.3 | 51.8 | 95.2 | 70 | 130 | * |
| 44) | tert-Amyl Methyl Ether | 15.89 | 24.0 | 25.5 | 94.1 | 70 | 130 | * |
| 45) | 1,2-Dichloropropane | 16.12 | 25.5 | 26.0 | 98.1 | 70 | 130 | * |
| 46) | Bromodichloromethane | 16.39 | 25.5 | 26.3 | 97.0 | 70 | 130 | * |
| 47) | Trichloroethene | 16.45 | 26.1 | 25.8 | 101.2 | 70 | 130 | * |
| 48) | 1,4-Dioxane | 16.55 | 26.0 | 26.0 | 100.0 | 70 | 130 | * |
| 49) | 2,2,4-Trimethylpentane (Isooctan | 16.53 | 24.0 | 25.8 | 93.0 | 70 | 130 | * |
| 50) | Methyl Methacrylate | 16.79 | 54.9 | 52.8 | 104.0 | 70 | 130 | * |



DA 8/6/09

# INITIAL CALIBRATION VERIFICATION CHECK SHEET

**Data File Name:** 08060924.D **Acq. Method File:** TO15.M
**Data File Path:** J:\MS13\DATA\2009_08\06\ **Name:** 25ng TO-15 ICV STD
**Operator:** WA **Misc Info:** S20-07200902/S20-07240917
**Date Acquired:** 8/6/09 18:51 **Instrument Name:** GCMS13

| # | Compound | Ret. Time | Amt. (ng) | Spike Amt.(ng) | % Rec. | Lower Limit | Upper Limit | * OR Fail |
|---|---|---|---|---|---|---|---|---|
| 51) | n-Heptane | 16.89 | 24.3 | 25.8 | 94.2 | 70 | 130 | * |
| 52) | cis-1,3-Dichloropropene | 17.66 | 24.0 | 24.5 | 98.0 | 70 | 130 | * |
| 53) | 4-Methyl-2-pentanone | 17.79 | 26.0 | 26.8 | 97.0 | 70 | 130 | * |
| 54) | trans-1,3-Dichloropropene | 18.37 | 26.7 | 27.0 | 98.9 | 70 | 130 | * |
| 55) | 1,1,2-Trichloroethane | 18.61 | 25.6 | 26.0 | 98.5 | 70 | 130 | * |
| 58) | Toluene | 18.99 | 25.4 | 26.8 | 94.8 | 70 | 130 | * |
| 59) | 2-Hexanone | 19.39 | 25.2 | 27.0 | 93.3 | 70 | 130 | * |
| 60) | Dibromochloromethane | 19.54 | 28.2 | 28.3 | 99.6 | 70 | 130 | * |
| 61) | 1,2-Dibromoethane | 19.87 | 26.1 | 26.3 | 99.2 | 70 | 130 | * |
| 62) | n-Butyl Acetate | 20.20 | 23.7 | 27.5 | 86.2 | 70 | 130 | * |
| 63) | n-Octane | 20.28 | 25.1 | 26.3 | 95.4 | 70 | 130 | * |
| 64) | Tetrachloroethene | 20.48 | 25.7 | 25.3 | 101.6 | 70 | 130 | * |
| 65) | Chlorobenzene | 21.35 | 25.6 | 26.5 | 96.6 | 70 | 130 | * |
| 66) | Ethylbenzene | 21.83 | 25.2 | 26.3 | 95.8 | 70 | 130 | * |
| 67) | m- & p-Xylenes | 22.07 | 48.9 | 51.5 | 95.0 | 70 | 130 | * |
| 68) | Bromoform | 22.16 | 26.4 | 26.5 | 99.6 | 70 | 130 | * |
| 69) | Styrene | 22.52 | 26.4 | 26.3 | 100.4 | 70 | 130 | * |
| 70) | o-Xylene | 22.66 | 25.0 | 26.0 | 96.2 | 70 | 130 | * |
| 71) | n-Nonane | 22.92 | 23.5 | 25.8 | 91.1 | 70 | 130 | * |
| 72) | 1,1,2,2-Tetrachloroethane | 22.64 | 25.4 | 27.0 | 94.1 | 70 | 130 | * |
| 74) | Cumene | 23.41 | 24.0 | 25.3 | 94.9 | 70 | 130 | * |
| 75) | alpha-Pinene | 23.91 | 24.0 | 24.8 | 96.8 | 70 | 130 | * |
| 76) | n-Propylbenzene | 24.05 | 24.2 | 25.3 | 95.7 | 70 | 130 | * |
| 77) | 3-Ethyltoluene | 24.18 | 25.3 | 26.3 | 96.2 | 70 | 130 | * |
| 78) | 4-Ethyltoluene | 24.23 | 25.6 | 26.3 | 97.3 | 70 | 130 | * |
| 79) | 1,3,5-Trimethylbenzene | 24.33 | 26.0 | 26.5 | 98.1 | 70 | 130 | * |
| 80) | alpha-Methylstyrene | 24.51 | 26.3 | 26.0 | 101.2 | 70 | 130 | * |
| 81) | 2-Ethyltoluene | 24.57 | 24.7 | 26.0 | 95.0 | 70 | 130 | * |
| 82) | 1,2,4-Trimethylbenzene | 24.84 | 25.3 | 25.5 | 99.2 | 70 | 130 | * |
| 83) | n-Decane | 24.94 | 24.5 | 26.3 | 93.2 | 70 | 130 | * |
| 84) | Benzyl Chloride | 25.01 | 26.7 | 26.8 | 99.6 | 70 | 130 | * |
| 85) | 1,3-Dichlorobenzene | 25.03 | 26.7 | 26.0 | 102.7 | 70 | 130 | * |
| 86) | 1,4-Dichlorobenzene | 25.11 | 25.4 | 26.3 | 96.6 | 70 | 130 | * |
| 87) | sec-Butylbenzene | 25.17 | 25.0 | 25.8 | 96.9 | 70 | 130 | * |
| 88) | 4-Isopropyltoluene (p-Cymene) | 25.36 | 24.8 | 25.0 | 99.2 | 70 | 130 | * |
| 89) | 1,2,3-Trimethylbenzene | 25.36 | 25.2 | 26.0 | 96.9 | 70 | 130 | * |
| 90) | 1,2-Dichlorobenzene | 25.54 | 26.2 | 25.8 | 101.6 | 70 | 130 | * |
| 91) | d-Limonene | 25.53 | 25.8 | 26.5 | 97.4 | 70 | 130 | * |
| 92) | 1,2-Dibromo-3-Chloropropane | 26.07 | 28.9 | 27.0 | 107.0 | 70 | 130 | * |
| 93) | n-Undecane | 26.46 | 24.5 | 26.3 | 93.2 | 70 | 130 | * |
| 94) | 1,2,4-Trichlorobenzene | 27.59 | 28.3 | 27.3 | 103.7 | 70 | 130 | * |
| 95) | Naphthalene | 27.74 | 25.1 | 25.0 | 100.4 | 70 | 130 | * |
| 96) | n-Dodecane | 27.70 | 21.2 | 24.3 | 87.2 | 70 | 130 | * |
| 97) | Hexachlorobutadiene | 28.15 | 25.1 | 26.8 | 93.7 | 70 | 130 | * |
| 98) | Cyclohexanone | 22.34 | 22.5 | 24.8 | 90.7 | 70 | 130 | * |
| 99) | tert-Butylbenzene | 24.83 | 24.9 | 26.5 | 94.0 | 70 | 130 | * |
| 100) | n-Butylbenzene | 25.87 | 25.9 | 26.5 | 97.7 | 70 | 130 | * |

*** Denotes Passing Criterion**



DA 8/6/09

CONTINUING CALIBRATION STANDARDS

# Evaluate Continuing Calibration Report

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180903.D
Acq On : 18 Aug 2009 14:32
Operator : WA
Sample : 25ng TO-15 CCV STD
Misc : S20-08140906/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 20:17:35 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
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 | 139 | -0.01 |
| 2 | T | Propene | 1.716 | 1.496 | 12.8 | 117 | 0.00 |
| 3 | T | Dichlorodifluoromethane (CF | 2.804 | 2.387 | 14.9 | 114 | 0.00 |
| 4 | T | Chloromethane | 1.884 | 1.945 | -3.2 | 124 | 0.00 |
| 5 | T | 1,2-Dichloro-1,1,2,2-tetraf | 1.139 | 1.057 | 7.2 | 124 | 0.00 |
| 6 | T | Vinyl Chloride | 1.810 | 1.676 | 7.4 | 114 | 0.00 |
| 7 | T | 1,3-Butadiene | 1.297 | 1.239 | 4.5 | 115 | 0.00 |
| 8 | T | Bromomethane | 1.102 | 1.184 | -7.4 | 128 | 0.00 |
| 9 | T | Chloroethane | 1.052 | 0.926 | 12.0 | 110 | -0.01 |
| 10 | T | Ethanol | 1.087 | 0.945 | 13.1 | 117 | -0.11 |
| 11 | T | Acetonitrile | 3.185 | 2.515 | 21.0 | 108 | -0.05 |
| 12 | T | Acrolein | 0.828 | 0.775 | 6.4 | 115 | -0.03 |
| 13 | T | Acetone | 1.026 | 0.941 | 8.3 | 119 | -0.06 |
| 14 | T | Trichlorofluoromethane | 2.535 | 2.349 | 7.3 | 116 | 0.00 |
| 15 | T | 2-Propanol (Isopropanol) | 4.032 | 3.206 | 20.5 | 107 | -0.09 |
| 16 | T | Acrylonitrile | 1.854 | 1.785 | 3.7 | 110 | -0.03 |
| 17 | T | 1,1-Dichloroethene | 1.177 | 1.148 | 2.5 | 118 | 0.00 |
| 18 | T | 2-Methyl-2-Propanol (tert-B | 3.579 | 3.560 | 0.5 | 118 | -0.07 |
| 19 | T | Methylene Chloride | 1.378 | 1.210 | 12.2 | 118 | -0.02 |
| 20 | T | 3-Chloro-1-propene (Allyl C | 2.656 | 2.105 | 20.7 | 110 | -0.02 |
| 21 | T | Trichlorotrifluoroethane | 0.922 | 0.985 | -6.8 | 129 | 0.00 |
| 22 | T | Carbon Disulfide | 4.858 | 4.362 | 10.2 | 114 | 0.00 |
| 23 | T | trans-1,2-Dichloroethene | 2.083 | 1.994 | 4.3 | 114 | -0.01 |
| 24 | T | 1,1-Dichloroethane | 2.526 | 2.372 | 6.1 | 116 | -0.01 |
| 25 | T | Methyl tert-Butyl Ether | 3.882 | 3.590 | 7.5 | 115 | -0.03 |
| 26 | T | Vinyl Acetate | 0.209 | 0.255 | -22.0 | 160 | -0.02 |
| 27 | T | 2-Butanone (MEK) | 0.926 | 0.888 | 4.1 | 115 | -0.05 |
| 28 | T | cis-1,2-Dichloroethene | 1.939 | 1.809 | 6.7 | 112 | -0.01 |
| 29 | T | Diisopropyl Ether | 1.240 | 1.235 | 0.4 | 121 | -0.03 |
| 30 | T | Ethyl Acetate | 0.483 | 0.474 | 1.9 | 118 | -0.04 |
| 31 | T | n-Hexane | 2.469 | 2.069 | 16.2 | 110 | 0.00 |
| 32 | T | Chloroform | 2.174 | 2.168 | 0.3 | 124 | -0.01 |
| 33 | S | 1,2-Dichloroethane-d4(SS1) | 2.173 | 1.996 | 8.1 | 129 | -0.02 |
| 34 | T | Tetrahydrofuran (THF) | 0.988 | 0.860 | 13.0 | 117 | -0.04 |
| 35 | T | Ethyl tert-Butyl Ether | 1.604 | 1.492 | 7.0 | 119 | -0.03 |
| 36 | T | 1,2-Dichloroethane | 1.986 | 1.829 | 7.9 | 114 | -0.02 |
| 37 | IR | 1,4-Difluorobenzene (IS2) | 1.000 | 1.000 | 0.0 | 138 | -0.01 |
| 38 | T | 1,1,1-Trichloroethane | 0.424 | 0.405 | 4.5 | 119 | 0.00 |





8/19/09

Evaluate Continuing Calibration Report

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180903.D
Acq On : 18 Aug 2009 14:32
Operator : WA
Sample : 25ng TO-15 CCV STD
Misc : S20-08140906/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 20:17:35 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
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 | 0.185 | 0.173 | 6.5 | 116 | -0.03 |
| 40 | T | 1-Butanol | 0.324 | 0.267 | 17.6 | 112 | -0.09 |
| 41 | T | Benzene | 1.099 | 0.977 | 11.1 | 119 | -0.01 |
| 42 | T | Carbon Tetrachloride | 0.350 | 0.355 | -1.4 | 120 | 0.00 |
| 43 | T | Cyclohexane | 0.403 | 0.382 | 5.2 | 120 | -0.01 |
| 44 | T | tert-Amyl Methyl Ether | 0.825 | 0.759 | 8.0 | 116 | -0.03 |
| 45 | T | 1,2-Dichloropropane | 0.276 | 0.260 | 5.8 | 115 | -0.02 |
| 46 | T | Bromodichloromethane | 0.362 | 0.356 | 1.7 | 120 | -0.01 |
| 47 | T | Trichloroethene | 0.248 | 0.256 | -3.2 | 125 | -0.01 |
| 48 | T | 1,4-Dioxane | 0.210 | 0.209 | 0.5 | 123 | -0.03 |
| 49 | T | 2,2,4-Trimethylpentane (Iso | 1.295 | 1.169 | 9.7 | 113 | -0.01 |
| 50 | T | Methyl Methacrylate | 0.101 | 0.106 | -5.0 | 124 | -0.03 |
| 51 | T | n-Heptane | 0.295 | 0.273 | 7.5 | 115 | -0.01 |
| 52 | T | cis-1,3-Dichloropropene | 0.458 | 0.441 | 3.7 | 118 | -0.01 |
| 53 | T | 4-Methyl-2-pentanone | 0.264 | 0.250 | 5.3 | 114 | -0.03 |
| 54 | T | trans-1,3-Dichloropropene | 0.435 | 0.422 | 3.0 | 119 | -0.02 |
| 55 | T | 1,1,2-Trichloroethane | 0.241 | 0.238 | 1.2 | 122 | -0.01 |
| 56 | IR | Chlorobenzene-d5 (IS3) | 1.000 | 1.000 | 0.0 | 130 | 0.00 |
| 57 | S | Toluene-d8 (SS2) | 2.184 | 2.302 | -5.4 | 138 | 0.00 |
| 58 | T | Toluene | 2.147 | 2.190 | -2.0 | 123 | -0.01 |
| 59 | T | 2-Hexanone | 1.428 | 1.341 | 6.1 | 110 | -0.03 |
| 60 | T | Dibromochloromethane | 0.508 | 0.566 | -11.4 | 124 | 0.00 |
| 61 | T | 1,2-Dibromoethane | 0.539 | 0.576 | -6.9 | 122 | -0.01 |
| 62 | T | n-Butyl Acetate | 1.683 | 1.560 | 7.3 | 111 | -0.03 |
| 63 | T | n-Octane | 0.519 | 0.505 | 2.7 | 116 | -0.01 |
| 64 | T | Tetrachloroethene | 0.497 | 0.568 | -14.3 | 130 | -0.01 |
| 65 | T | Chlorobenzene | 1.328 | 1.386 | -4.4 | 124 | 0.00 |
| 66 | T | Ethylbenzene | 2.454 | 2.499 | -1.8 | 121 | 0.00 |
| 67 | T | m- & p-Xylenes | 1.985 | 1.993 | -0.4 | 121 | -0.02 |
| 68 | T | Bromoform | 0.422 | 0.512 | -21.3 | 128 | -0.01 |
| 69 | T | Styrene | 1.435 | 1.527 | -6.4 | 122 | -0.01 |
| 70 | T | o-Xylene | 1.990 | 2.023 | -1.7 | 122 | -0.02 |
| 71 | T | n-Nonane | 1.323 | 1.190 | 10.1 | 111 | 0.00 |
| 72 | T | 1,1,2,2-Tetrachloroethane | 0.883 | 0.922 | -4.4 | 123 | -0.02 |
| 73 | S | Bromofluorobenzene (SS3) | 0.576 | 0.624 | -8.3 | 140 | 0.00 |
| 74 | T | Cumene | 2.514 | 2.603 | -3.5 | 125 | -0.01 |
| 75 | T | alpha-Pinene | 1.289 | 1.319 | -2.3 | 120 | -0.01 |
| 76 | T | n-Propylbenzene | 3.161 | 3.271 | -3.5 | 123 | 0.00 |



JSH 8/19/09

Evaluate Continuing Calibration Report

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180903.D
Acq On : 18 Aug 2009 14:32
Operator : WA
Sample : 25ng TO-15 CCV STD
Misc : S20-08140906/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 20:17:35 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
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 | 2.403 | 2.489 | -3.6 | 125 | -0.01 |
| 78 | T | 4-Ethyltoluene | 2.328 | 2.420 | -4.0 | 123 | -0.02 |
| 79 | T | 1,3,5-Trimethylbenzene | 1.964 | 2.036 | -3.7 | 123 | -0.01 |
| 80 | T | alpha-Methylstyrene | 1.051 | 1.145 | -8.9 | 124 | -0.02 |
| 81 | T | 2-Ethyltoluene | 2.423 | 2.501 | -3.2 | 122 | -0.01 |
| 82 | T | 1,2,4-Trimethylbenzene | 2.003 | 2.119 | -5.8 | 125 | -0.02 |
| 83 | T | n-Decane | 1.302 | 1.225 | 5.9 | 113 | -0.01 |
| 84 | T | Benzyl Chloride | 1.877 | 2.037 | -8.5 | 121 | -0.02 |
| 85 | T | 1,3-Dichlorobenzene | 1.013 | 1.105 | -9.1 | 127 | -0.02 |
| 86 | T | 1,4-Dichlorobenzene | 1.081 | 1.167 | -8.0 | 128 | -0.02 |
| 87 | T | sec-Butylbenzene | 2.705 | 2.842 | -5.1 | 124 | -0.01 |
| 88 | T | 4-Isopropyltoluene (p-Cymen | 2.412 | 2.649 | -9.8 | 127 | -0.01 |
| 89 | T | 1,2,3-Trimethylbenzene | 2.040 | 2.146 | -5.2 | 124 | -0.01 |
| 90 | T | 1,2-Dichlorobenzene | 0.961 | 1.079 | -12.3 | 129 | -0.02 |
| 91 | T | d-Limonene | 0.852 | 0.878 | -3.1 | 120 | 0.00 |
| 92 | T | 1,2-Dibromo-3-Chloropropane | 0.330 | 0.393 | -19.1 | 126 | 0.00 |
| 93 | T | n-Undecane | 1.385 | 1.309 | 5.5 | 115 | 0.00 |
| 94 | T | 1,2,4-Trichlorobenzene | 0.661 | 0.774 | -17.1 | 129 | -0.01 |
| 95 | T | Naphthalene | 2.720 | 2.955 | -8.6 | 127 | -0.01 |
| 96 | T | n-Dodecane | 1.609 | 1.501 | 6.7 | 118 | 0.00 |
| 97 | T | Hexachlorobutadiene | 0.420 | 0.446 | -6.2 | 129 | 0.00 |
| 98 | T | Cyclohexanone | 0.889 | 0.851 | 4.3 | 114 | -0.03 |
| 99 | T | tert-Butylbenzene | 1.938 | 2.052 | -5.9 | 126 | -0.01 |
| 100 | T | n-Butylbenzene | 2.231 | 2.343 | -5.0 | 122 | -0.01 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0

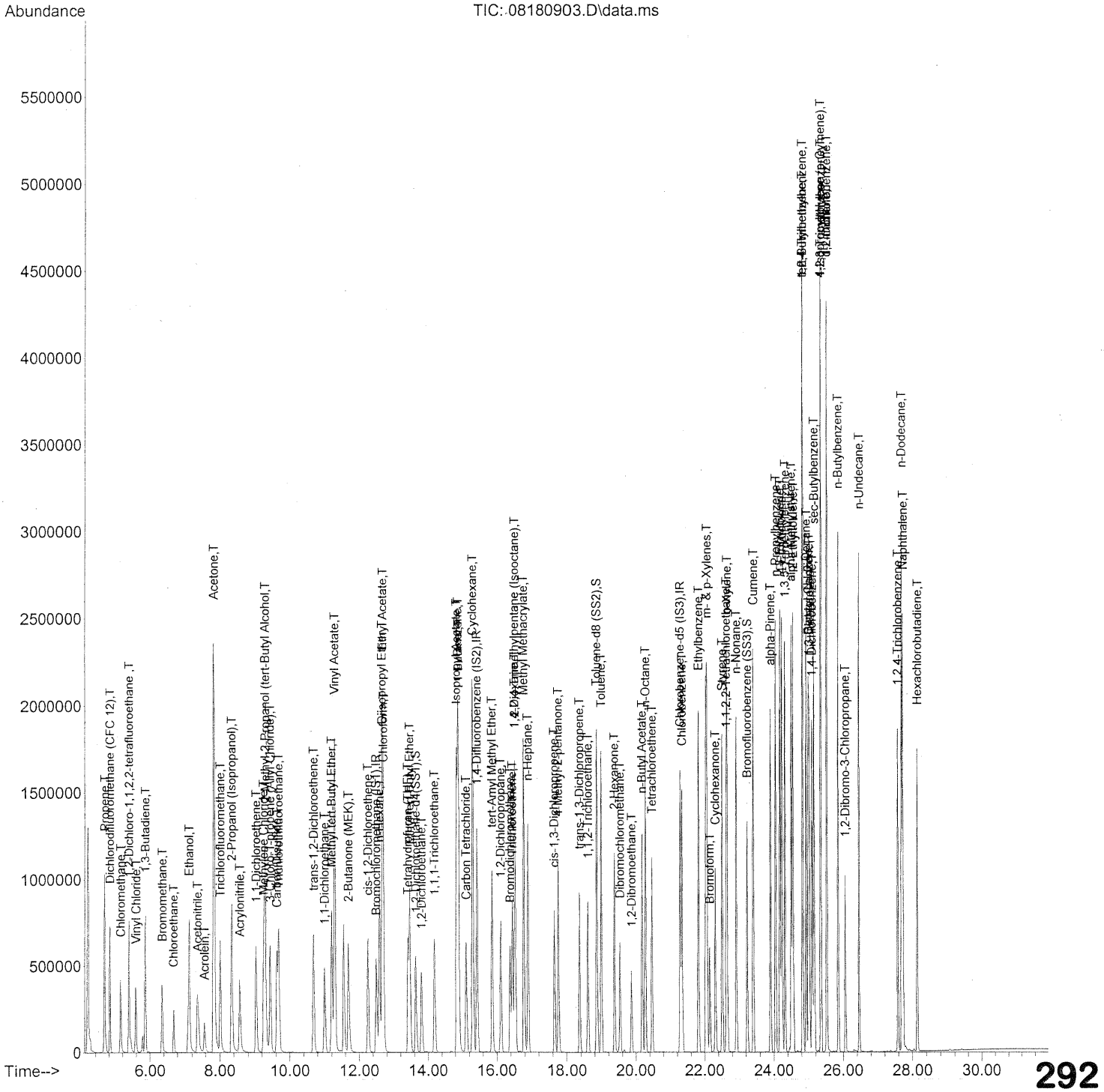


DA 8/19/09

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180903.D
Acq On : 18 Aug 2009 14:32
Operator : WA
Sample : 25ng TO-15 CCV STD
Misc : S20-08140906/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 20:17:35 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180903.D
Acq On : 18 Aug 2009 14:32
Operator : WA
Sample : 25ng TO-15 CCV STD
Misc : S20-08140906/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 20:17:35 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 1) Bromochloromethane (IS1) | 12.50 | 130 | 288901 | 25.000 | ng | | -0.01 |
| 37) 1,4-Difluorobenzene (IS2) | 15.43 | 114 | 1459937 | 25.000 | ng | | -0.01 |
| 56) Chlorobenzene-d5 (IS3) | 21.29 | 82 | 689590 | 25.000 | ng | | 0.00 |
| **System Monitoring Compounds** | | | | | | | |
| 33) 1,2-Dichloroethane-d4(... | 13.64 | 65 | 576679 | 22.966 | ng | | -0.02 |
| Spiked Amount 25.000 | | | Recovery = | 91.88% | | | |
| 57) Toluene-d8 (SS2) | 18.86 | 98 | 1587418 | 26.345 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 105.40% | | | |
| 73) Bromofluorobenzene (SS3) | 23.24 | 174 | 429983 | 27.060 | ng | | 0.00 |
| Spiked Amount 25.000 | | | Recovery = | 108.24% | | | |
| **Target Compounds** | | | | | | | Qvalue |
| 2) Propene | 4.66 | 42 | 463284 | 23.369 | ng | | 100 |
| 3) Dichlorodifluoromethan... | 4.82 | 85 | 725417 | 22.388 | ng | | 99 |
| 4) Chloromethane | 5.14 | 50 | 562022 | 25.816 | ng | | 98 |
| 5) 1,2-Dichloro-1,1,2,2-t... | 5.39 | 135 | 323539 | 24.576 | ng | | 98 |
| 6) Vinyl Chloride | 5.59 | 62 | 489878 | 23.421 | ng | | 97 |
| 7) 1,3-Butadiene | 5.86 | 54 | 429369 | 28.641 | ng | | 99 |
| 8) Bromomethane | 6.35 | 94 | 349021 | 27.412 | ng | | 99 |
| 9) Chloroethane | 6.69 | 64 | 270757 | 22.271 | ng | | 98 |
| 10) Ethanol | 7.13 | 45 | 1420198 | 113.015 | ng | | 99 |
| 11) Acetonitrile | 7.37 | 41 | 764442 | 20.772 | ng | | 100 |
| 12) Acrolein | 7.57 | 56 | 241937 | 25.292 | ng | | 100 |
| 13) Acetone | 7.83 | 58 | 1501329 | 126.620 | ng | | 95 |
| 14) Trichlorofluoromethane | 8.01 | 101 | 713875 | 24.369 | ng | | 100 |
| 15) 2-Propanol (Isopropanol) | 8.34 | 45 | 1752312 | 37.607 | ng | | 98 |
| 16) Acrylonitrile | 8.57 | 53 | 546673 | 25.517 | ng | | 98 |
| 17) 1,1-Dichloroethene | 9.03 | 96 | 364779 | 26.817 | ng | # | 86 |
| 18) 2-Methyl-2-Propanol (t... | 9.30 | 59 | 2077344 | 50.228 | ng | | 98 |
| 19) Methylene Chloride | 9.25 | 84 | 374689 | 23.531 | ng | | 93 |
| 20) 3-Chloro-1-propene (Al... | 9.43 | 41 | 656904 | 21.401 | ng | | 96 |
| 21) Trichlorotrifluoroethane | 9.68 | 151 | 313157 | 29.400 | ng | | 96 |
| 22) Carbon Disulfide | 9.63 | 76 | 1350893 | 24.063 | ng | | 99 |
| 23) trans-1,2-Dichloroethene | 10.69 | 61 | 610745 | 25.375 | ng | | 92 |
| 24) 1,1-Dichloroethane | 11.00 | 63 | 726500 | 24.891 | ng | | 100 |
| 25) Methyl tert-Butyl Ether | 11.20 | 73 | 1132631 | 25.246 | ng | | 99 |
| 26) Vinyl Acetate | 11.29 | 86 | 370668 | 153.616 | ng | # | 83 |
| 27) 2-Butanone (MEK) | 11.68 | 72 | 282174 | 26.357 | ng | | 95 |
| 28) cis-1,2-Dichloroethene | 12.26 | 61 | 570792 | 25.477 | ng | | 92 |
| 29) Diisopropyl Ether | 12.67 | 87 | 382483 | 26.697 | ng | # | 43 |
| 30) Ethyl Acetate | 12.69 | 61 | 291787 | 52.319 | ng | | 99 |
| 31) n-Hexane | 12.59 | 57 | 652612 | 22.875 | ng | | 100 |



8/18/09

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180903.D
Acq On : 18 Aug 2009 14:32
Operator : WA
Sample : 25ng TO-15 CCV STD
Misc : S20-08140906/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 20:17:35 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 32) Chloroform | 12.71 | 83 | 671566 | 26.737 | ng | | 100 |
| 34) Tetrahydrofuran (THF) | 13.41 | 72 | 273222 | 23.942 | ng | | 96 |
| 35) Ethyl tert-Butyl Ether | 13.47 | 87 | 444891 | 24.004 | ng | | 93 |
| 36) 1,2-Dichloroethane | 13.80 | 62 | 560027 | 24.396 | ng | | 97 |
| 38) 1,1,1-Trichloroethane | 14.19 | 97 | 621744 | 25.105 | ng | | 97 |
| 39) Isopropyl Acetate | 14.84 | 61 | 528541 | 48.803 | ng | # | 89 |
| 40) 1-Butanol | 14.90 | 56 | 806925 | 42.587 | ng | # | 73 |
| 41) Benzene | 14.89 | 78 | 1512527 | 23.564 | ng | | 99 |
| 42) Carbon Tetrachloride | 15.12 | 117 | 559691 | 27.358 | ng | | 99 |
| 43) Cyclohexane | 15.31 | 84 | 1200029 | 51.043 | ng | | 94 |
| 44) tert-Amyl Methyl Ether | 15.87 | 73 | 1152719 | 23.914 | ng | | 98 |
| 45) 1,2-Dichloropropane | 16.12 | 63 | 398594 | 24.725 | ng | | 99 |
| 46) Bromodichloromethane | 16.39 | 83 | 560822 | 26.513 | ng | | 99 |
| 47) Trichloroethene | 16.45 | 130 | 396662 | 27.399 | ng | | 100 |
| 48) 1,4-Dioxane | 16.52 | 88 | 327870 | 26.727 | ng | | 81 |
| 49) 2,2,4-Trimethylpentane... | 16.53 | 57 | 1775572 | 23.484 | ng | | 96 |
| 50) Methyl Methacrylate | 16.77 | 100 | 330329 | 55.903 | ng | | 94 |
| 51) n-Heptane | 16.89 | 71 | 422828 | 24.545 | ng | | 97 |
| 52) cis-1,3-Dichloropropene | 17.65 | 75 | 638377 | 23.894 | ng | | 98 |
| 53) 4-Methyl-2-pentanone | 17.77 | 58 | 401403 | 26.020 | ng | | 100 |
| 54) trans-1,3-Dichloropropene | 18.36 | 75 | 676920 | 26.647 | ng | | 99 |
| 55) 1,1,2-Trichloroethane | 18.61 | 97 | 365485 | 25.934 | ng | | 97 |
| 58) Toluene | 18.99 | 91 | 1630957 | 27.542 | ng | | 99 |
| 59) 2-Hexanone | 19.37 | 43 | 1017439 | 25.837 | ng | | 97 |
| 60) Dibromochloromethane | 19.54 | 129 | 449255 | 32.065 | ng | | 99 |
| 61) 1,2-Dibromoethane | 19.87 | 107 | 420704 | 28.322 | ng | | 97 |
| 62) n-Butyl Acetate | 20.18 | 43 | 1183108 | 25.490 | ng | | 99 |
| 63) n-Octane | 20.28 | 57 | 373269 | 26.073 | ng | | 93 |
| 64) Tetrachloroethene | 20.47 | 166 | 399584 | 29.160 | ng | | 99 |
| 65) Chlorobenzene | 21.35 | 112 | 1032114 | 28.171 | ng | | 100 |
| 66) Ethylbenzene | 21.83 | 91 | 1826983 | 26.989 | ng | | 98 |
| 67) m- & p-Xylenes | 22.06 | 91 | 2858446 | 52.199 | ng | | 98 |
| 68) Bromoform | 22.16 | 173 | 364304 | 31.315 | ng | | 98 |
| 69) Styrene | 22.51 | 104 | 1128923 | 28.523 | ng | | 99 |
| 70) o-Xylene | 22.66 | 91 | 1478554 | 26.930 | ng | | 97 |
| 71) n-Nonane | 22.92 | 43 | 869677 | 23.839 | ng | | 96 |
| 72) 1,1,2,2-Tetrachloroethane | 22.63 | 83 | 681521 | 27.971 | ng | | 100 |
| 74) Cumene | 23.41 | 105 | 1852171 | 26.706 | ng | | 100 |
| 75) alpha-Pinene | 23.90 | 93 | 920650 | 25.897 | ng | | 99 |
| 76) n-Propylbenzene | 24.05 | 91 | 2328185 | 26.705 | ng | | 98 |
| 77) 3-Ethyltoluene | 24.18 | 105 | 1874582 | 28.283 | ng | | 100 |
| 78) 4-Ethyltoluene | 24.23 | 105 | 1822269 | 28.374 | ng | | 98 |
| 79) 1,3,5-Trimethylbenzene | 24.33 | 105 | 1533465 | 28.311 | ng | | 98 |

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180903.D
Acq On : 18 Aug 2009 14:32
Operator : WA
Sample : 25ng TO-15 CCV STD
Misc : S20-08140906/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 18 20:17:35 2009
Quant Method : J:\MS13\METHODS\R13080609.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Aug 06 17:14:07 2009
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 80) alpha-Methylstyrene | 24.51 | 118 | 846276 | 29.183 | ng | 95 |
| 81) 2-Ethyltoluene | 24.57 | 105 | 1814026 | 27.141 | ng | 99 |
| 82) 1,2,4-Trimethylbenzene | 24.83 | 105 | 1549032 | 28.043 | ng | 99 |
| 83) n-Decane | 24.94 | 57 | 912318 | 25.403 | ng | 98 |
| 84) Benzyl Chloride | 25.01 | 91 | 1544913 | 29.837 | ng | 98 |
| 85) 1,3-Dichlorobenzene | 25.03 | 146 | 831773 | 29.753 | ng | 97 |
| 86) 1,4-Dichlorobenzene | 25.11 | 146 | 853369 | 28.629 | ng | 99 |
| 87) sec-Butylbenzene | 25.17 | 105 | 2077107 | 27.836 | ng | 99 |
| 88) 4-Isopropyltoluene (p-... | 25.35 | 119 | 1885493 | 28.336 | ng | 98 |
| 89) 1,2,3-Trimethylbenzene | 25.36 | 105 | 1586239 | 28.189 | ng | 96 |
| 90) 1,2-Dichlorobenzene | 25.53 | 146 | 789044 | 29.770 | ng | 99 |
| 91) d-Limonene | 25.53 | 68 | 661121 | 28.145 | ng | 98 |
| 92) 1,2-Dibromo-3-Chloropr... | 26.07 | 157 | 298475 | 32.741 | ng | 87 |
| 93) n-Undecane | 26.46 | 57 | 985463 | 25.791 | ng | 98 |
| 94) 1,2,4-Trichlorobenzene | 27.59 | 180 | 597547 | 32.789 | ng | 98 |
| 95) Naphthalene | 27.73 | 128 | 2159727 | 28.790 | ng | 100 |
| 96) n-Dodecane | 27.70 | 57 | 1026491 | 23.125 | ng | 99 |
| 97) Hexachlorobutadiene | 28.15 | 225 | 338591 | 29.211 | ng | 99 |
| 98) Cyclohexanone | 22.31 | 55 | 575126 | 23.441 | ng | 97 |
| 99) tert-Butylbenzene | 24.83 | 119 | 1499695 | 28.052 | ng | 99 |
| 100) n-Butylbenzene | 25.86 | 91 | 1764253 | 28.674 | ng | 99 |

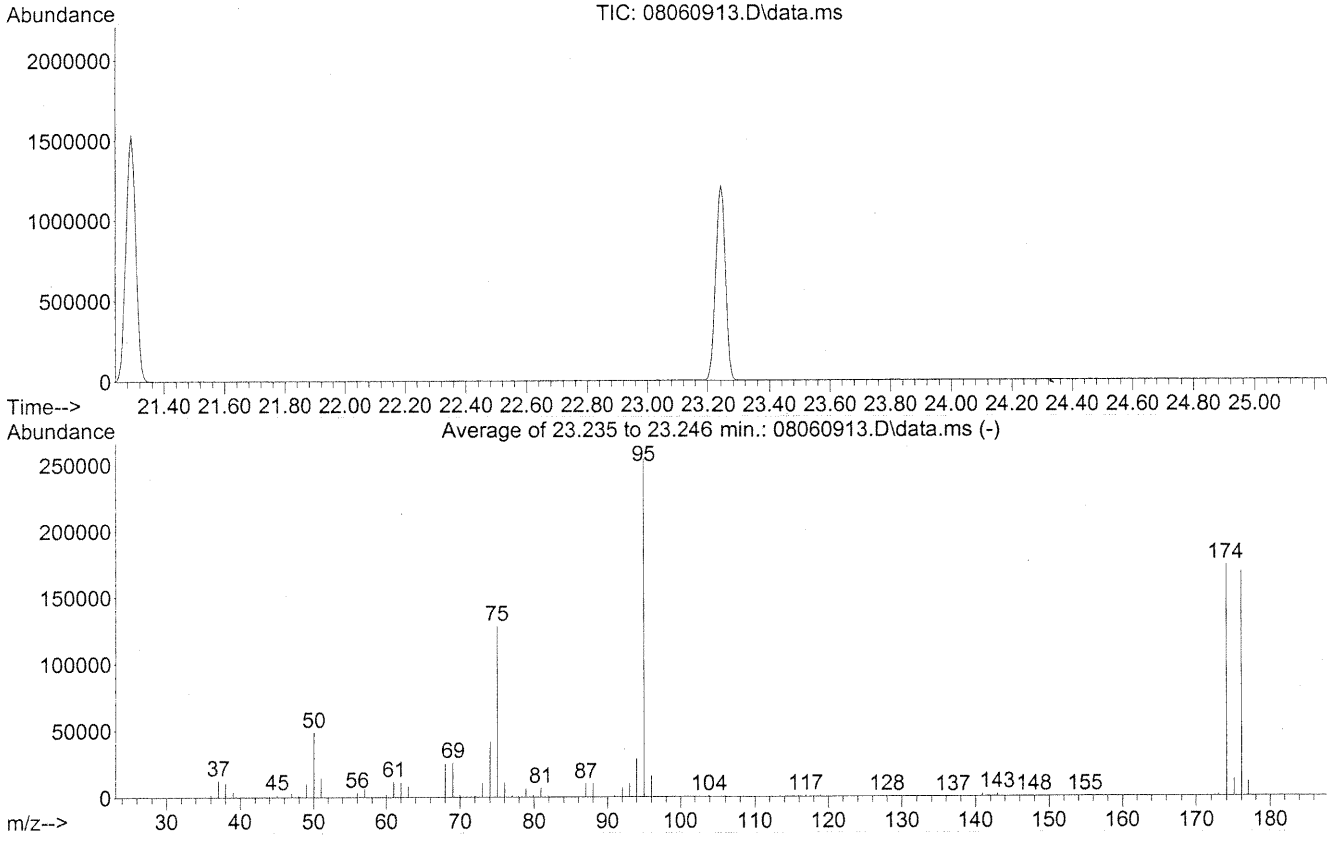
(#) = qualifier out of range (m) = manual integration (+) = signals summed

BFB TUNING & MASS CALIBRATIONS

Data Path : J:\MS13\DATA\2009_08\06\
Data File : 08060913.D
Acq On : 6 Aug 2009 11:15
Operator : WA
Sample : 25ng BFB STD
Misc : S20-07200902
ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS13\METHODS\R13080609.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Aug 06 07:59:49 2009



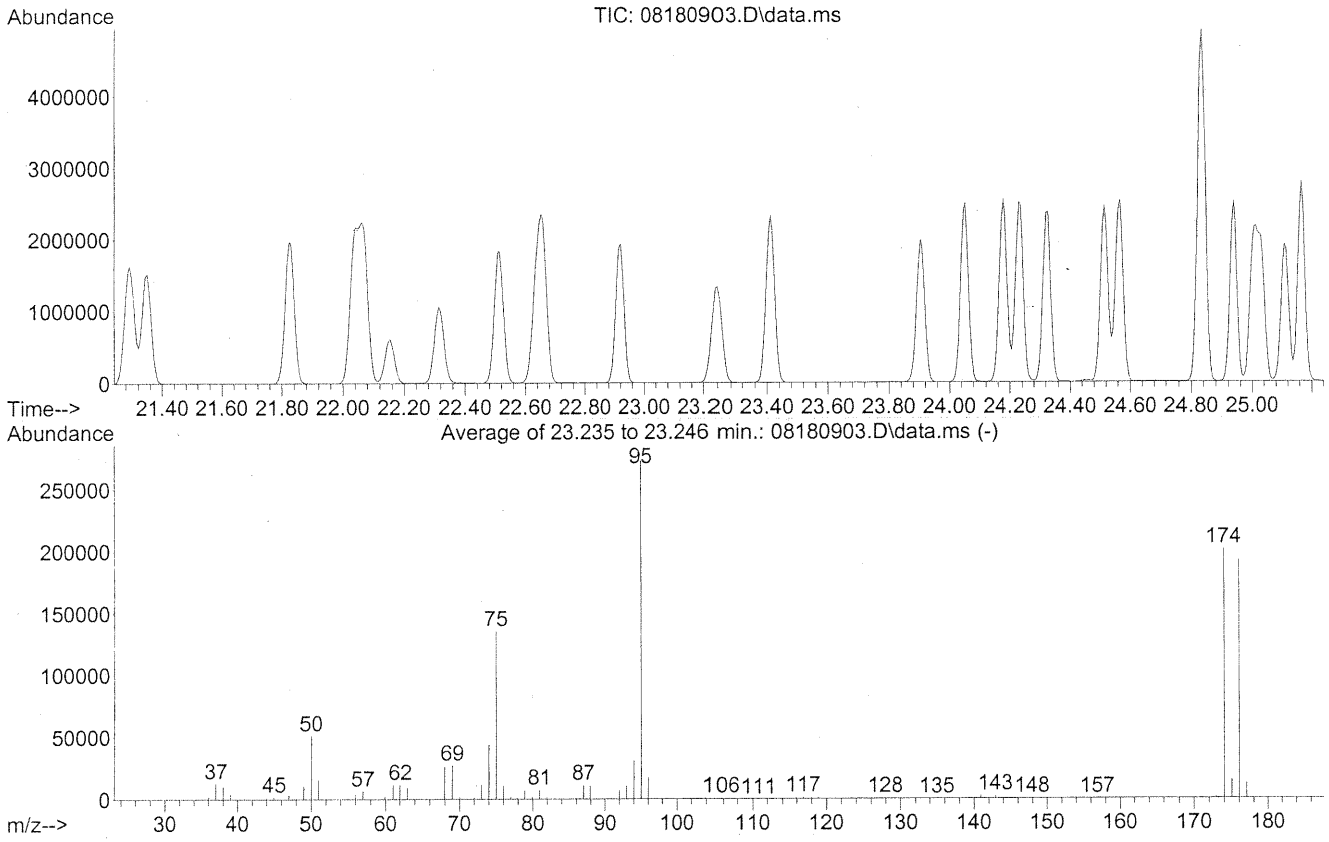

AutoFind: Scans 3352, 3353, 3354; Background Corrected with Scan 3342

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 19.2 | 48845 | PASS |
| 75 | 95 | 30 | 66 | 50.6 | 128627 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 254165 | PASS |
| 96 | 95 | 5 | 9 | 6.3 | 16094 | PASS |
| 173 | 174 | 0.00 | 2 | 0.9 | 1624 | PASS |
| 174 | 95 | 50 | 120 | 68.4 | 173931 | PASS |
| 175 | 174 | 4 | 9 | 7.5 | 13043 | PASS |
| 176 | 174 | 93 | 101 | 97.2 | 168981 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 11200 | PASS |

Data Path : J:\MS13\DATA\2009_08\18\
Data File : 08180903.D
Acq On : 18 Aug 2009 14:32
Operator : WA
Sample : 25ng TO-15 CCV STD
Misc : S20-08140906/S20-07310901
ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS13\METHODS\R13080609.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Thu Aug 06 17:14:07 2009




AutoFind: Scans 3352, 3353, 3354; Background Corrected with Scan 3342

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.8 | 51365 | PASS |
| 75 | 95 | 30 | 66 | 49.8 | 135747 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 272789 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 17559 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 1653 | PASS |
| 174 | 95 | 50 | 120 | 73.9 | 201493 | PASS |
| 175 | 174 | 4 | 9 | 7.6 | 15284 | PASS |
| 176 | 174 | 93 | 101 | 95.5 | 192363 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 12710 | PASS |

RUN LOGS

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment |
|---|---|---|---|---|---|---|---|
| 13 | 08/06/09 11:15 | 08060913.D | 25ng BFB STD | S20-07200902 | WA | 4 | Passed |
| 14 | 08/06/09 11:55 | 08060914.D | 0.1ng TO-15 ICAL STD | S20-07200902/S20-07240912 | WA | 1 | |
| 15 | 08/06/09 12:36 | 08060915.D | 0.2ng TO-15 ICAL STD | S20-07200902/S20-07240912 | WA | 1 | |
| 16 | 08/06/09 13:17 | 08060916.D | 0.5ng TO-15 ICAL STD | S20-07200902/S20-07310903 | WA | 4 | |
| 17 | 08/06/09 13:57 | 08060917.D | 1.0ng TO-15 ICAL STD | S20-07200902/S20-07310903 | WA | 4 | |
| 18 | 08/06/09 14:38 | 08060918.D | 5.0ng TO-15 ICAL STD | S20-07200902/S20-07310903 | WA | 4 | |
| 19 | 08/06/09 15:18 | 08060919.D | 25ng TO-15 ICAL STD | S20-07200902/S20-07310901 | WA | 4 | |
| 20 | 08/06/09 15:59 | 08060920.D | 50ng TO-15 ICAL STD | S20-07200902/S20-07310901 | WA | 4 | |
| 21 | 08/06/09 16:39 | 08060921.D | 100ng TO-15 ICAL STD | S20-07200902/S20-07310901 | WA | 4 | |
| | ICAL saved as R13080609.M; Good from 0.1ng --> 100ng, except: Acetone: 2.5ng -->500ng and THF: 0.2ng -->100ng | | | | | | |
| 22 | 08/06/09 17:20 | 08060922.D | 25ng TO-15 ICV STD | S20-07200902/S20-07240916 | WA | 2 | failed, case file |
| 23 | 08/06/09 18:10 | 08060923.D | Blank | S20-07200902 | WA | 4 | |
| 24 | 08/06/09 18:51 | 08060924.D | 25ng TO-15 ICV STD | S20-07200902/S20-07240917 | WA | 2 | Passed all cmpds. |
| 25 | 08/06/09 19:31 | 08060925.D | 1.0ng TO-15 LOQ Verification | S20-07200902/S20-07310903 | WA | 4 | |
| 26 | 08/06/09 20:11 | 08060926.D | 1.0ng TO-15 LOQ Verification | S20-07200902/S20-07310903 | WA | 4 | |
| 27 | 08/06/09 20:53 | 08060927.D | CAS QC CAN/FC/Gauge (1000mL) | AC00687/FC00232/AVG00940 | WA | 5 | |
| 28 | 08/06/09 21:35 | 08060928.D | CAS QC CAN/FC/Gauge (1000mL) | AC00705/FC00189/AVG00655 | WA | 6 | |
| 29 | 08/06/09 22:17 | 08060929.D | CAS QC CAN/FC/Gauge (1000mL) | AC00931/FC00407/AVG01149 | WA | 7 | |
| 30 | 08/06/09 22:59 | 08060930.D | CAS QC CAN/FC/Gauge (1000mL) | AC00672/FC00783/AVG00900 | WA | 8 | |
| 31 | 08/06/09 23:41 | 08060931.D | CAS QC CAN/FC/Gauge (1000mL) | AC01257/FC00515/AVG00906 | WA | 9 | |
| 32 | 08/07/09 0:23 | 08060932.D | CAS QC CAN/FC/Gauge (1000mL) | AC00958/FC00678/AVG01072 | WA | 10 | |
| 33 | 08/07/09 1:04 | 08060933.D | CAS QC CAN/FC/Gauge (1000mL) | AC01527/FC00508/AVG01046 | WA | 11 | |
| 34 | 08/07/09 1:46 | 08060934.D | CAS QC CAN/FC/Gauge (1000mL) | AC01172/FC00256/AVG00986 | WA | 12 | |
| 35 | 08/07/09 2:27 | 08060935.D | 0.2ng LOD Verification | S20-07200902/S20-07240912 | WA | 1 | |

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment |
|---|---|---|---|---|---|---|---|
| 10 | 08/17/09 10:49 | 08170910.D | P0902721-005 dil (100mL) | | WA | 9 | |
| 11 | 08/17/09 11:47 | 08170911.D | 25ng TO-15 LCS STD | S20-08140906/S20-07270906 | WA | 2 | Passed |
| 12 | 08/17/09 12:28 | 08170912.D | P0902721-007 dil (100mL) | | WA | 11 | |
| 13 | 08/17/09 13:08 | 08170913.D | P0902721-008 dil (100mL) | | WA | 12 | |
| 14 | 08/17/09 14:31 | 08170914.D | 25ng TO-15 LCSD STD | S20-08140906/S20-07270906 | WA | 2 | Passed |
| 15 | 08/17/09 15:13 | 08170915.D | P0902721-001 (1000mL) | | WA | 5 | |
| 16 | 08/17/09 15:55 | 08170916.D | P0902721-011 (1000mL) | | WA | 1 | |
| 17 | 08/17/09 16:37 | 08170917.D | P0902721-012 (1000mL) | | WA | 3 | |
| 18 | 08/17/09 17:17 | 08170918.D | System | | WA | 16 | |
| 19 | 08/17/09 17:59 | 08170919.D | P0902721-001 dup (1000mL) | | WA | 5 | Passed |
| 20 | 08/17/09 18:41 | 08170920.D | P0902721-013 (1000mL) | | WA | 6 | |
| 21 | 08/17/09 19:23 | 08170921.D | P0902721-014 (1000mL) | | WA | 7 | |
| 22 | 08/17/09 20:05 | 08170922.D | P0902721-015 (1000mL) | | WA | 8 | |
| 23 | 08/17/09 20:47 | 08170923.D | P0902721-016 (1000mL) | | WA | 9 | |
| 24 | 08/17/09 21:28 | 08170924.D | P0902721-017 (1000mL) | | WA | 10 | |
| 25 | 08/17/09 22:10 | 08170925.D | P0902721-018 (1000mL) | | WA | 11 | |
| 26 | 08/17/09 22:51 | 08170926.D | System | | WA | 16 | |
| 27 | 08/17/09 23:32 | 08170927.D | P0902721-001 dil (100mL) | | WA | 5 | |
| 28 | 08/18/09 0:13 | 08170928.D | P0902721-001 dupdil (100mL) | | WA | 5 | |
| 29 | 08/18/09 0:53 | 08170929.D | P0902721-011 dil (200mL) | | WA | 1 | |
| 30 | 08/18/09 1:34 | 08170930.D | P0902721-013 dil (200mL) | | WA | 6 | |
| 31 | 08/18/09 2:15 | 08170931.D | P0902721-014 dil (200mL) | | WA | 7 | EA 8/18/09 |

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment |
|---|---|---|---|---|---|---|---|
| 1 | 08/18/09 13:27 | 08180902.D | Bad Run | | WA | 5 | |
| 2 | 08/18/09 14:32 | 08180903.D | 25ng TO-15 CCV STD | S20-08140906/S20-07310901 | WA | 4 | Passed |
| 3 | 08/18/09 16:40 | 08180904.D | 0.5ng RL/LOQ Check | S20-08070902/S20-07310903 | WA | 4 | |
| 4 | 08/18/09 17:22 | 08180905.D | TO-15 Method Blank (1000mL) | S20-08140906 | WA | 4 | Passed |
| 5 | 08/18/09 18:02 | 08180906.D | 25ng TO-15 LCS STD | S20-08140906/S20-07270906 | WA | 2 | Passed |
| 6 | 08/18/09 18:43 | 08180907.D | P0902766-001 (1000mL) | Env. Health & Engineering 101160 | WA | 13 | |
| 7 | 08/18/09 19:25 | 08180908.D | P0902766-001 dup (1000mL) | Env. Health & Engineering 101160 | WA | 13 | |
| 8 | 08/18/09 20:05 | 08180909.D | P0902766-002 (1000mL) | Env. Health & Engineering 101161 | WA | 14 | |
| 9 | 08/18/09 20:46 | 08180910.D | P0902721-016 dil (200mL) | | WA | 9 | |
| 10 | 08/18/09 21:26 | 08180911.D | P0902721-017 dil (200mL) | | WA | 10 | |
| 11 | 08/18/09 22:06 | 08180912.D | 25ng TO-15 LCSD STD | S20-08140906/S20-07270906 | WA | 2 | case file |
| 12 | 08/18/09 22:46 | 08180913.D | System | S20-08140906/S20-07270906 | WA | 16 | |
| 13 | 08/18/09 23:26 | 08180914.D | P0902697-Blank100 | | WA | 5 | |
| 14 | 08/19/09 0:07 | 08180915.D | P0902697-Blank150 | | WA | 7 | |
| 15 | 08/19/09 0:47 | 08180916.D | P0902697-001 (100mL) | | WA | 6 | |
| 16 | 08/19/09 1:27 | 08180917.D | P0902697-002 (100mL) | | WA | 8 | |
| 17 | 08/19/09 2:08 | 08180918.D | System | | WA | 16 | |



conf run pg

EA 8/20/09

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment |
|---|---|---|---|---|---|---|---|
| 18 | 08/19/09 2:48 | 08180919.D | P0902704-Blank (100mL) | [redacted] | WA | 1 | |
| 19 | 08/19/09 3:28 | 08180920.D | P0902704-001 (100mL) | [redacted] | WA | 3 | |
| 20 | 08/19/09 4:08 | 08180921.D | P0902704-002 (100mL) | [redacted] | WA | 11 | |
| 21 | 08/19/09 4:49 | 08180922.D | P0902704-003 (100mL) | [redacted] | WA | 12 | |
| 22 | 08/19/09 5:29 | 08180923.D | system | | WA | 16 | |
| 23 | 08/19/09 6:09 | 08180924.D | P0902697-001 dil (15mL) | [redacted] | WA | 6 | |
| 24 | 08/19/09 7:19 | 08180925.D | P0902766-003 (1000mL) | Env. Health & Engineering 101162 | WA | 10 | |
| 25 | 08/19/09 8:01 | 08180926.D | P0902766-004 (1000mL) | Env. Health & Engineering 101163 | WA | 11 | |
| 26 | 08/19/09 9:09 | 08180927.D | P0902828-001 (2.5mL) | [redacted] | WA | 4 | |
| 27 | 08/19/09 9:50 | 08180928.D | P0902828-002 (2.5mL) | [redacted] | WA | 4 | |
| 28 | 08/19/09 10:42 | 08180929.D | P0902818-001 (200mL) | [redacted] | WA | 3 | |
| 29 | 08/19/09 11:22 | 08180930.D | P0902818-001 dil (25mL) | [redacted] | WA | 3 | |
| 30 | 08/19/09 12:03 | 08180931.D | P0902828-001 (15mL) | [redacted] | WA | 1 | |
| 31 | 08/19/09 12:43 | 08180932.D | Blank | | WA | 4 | 8/20/09 |